

**Social Security for the Organised Working Class in  
Kerala through Employees' State Insurance  
Corporation: Analysis of Service Quality**

*Thesis*  
*submitted to the University of Calicut*  
*for the award of the Degree of*  
**DOCTOR OF PHILOSOPHY IN COMMERCE**

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**August 2025**

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I hereby declare that the work presented in the thesis entitled “**Social Security for the Organised Working Class in Kerala through Employees’ State Insurance Corporation: Analysis of Service Quality**” is based on the original work done by me under the guidance of Dr. R Reshmi, Associate Professor, P G and Research Department of Commerce, Farook College (Autonomous), and has not been included in any other thesis submitted previously for the award of any degree. The contents of the thesis are undergone plagiarism check using iThenticate software at C.H.M.K. Library, University of Calicut, and the similarity index found is within the permissible limit. I also declare that the thesis is free from AI-generated contents.

  
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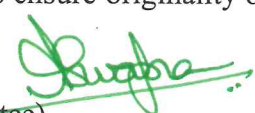
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## **List of Abbreviations**


|       |   |                              |
|-------|---|------------------------------|
| AC    | : | Accessibility                |
| ANOVA | : | Analysis of Variance         |
| AS    | : | Assurance                    |
| AVE   | : | Average Variance Extracted   |
| AW    | : | Awareness                    |
| CFI   | : | Comparative Fit Index        |
| CMIN  | : | Chi-square Minimum           |
| CO    | : | Communication                |
| CR    | : | Composite Reliability        |
| EG    | : | E-Governance                 |
| ESI   | : | Employees' State Insurance   |
| GFI   | : | Goodness of Fit Index        |
| HP    | : | Health Protection            |
| IFI   | : | Incremental Fit Index        |
| IS    | : | Provision of Income Security |
| KW    | : | Knowledge                    |
| MSV   | : | Maximum Shared Variance      |
| NFI   | : | Normed Fit Index             |
| RC    | : | Risk Coverage                |
| RE    | : | Responsiveness               |
| RFI   | : | Relative Fit Index           |
| RL    | : | Reliability                  |
| RMR   | : | Root Mean Square Residuals   |

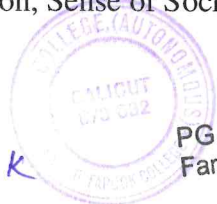
|       |   |                                         |
|-------|---|-----------------------------------------|
| RMSEA | : | Root Mean Square Error of Approximation |
| RO    | : | Regional Office                         |
| SAT   | : | Satisfaction                            |
| SQ    | : | Service Quality                         |
| SRO   | : | Sub Regional Office                     |
| SSS   | : | Sense of Social Security                |
| TA    | : | Tangibility                             |
| TLI   | : | Tucker Lewis Index                      |
| UN    | : | Understanding of Policyholders          |

## Abstract

Employees' State Insurance Corporation is one of the most important and comprehensive social insurance organisations in India. It provides socio-economic protection to the organised labour force through its multidimensional social security scheme known as ESI scheme. The current study intends to make a detailed analysis of various dimensions of service quality provided by ESI Corporation in Kerala during the post ESI reform period. It also studies the awareness and knowledge level of ESI policyholders regarding the services of ESI Corporation and the level of utilisation of ESI benefits. Further it evaluates the satisfaction level and sense of social security experienced by ESI policyholders from the services of ESI Corporation. This study is both descriptive and analytical in nature and is mainly based on primary data. Primary data were collected from ESI policyholders registered in Kerala by using a structured questionnaire. Multistage stratified random sampling technique is used for selecting the respondents of the study. Both descriptive and inferential statistical tools were used for analysing data. The results of the study revealed that awareness and knowledge level about ESI services is below average among ESI policyholders. Low level of awareness and knowledge is identified as one of the main reasons for low level of utilisation of ESI services. The results also showed that the service quality offered by the ESI Corporation is only on an average level. Analysis of the satisfaction level revealed that ESI policyholders are dissatisfied with communication of information, procedural formalities and grievance handling mechanism. Furthermore, it is found that the Corporation is offering above average level of health protection, average level of income security and below average level of risk coverage to its policyholders. Findings of the study pointed out the urgent need for the ESI Corporation to implement comprehensive measures to improve the awareness and knowledge level of ESI policyholders for increasing the level of utilisation of ESI benefits. The study also suggests that improving service quality is essential for enhancing the satisfaction level and sense of social security experienced by the ESI policyholders.

**Key words:** Employees' State Insurance, Awareness and Knowledge, Service Quality, Satisfaction, Sense of Social Security

  
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## സംഗ്രഹം

എംപ്ലോയീസ് സ്റ്റേറ്റ് ഇൻഷുറൻസ് കോർപ്പറേഷൻ ഇന്ത്യയിലെ ഏറ്റവും പ്രധാനപ്പെട്ടതും സമഗ്രവുമായ സാമൂഹ്യ ഇൻഷുറൻസ് സ്ഥാപനങ്ങളിൽ ഒന്നാണ്. ഇ.എസ്.ഐ.സ്കീം എന്നറിയപ്പെടുന്ന ബഹുമുഖ സാമൂഹ്യ സുരക്ഷാപദ്ധതി മുഖേന ഇ.എസ്.ഐ. കോർപ്പറേഷൻ സംഘടിത മേഖലയിലെ തൊഴിലാളികൾക്ക് സാമൂഹ്യസാമ്പത്തിക സംരക്ഷണം നൽകുന്നു. കേരളത്തിലെ ഇ.എസ്.ഐ കോർപ്പറേഷന്റെ പരിഷ്കരണാനന്തര കാലഘട്ടത്തിലെ സേവന ഗുണനിലവാരം വിശദമായി പഠനം ചെയ്യുവാനാണ് നിലവിലുള്ള പഠനം ഉദ്ദേശിക്കുന്നത്. ഇ.എസ്.ഐ കോർപ്പറേഷന്റെ വിവിധ സേവനങ്ങളെക്കുറിച്ചുള്ള ഇ.എസ്.ഐ പോളിസി ഉടമകളുടെ അവബോധവും അറിവും പഠിക്കുന്നതും പോളിസി ഉടമകൾ എത്രത്തോളം ഇ.എസ്.ഐ ആനുകൂല്യങ്ങൾ പ്രയോജനപ്പെടുത്തുന്നു എന്ന് പഠിക്കുന്നതും ഈ പഠനത്തിന്റെ മറ്റു ലക്ഷ്യങ്ങളാണ്. ഇതു കൂടാതെ ഇ.എസ്.ഐ പോളിസി ഉടമകൾക്കു ഇ.എസ്.ഐ സേവനങ്ങളിൽ നിന്നു ലഭിക്കുന്ന സംതൃപ്തിയുടെ നിലവാരവും അവരുടെ സാമൂഹ്യ സുരക്ഷാ ബോധവും ഈ പഠനം വിലയിരുത്തുന്നുണ്ട്. വിവരണാത്മകവും വിശകലനാത്മകവുമായ ഈ പഠനം പ്രധാനമായും പ്രാഥമിക വിവരങ്ങളെ അടിസ്ഥാനമാക്കിയുള്ളതാണ്. കേരളത്തിൽ രജിസ്റ്റർ ചെയ്ത ഇ.എസ്.ഐ പോളിസി ഉടമകളിൽ നിന്നും ഘടനാപരമായ ചോദ്യാവലിയുടെ സഹായത്തോടെയാണ് പ്രാഥമിക വിവരങ്ങൾ ശേഖരിച്ചിട്ടുള്ളത്. ബഹുഘട്ടങ്ങളുള്ള സ്ട്രാറ്റിഫൈഡ് റാൻഡം സാമ്പിളിംഗ് രീതി ഉപയോഗപ്പെടുത്തിയാണ് പ്രതികരണ ദാതാക്കളെ തിരഞ്ഞെടുത്തത്. ശേഖരിച്ച വിവരങ്ങൾ വിശകലനം ചെയ്യുവാനായി വിവരണാത്മകമായതും അനുമാനാത്മകമായതും ആയ വിവിധ സ്ഥിതി വിവര ശാസ്ത്ര ഉപകരണങ്ങൾ ഉപയോഗപ്പെടുത്തിയിട്ടുണ്ട്. ഇ എസ് ഐ പോളിസി ഉടമകൾക്ക് ഇ.എസ്.ഐ സേവനങ്ങളെക്കുറിച്ചുള്ള അവബോധവും അറിവും കുറവാണെന്ന് പഠന ഫലങ്ങൾ വ്യക്തമാക്കുന്നു. ഇ.എസ്.ഐ സേവനങ്ങളുടെ കുറഞ്ഞ ഉപയോഗത്തിന്റെ ഒരു പ്രധാനകാരണം പോളിസി ഉടമകൾക്ക് സേവനങ്ങളെക്കുറിച്ചുള്ള കുറഞ്ഞതോതിലുള്ള അവബോധവും അറിവും ആണെന്ന് പഠനം കണ്ടെത്തി. ഇത് കൂടാതെ ഇ.എസ്.ഐ കോർപ്പറേഷൻ ശരാശരി സേവന ഗുണനിലവാരം മാത്രമാണ് നൽകുന്നതെന്ന് പഠനത്തിന്റെ ഭാഗമായി കണ്ടെത്തി. സംതൃപ്തിയുടെ നിലവാരം വിശകലനം ചെയ്തതിലൂടെ ഇ.എസ്.ഐ പോളിസി ഉടമകൾ വിവര വിനിമയത്തിലും ഔദ്യോഗികമായ നടപടിക്രമങ്ങളിലും പരാതി പരിഹാര സംവിധാനത്തിലും അസംതൃപ്തരാണെന്ന് വ്യക്തമായി. ഇത് കൂടാതെ ഇ.എസ്.ഐ കോർപ്പറേഷൻ ശരാശരിയിലും ഉയർന്ന ആരോഗ്യസംരക്ഷണവും ശരാശരി വരുമാനസുരക്ഷയും ശരാശരിയിലും താഴ്ന്ന അപായ പരിരക്ഷയും ആണ് പോളിസി

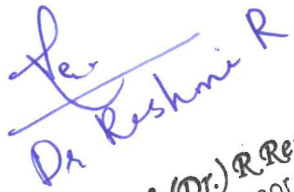


ഉടമകൾക്ക് നല്ലന്നതെന്ന് പഠനത്തിലൂടെ കണ്ടെത്തി. ഇ.എസ്.ഐ പോളിസി ഉടമകൾക്കിടയിൽ ഇ.എസ്.ഐ ആനുകൂല്യങ്ങളുടെ ഉപയോഗം വർദ്ധിപ്പിക്കുന്നതിനായി അവരുടെ അവബോധവും അറിവും മെച്ചപ്പെടുത്തുവാൻ നടപ്പിലാക്കേണ്ട സമഗ്രമായ നടപടികളുടെ അത്യാവശാവസ്ഥ ഈ പഠനം ചൂണ്ടിക്കാണിക്കുന്നു. അതിനോടൊപ്പം ഇ.എസ്.ഐ പോളിസി ഉടമകളുടെ സംതൃപ്തിയുടെ നിലവാരവും സാമൂഹ്യ സുരക്ഷാബോധവും മെച്ചപ്പെടുത്തുന്നതിനായി സേവന ഗുണനിലവാരം ഉയർത്തുന്നത് അത്യാവശ്യമാണെന്നും പഠനം നിർദ്ദേശിക്കുന്നു.

**താക്കോൽവാക്കുകൾ:** എംപ്ലോയീസ് സ്റ്റേറ്റ് ഇൻഷുറൻസ്, അവബോധവും അറിവും, സേവനഗുണനിലവാരം, സംതൃപ്തി, സാമൂഹ്യ സുരക്ഷാബോധം.

  
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# *Chapter 1*

## **INTRODUCTION**

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## **1.1 Introduction**

People experience uncertainty and loss on account of disease, disability, unemployment, old age and death. The concept of social security has developed out of the human need of safeguarding them against the risks created by natural uncertainties and from those contingencies arising out of life and work in contemporary societies. Social security refers to the measures developed by law which insure individuals against the loss or reduction of their earnings and for some expenses arising from marriage, birth or death (Rejda, 2015). In the broader sense, social security means the complete protection for an individual in family, work place and society. The major aim of social security programmes is to safeguard the welfare of the vulnerable and marginalised sections of the society through joint and participatory approach in the case of economic difficulty and physical distress arising from death, disablement and diseases. It reflects the collective action of the community to support its members to overcome various difficulties, which they cannot address by using their own resources. Social security measures reduce the income gap and ensure social welfare and sustainable development.

India is a welfare state (Robson, 1954). Social security is emerging as an indispensable tool for national development in India. Being a democratic state, the government of India has the responsibility of ensuring social and economic welfare to its people. Liberalisation, pandemics and competition from the global market further enhanced the need for a comprehensive social security system for the workforce in the country. Social security legislative framework existing in the country involve multiple labour laws and regulations. The major social security laws in India include ESI Act 1948, The Employees' Provident Fund and Miscellaneous Provisions Act 1952, The Workmen's Compensation Act 1923, The Maternity

Benefit Act 1961, Employees Family Pension Scheme 1971 etc. (Government of India, 2025). These laws primarily aim to foster sound industrial relations, quality work environment and stable workforce. These laws protect workers against risks caused due to accidents, health issues, retirement, unemployment etc. Employees' State Insurance Act was the first comprehensive legislation on social security for workers in independent India (Ministry of Labour and Employment, 2025). This Act led to the formation of a multi-dimensional and unified social security scheme for the socio-economic upgradation of the labour force in India known as Employees' State Insurance Scheme.

**Employees' State Insurance Scheme** is designed to offer medical care and social protection to employees in the organised sector and their dependents during contingencies like illness, maternity, death or disability caused by occupational disease or work-related injuries (Employees' State Insurance Corporation, 2022). ESI is a social insurance scheme which involves pooling of smaller resources to extend financial assistance for larger individual and collective social gains. ESI scheme is the only social security scheme in the country which covers most of the benefits included in the list provided by the International Labour Organisation such as medical benefit, sickness benefit, unemployment allowance, maternity benefit, dependent benefit, disablement benefit etc. It is based on the Gandhian philosophy of "contribution as per ability and benefits as per requirements."

**Employees' State Insurance Corporation** is responsible for formulating and implementing policies for the administration of ESI scheme. It is an apex corporate body and administrative ministry is Ministry of Labour and Employment, Government of India. The Corporation supervises and co-ordinates the functioning of ESI scheme through its network of regional and sub-regional offices, branch offices, ESI hospitals and dispensaries throughout the country. The Corporation manages ESI fund and is responsible for the disbursement of various benefits under ESI scheme. Being the largest social security organisation in the country, ESI Corporation is responsible for ensuring efficient and high-quality services to its beneficiaries to meet their needs and expectations. Delivering quality services build

confidence among the beneficiaries and it also encourages better utilisation of social security benefits.

ESI Corporation introduced its reforms, namely 'ESIC-2.0' in the year 2015 to improve its service delivery mechanism (Ministry of Labour and Employment, 2015). As a part of the reforms, the Corporation enhanced the coverage of ESI scheme and the scheme has been implemented in several new areas. ESI Corporation also reduced the contribution rate in 2019 to make the scheme more attractive. The number of ESI hospitals, dispensaries and branch offices also increased in the recent years. Since 2015, there has been substantial increase in the number of ESI registered units and policyholders throughout the nation.

Kerala is a state which is giving high importance to the social security and welfare of its people. As a result of ESI reforms, several new organisations in Kerala registered under ESI scheme. Hence, it is very essential to analyse how effectively ESI Corporation is fulfilling its mission in Kerala. Awareness and knowledge level are crucial components influencing the extent of utilisation of ESI benefits. Lack of awareness and knowledge leads to underutilisation of eligible ESI benefits. Since the proper identification of information gap helps to frame suitable communication strategies for dissemination of information, this study starts with the identification of the awareness and knowledge level of ESI policyholders and the level of utilisation of ESI benefits.

Another major concept discussed in the study is service quality. In today's era of cut throat competition, service quality has become a major area of interest for service organisations. "Service quality represents the overall impression of a consumer regarding the superiority or inferiority of services of an organization" (Bitner & Hubbert, 1994). Researches have revealed that high service quality leads to high customer satisfaction and positive behavioural intention (Agyapong et al., 2017). International Social Security Association (ISSA) provides guidelines and standards for improving service quality of social security organisations. According to Lee-Archer (2013) social security organisations are investing huge amount of money for improving the quality of services offered to its beneficiaries. Being the

major social security organisation in India, delivering quality service is crucial for ESI Corporation to ensure public accountability and trust. The study aims to analyse the service quality of ESI Corporation to assess how effectively ESI Corporation delivers its services and meets the requirements of its beneficiaries. The results provide insights in to the areas which need improvement in service design and delivery.

The policyholders' contribution constitutes the major source of revenue for the ESI Corporation. So, the very survival of ESI Corporation depends on the satisfaction level of its policyholders. Moreover, monitoring the level of satisfaction helps to evaluate and improve service performance. Satisfaction level is a direct indicator of how well the services are being received by ESI policyholders and the extent to which ESI Corporation meets the needs and expectations of its beneficiaries. Hence assessing the satisfaction level of ESI policyholders is also relevant. As a large section of the Indian population lives under conditions of socio-economic vulnerability, it is also essential to analyse the extent to which ESI Corporation ensures financial protection, better health outcomes and social stability of its beneficiaries. So, the study further analyses the sense of social security experienced by the ESI policyholders.

With this background, the study analyses the awareness and knowledge level of ESI policyholders, level of utilisation of ESI benefits, service quality of ESI Corporation, satisfaction level of ESI policyholders and the sense of social security experienced by the ESI policyholders. Since the previous researchers established the relationship between service quality, satisfaction level and behavioural intentions (Mosahab et al., 2010), this study also examines the relationship among these variables and the influence of mediating variables on this relationship. The results of the study help to identify the areas of service quality which require policy reforms and improvement in administration.

## **1.2 Statement of the problem**

Social security is a powerful tool to develop productive employment in a country (Nadagoudar & Patil, 2021). It enables workers to become more efficient by creating

confidence in them and also helps to maintain a qualitative work environment in the organization by eliminating industrial disputes (Rejda, 1997). Social security programs ensure a decent standard of living to its policyholders (Gottlieb, 2015) Employee State Insurance Corporation is one of the most important and comprehensive social insurance organizations in India which provides socio-economic protection to the organized labour force. The Corporation has recently introduced a lot of new developments in the ESI scheme. Health reforms initiative of Employee State Insurance Corporation namely ESIC 2.0 offered several new social security measures and new service delivery mechanism. (ESI Corporation, December 2019). ESI Corporation has also taken various relief measures to ensure the social security of working class during the period of pandemic COVID-19. As per the report released by the National Statistical Office, there has been substantial increase in the number of ESI registered units and ESI insured persons in India since 2017 (National Statistical Office, 2020).

Kerala is a state, which has a remarkable history in its contribution to protect the vulnerable sections of the society by using a lot of innovative social security measures (Goswami, 2007). ESI scheme, being the multi-dimensional social security measure, is implemented in all districts of the state. As ESI Corporation in the post reform era is offering modified services at the reduced contribution rate, it can play a major role on ensuring the social security of organised working class in Kerala. The quality of services provided can also significantly influence the utilization rate of ESI benefits and the satisfaction level of ESI policyholders. As per the annual reports of the ESI Corporation, there has been an increase of 32743 ESI registered units in Kerala from 2017 to 2023 (Employees' State Insurance Corporation, 2023). But the results of several previous studies made in relation to ESI Corporation shows that increase in quantity in terms of the number of ESI registered unit is not supported by a corresponding improvement in its quality of services and performance (International Labour Organisation, 2022; Singh, 2018) Similarly previous studies pointed out lack of awareness and knowledge of the ESI policyholders regarding various services of ESI Corporation as an issue requiring attention (Andal A, 2020). The literature also reveals that ESI Corporation has been

receiving persistent complaints from the insured persons about its service performance (Chellasamy & Ligy, 2018; Sasikala & Krishnamurthy, 2017). In this context, the study entitled “Social security for the organized working class in Kerala through Employees’ State Insurance Corporation – Analysis of service quality” is being conducted in Kerala.

This study intends to make a detailed analysis of various dimensions of quality of services rendered by Employees’ State Insurance Corporation and ESI policyholders’ satisfaction in Kerala during the post reform period. It also studies the awareness and knowledge level of ESI policyholders and the level of utilization of ESI benefits. It involves an attempt to identify the areas of service which need improvement to ensure health protection, income security and risk coverage to ESI policyholders.

The study analyses the service quality of ESI Corporation by modifying the SERVPERF scale suggested by Cronin & Taylor (1992) and its effect on the sense of social security of ESI policyholders. It further examines the mediating role of satisfaction in this relationship. The influence of ESI awareness/ knowledge on the satisfaction level of ESI policyholders is also investigated in this study. The study aims to answer the following questions:

1. What is the level of awareness and knowledge of ESI policyholders about various services of ESI Corporation?
2. What is the level of utilisation of ESI benefits among ESI policyholders?
3. How is the quality of services offered by ESI Corporation in Kerala during the post reform period?
4. What is the level of satisfaction of ESI policyholders regarding various benefits and services of ESI Corporation?
5. Is there any influence of ESI awareness and knowledge on the satisfaction level of ESI policyholders?

5. What is the role of ESI Corporation on ensuring the sense of social security among ESI policyholders in Kerala?
6. Whether the service quality perception influences the satisfaction level of ESI policyholders?
7. Whether the service quality perception influences the sense of social security of ESI policyholders?
8. Whether the satisfaction level influences the sense of social security of ESI policyholders?

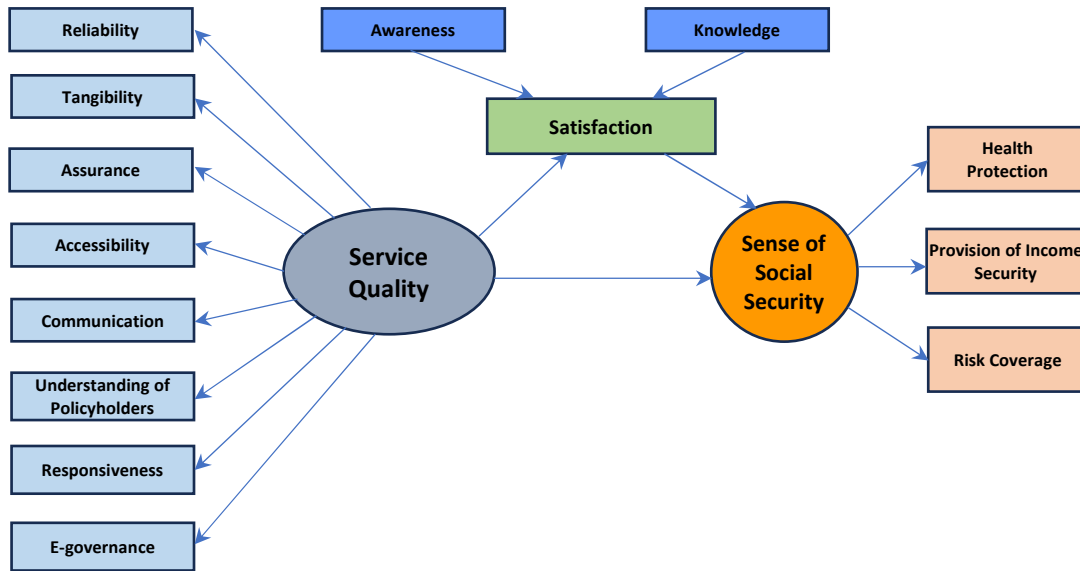
### **1.3 Objectives**

1. To identify the awareness and knowledge level of ESI policyholders about various services of ESI Corporation.
2. To examine the level of ESI benefits utilization among ESI policyholders.
3. To analyse the service quality offered by ESI Corporation during the post reform period.
4. To study the satisfaction level of ESI policyholders and the influence of awareness and knowledge on their satisfaction level.
5. To evaluate the Sense of Social Security experienced by ESI policyholders from the services of ESI Corporation.
6. To assess the influence of service quality on the sense of social security by considering satisfaction level as a mediating variable.

## 1.4 Conceptual Model

**Figure 1.1**

*Conceptual Model of the Study*



## 1.5 Hypotheses of the Study (Combined Form)

### Objective 1

H1: ESI policyholders do not have average level of awareness and knowledge regarding various services of ESI Corporation.

H2: There is significant difference in the awareness and knowledge level about various services of ESI Corporation among policyholders of different demographic groups and ESI details.

### Objective 2

H3: There is significant association between the level of ESI benefit utilization and their demographic profile and ESI details.

H4: There is significant association between the level of ESI benefit utilization and their awareness and knowledge level.

**Objective 3**

H5: ESI Corporation does not offer average level of service quality to its policyholders.

H6: There is significant difference among ESI policyholders of different demographic groups and ESI details in respect of their perception regarding various factors of service quality.

**Objective 4**

H7: ESI Corporation does not offer average level of satisfaction to its policyholders.

H8: There is significant difference in the satisfaction level towards services of ESI Corporation among policyholders of different demographic groups and ESI details.

H9: Awareness level on ESI services has a positive effect on Satisfaction Level of ESI policyholders.

H10: Knowledge level on ESI services has a positive effect on Satisfaction Level of ESI policyholders.

**Objective 5**

H11: ESI Corporation does not offer average level of sense of social security to its policyholders.

H12: There is significant difference in the sense of social security among ESI policyholders of different demographic groups and ESI details.

**Objective 6**

H13: Service quality of ESI Corporation has a positive effect on policyholders' satisfaction.

H14: Service quality of ESI Corporation has a positive effect on the sense of social security experienced by the ESI policyholders.

H15: ESI Policyholders' satisfaction has a positive effect on their sense of social security.

H16: ESI Policyholders' satisfaction has a mediating role between service quality of ESI Corporation and sense of social security of ESI policyholders.

### **1.6 Operational Definition of the Terms/ Concepts**

Operational definition of the various terms and concepts used in the study are described below

- **Awareness**

Awareness refers to the extent to which ESI policyholders recognize and perceive various benefits and services of ESI Corporation.

- **Knowledge**

Knowledge refers to deeper understanding of the services and benefits offered by ESI Corporation. It also involves comprehension of the procedural formalities under ESI scheme.

- **Service Quality**

Service quality shows the perception of ESI policyholders regarding the excellence of ESI Corporation in delivering its promised benefits and services.

- **Reliability**

Reliability shows the ability of ESI Corporation to perform the promised services in an accurate, dependable and timely manner. It includes timely claim settlement, ensuring correctness of medical records and corruption free service performance.

- **Tangibility**

Tangibility represents the availability and appearance of technically graded physical facilities, equipments and qualified staffs in adequate number in the ESI hospitals/ dispensaries and branch offices of the ESI Corporation.

- **Assurance**

Assurance represents the knowledge and behaviour of the staffs of ESI healthcare facilities and branch offices to encourage trust and confidence among policyholders towards the services of ESI Corporation.

- **Accessibility**

Accessibility refers to the ease and convenience with which ESI policyholders can avail the services of ESI healthcare institutions and Branch Offices as per their requirements.

- **Communication**

Communication shows the ability of ESI Corporation to provide clear, accurate and updated information about its benefits and services to ESI policyholders in an understanding manner.

- **Understanding of Policyholders**

It shows the ability of the staff of ESI hospitals/ dispensaries and branch offices to understand the needs of ESI policyholders and providing them individual care and attention to delight them.

- **Responsiveness**

Responsiveness shows the willingness and readiness of the staffs of ESI branch offices and ESI hospitals/ dispensaries to assist the policyholders by offering prompt and timely services.

- **E-governance**

E-governance refers to the ability of ESI Corporation to offer various services and information exchange to its beneficiaries with the help of information and communication technology. It includes online availability of policyholders' information, online claim processing, online grievance redressal procedure etc.

- **Satisfaction**

Satisfaction shows the extent to which the services of ESI Corporation meet the expectations of ESI policyholders. It reflects the evaluative judgement of the quality of services of ESI Corporation by its policyholders.

- **Sense of Social Security**

Sense of Social Security shows the extent to which ESI Corporation provides health protection, financial security and risk coverage to ESI policyholders by reducing their exposure to huge medical expenses, financial difficulty and stress arising out of emergencies such as employment injury, occupational hazard etc.

- **Health Protection**

Health protection refers to the extent to which ESI Corporation protects the health of its policyholders by providing free access to preventive healthcare services, medical and diagnostic services and also by offering medical bill reimbursement facility.

- **Income Security**

Income security refers to the extent to which ESI Corporation safeguards its policyholders from financial instability caused due to work related injury, occupational hazards/ diseases, disability and unemployment.

- **Risk Coverage**

Risk Coverage refers to the extent to which ESI Corporation sustains the quality of life of insured persons during crisis by reducing stress and improving confidence level.

- **Organised working class**

Organised working class refers to the workers who are employed in organisations which are registered with the government and follow its regulations and guidelines. The employment term is regular and fixed for the organized working class and they are also offered job security and social benefit.

- **ESI Policyholder**

ESI policyholder is an employee working in a factory or shop/ establishment and registered under the ESI scheme.

- **ESI Beneficiary**

A person who is eligible to receive any benefit under ESI scheme is termed as an ESI beneficiary. It includes both ESI insured persons and their dependents.

- **Factory**

Factory means any premise in which manufacturing process is being carried on and is not seasonal in nature.

- **Shop/ Establishment**

Shop/ establishment refers to any shop, hotel, restaurants, cinemas including preview theatres, road motor transport establishments, newspaper establishments, private educational and medical institutions in which 10 or more persons are employed and registered under ESI scheme.

- **ESI Contribution**

The amount of monthly premium payable to the ESI Corporation in respect of an ESI insured person is called ESI contribution.

- **ESI Claim**

ESI claim is a request to the ESI Corporation for receiving various cash benefits eligible under ESI scheme.

### **1.7 Significance of the Study**

Social security constitutes an important step towards the goal of a welfare state by maintaining economic and social peace during adverse situations (International Labour Organisation, 2001). Employee State Insurance Corporation is the largest multi-dimensional social security organization in India which provides social

protection to employees in the organized sector and their dependents through its distinctive social security scheme. The new initiatives of ESI Corporation have caused significant changes in the social security benefits under ESI scheme and also high increase in the number of insured persons in Kerala. About 10 lakhs insured persons and their family members constitute the beneficiary chain of about 30 lakhs in Kerala (Employees' State Insurance Corporation, 2023). During the post reform period, ESI Corporation is undertaking numerous quality initiatives to boost policyholders' satisfaction and it is making huge investment for ensuring the sense of social security of its policyholders. Hence, it is essential to analyse various dimensions of the service quality of ESI Corporation.

Social security service quality refers to the qualitative aspects of the benefits and services offered by a social security organization to its beneficiaries. Service quality improvement starts with the measurement and analysis of service quality. Delivering quality service results in to greater trust and confidence in the social security system and better sense of social security (International Social Security Association, 2016). Moreover, improved service quality leads to increased satisfaction and positive behavioural intention (Agyapong et al., 2017). As the economic crisis caused by the global pandemic COVID-19 and the natural calamities frequently occurring in Kerala has increased the need for social security measures, the study conducted to analyse the service quality and the sense of social security of ESI policyholders is quite relevant in the present context.

The present study has been undertaken to analyse the quality of services rendered by Employee State Insurance Corporation in Kerala during the post reform period by using the modified SERVPERF scale. The study also tries to identify the awareness and knowledge level of ESI policyholders and the level of utilization of ESI benefits. The study further examines the satisfaction level of ESI policyholders and also investigates the role of ESI corporation on ensuring the social security of ESI policyholders. The outcome of the study will be useful to the policy makers, Employee State Insurance Corporation and the beneficiaries of the ESI scheme. For the Employee State Insurance Corporation, the study would be useful to identify the

areas which need improvement so that the quality of its services can be enhanced. The results of the study help the ESI Corporation to enhance transparency in its services and accountability of ESI staffs. Identification of the awareness and knowledge level helps the organization to refine its communication strategies as per requirements. Analysis of the satisfaction level provides insights in to making ESI services more user friendly and responsive to customer needs. The study will help the policy makers in developing innovative social security measures under the scheme for improving the sense of social security of policyholders. The study also provides a platform to ESI policyholders for expressing their opinion regarding the service quality of ESI Corporation and the areas in which they are dissatisfied.

### **1.8 Scope of the study**

ESI Corporation is a multi-dimensional and comprehensive social security organization in the country. The Corporation is spending huge amount of money for providing services to its policyholders. Hence, it is essential to analyse the quality of services offered and the level of social security ensured by the ESI Corporation. The present study has been undertaken to analyse the perceptions of insured persons regarding the quality of services offered by Employee State Insurance Corporation in Kerala. The service quality is analysed by using the modified SERVPERF scale based on 8 dimensions such as Reliability, Tangibility, Assurance, Accessibility, Communication, Responsiveness, Understanding of policyholders and E-governance. Data relating to the Perception of ESI policyholders regarding various dimensions of service quality are considered for the study. The expectation scores of the respondents are not collected. The study also tries to identify the awareness and knowledge level about ESI services as well as the level of utilization of ESI benefits. Further it studies the satisfaction level of ESI policyholders and investigates the sense of social security experienced by them. Sense of Social Security is assessed by considering three factors such as Health Protection, Provision of Income Security and Risk Coverage. Awareness and knowledge level, service quality, satisfaction and sense of social security are measured by using five-point Likert scale. The level of ESI benefit utilization is measured by using a categorical scale.

The researcher collects data from ESI policyholders registered in Kerala. It includes both the policyholders working in factory and shops/ establishments. Shops/ Establishments include shops, hotels, restaurants, cinema theatre, road-motor transport undertaking, newspaper establishments and private medical and educational institutions in which 10 or more persons are employed. The study covers all districts of Kerala. The effectiveness of benefits offered to ESI dependents and other beneficiaries as well as the super specialty medical services provided in the tie-up hospitals are not assessed in this study.

### **1.9 Limitations of the study**

1. The data collected through questionnaire is based on respondents' self-perceptions which may be subject to personal bias or misunderstanding of questions.
2. The study involves only a cross-sectional analysis of the service quality perception, satisfaction and sense of social security of ESI policyholders at a specific point of time. It does not involve a longitudinal analysis of the responses over a period of time to derive more meaningful results.
3. The data are collected on the basis of a sample survey. So, there is a possibility of sampling errors.

### **1.10 Chapter Scheme**

The research report is organized and presented under 10 chapters as below:

#### **Chapter 1: Introduction**

This chapter includes a brief introduction to the topic, statement of the research problem and research questions, objectives and hypotheses of the study, conceptual framework, operational definition of the concepts, significance and scope of the study, limitations of the study and chapter scheme.

## **Chapter 2: Review of Literature**

This chapter reports a review of the studies already done in the concerned topic. The review has been classified based on the objectives in to three groups such as review relating to ESI Corporation; review relating to social security and review based on service quality and satisfaction. At the end of the chapter, research gap is also presented.

## **Chapter 3: Theoretical Framework**

This chapter begins with the meaning and features of social security, various international organisations for social security, social security legislations and measures. It is followed by a detailed explanation of the history, constitution and the organizational structure of ESI Corporation, benefits under ESI scheme, ESI Act etc. It also includes a detailed overview of the meaning and importance of service quality and various service quality models.

## **Chapter 4: Research Methodology**

This chapter includes introduction, research design, research onion, source of data, population of the study, sampling design, tools for data collection and analysis, variables of the study, pilot study, results of reliability, validity and normality checking, period of data collection, test of randomness and software used for data analysis.

## **Chapter 5: Analysis of Awareness and Knowledge about ESI Services and Level of ESI Benefits Utilisation**

This chapter presents the demographic profile and ESI details of the respondents of the study. It analyses the awareness and knowledge level of ESI policyholders and compare it across the respondents of various demographic groups and ESI details. Further it analyses the level of ESI benefits utilization and its association with demographic profile and ESI details of the respondents. The association between the level of ESI benefit utilization and the awareness and knowledge level of ESI policyholders are also reported in this chapter.

### **Chapter 6: Analysis of Service Quality of ESI Corporation**

This chapter analyses the service quality of ESI Corporation by using the modified SERVPERF scale. It involves the descriptive statistics of service quality and compares the level of service quality across the respondents of various demographic groups and ESI details.

### **Chapter 7: Analysis of Satisfaction Level and Sense of Social Security of ESI Policyholders**

This chapter is divided in to two sections. The first section involves the descriptive statistics of satisfaction and its comparison across various demographic groups and ESI details. The second section presents the descriptive statistics of sense of social security and its comparison across various demographic groups and ESI details.

### **Chapter 8: Analysis of Relationship Among Service Quality, Satisfaction Level and Sense of Social Security and the Influence of Awareness and Knowledge on the Satisfaction Level**

This chapter presents the influence of the service quality of ESI Corporation on the sense of social security of ESI policyholders. It reports the mediating effect of policyholders' satisfaction in this relationship. It also presents the influence of ESI awareness and knowledge on the satisfaction level of ESI policyholders.

### **Chapter 9: Summary, Findings and Conclusion**

This chapter presents the overall summary of the research work, findings based on the objectives of the study and conclusion of the thesis.

### **Chapter 10: Recommendations, Implications and Scope for Further Research**

This chapter highlights the recommendations and implications contributed by the researcher based on the findings of the study. Scope for further studies is also mentioned at the end of this chapter.

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## *Chapter 2*

# **REVIEW OF LITERATURE**



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## **2.1 Introduction**

The current study analyses the service quality, satisfaction level and sense of social security of ESI policyholders in Kerala. Besides that, the study aims to identify the awareness and knowledge level of ESI policyholders and the level of utilisation of ESI benefits. As a part of the study, the researcher conducted a detailed review of previous studies relating to these topics. Literature review is an essential step in the research process which guides the researcher from problem formulation till report writing. In this study, the researcher has reviewed articles, research dissertations, working papers, conference proceedings, text books and various reports published by the ESI Corporation, International Social Security Association and International labour Organisation. Recent studies were mainly considered for the review purpose. However, some selected highly cited old literature have also been considered due to its significant impact on the current study. The researcher searched relevant literature through various databases such as Scopus, Web of Sciences, Pro Quest, PubMed, JSTOR, Google Scholar, Shodhganga, Delnet, International Bibliography of the Social Sciences (IBSS), EBSCO Open Dissertations etc.

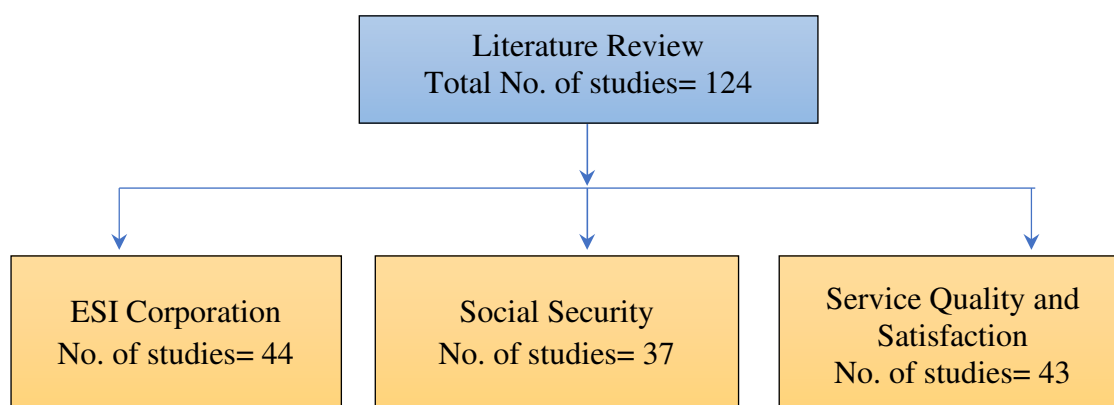
## **2.2 Themes of Literature.**

Various methods are available for literature review such as Thematic Review, Bibliometric Analysis, Systematic Literature Review, Meta Analysis etc. In this study, the researcher followed a thematic approach for writing literature review. Thematic review is concerned with critical evaluation of the related literature based on themes. It involves presenting and synthesising information in a narrative format and identifying research gaps in the literature. In this chapter, the researcher classified the relevant previous literatures based on the objectives of the study under

three broad headings such as review relating to 1. Employees' State Insurance Corporation, 2. Social Security and 3. Service Quality and Satisfaction.

**Figure 2.1**

*Literature Review of the Study*



### **2.2.1 Literature Reviews on ESI Corporation**

Under this section, various studies which highlight the working of ESI Corporation, awareness of ESI policyholders, various benefits under ESI scheme, Provisions of ESI Act, problems of ESI policyholders, service quality of ESI Corporation and satisfaction level of ESI policyholders are reviewed and reported.

Employees' State Insurance Corporation (2024) published standard note on Employees' State Insurance Scheme on 1-1-2024. The standard note explains the ESI Act under the Code on Social Security, 2020. As per the new social security code, the provision for voluntary coverage of establishment with less than 10 persons has been incorporated under the ESI Act. Similarly, the establishments engaged in hazardous or life-threatening occupation have to register their every employee under the ESI scheme. It involves provision for special scheme for unorganised workers, gig workers, platform workers etc. It also contains the measures taken by ESI Corporation during COVID-19 pandemic period.

International Labour Organisation (2022) assessed the health seeking behaviour, requirements and challenges of the beneficiaries of ESI scheme. The study also investigated the knowledge, attitude and awareness of beneficiaries in relation to

ESI scheme and put forward some suggestions to enhance the service coverage and facilities to beneficiaries. The study found that ESI covers one tenth of India's population. Employees are more aware about medical benefits but their awareness level is far less on cash benefits. Significant differences in health care utilisation across states reported in the study revealed the variations in treatment seeking behaviour across states. The key factors hindering access and uptake of health benefits under ESI scheme are insufficient health infrastructure availability, inadequate health workforce and shortages and stock-out of essential medicines and supplies.

Sasidharan & Manoharan (2021) studied about the awareness and utilisation of ESI benefits and satisfaction among the employees regarding ESI scheme in Trissur. Findings of the study showed significant relationship between awareness level and utilisation of ESI benefits. Employees mainly came to know about ESI scheme from their employers and co-workers. The ESI benefits mostly utilised by employees are medical benefits, sickness benefits and maternity benefits. The result showed that most of the ESI beneficiaries are satisfied with the reimbursement of medical bills under ESI scheme. The researchers suggested conducting awareness programs, simplifying the procedural formalities and improving the infrastructural facilities in ESI hospitals for enhancing the satisfaction level of ESI policyholders.

Andal A (2020) found that among the benefits provided by ESI Corporation medical benefit is the most useful one which is followed by dependents benefits and sickness benefits. The awareness level, knowledge level, frequency of usage, satisfaction and positive perception are found to be high among the respondents of above 50 years of age. Similarly, these factors are high among the post graduate respondents. The study further revealed that the knowledge level on ESI schemes influences the frequency of availing services from ESI. The study concluded that, even though the employees have a good perception towards ESI scheme, their awareness and knowledge about ESI scheme is very low.

Kavitha & Arangasamy (2020) examined the payer and provider role of Employees' State Insurance Corporation and its problems. The authors reported that the

Government run ESI office is bureaucratic oriented and hence the response time is slow. Low empathy of doctors, poor sanitary conditions and poor technology are the other major problems of ESI reported in the study. The study reported that ESI hospitals' drug purchases are centralised and auction based. Hence corruption can be rampant and it adversely affect the drug efficacy and the quality of medical services.

M. Singh et al. (2020) tried to find out whether the waiting time is a predictor of patient satisfaction at Out Patient Departments in ESI hospital, Faridabad. Multiple Linear Regression analysis revealed that the time taken from the laboratory or OPD to pharmacy for taking drugs and time spent in the laboratory are significant predictors of satisfaction. Findings showed that patients waited for long time to visit the doctor were less satisfied. But more time spent by a pharmacist to explain the dosage and frequency of prescribed drugs increased the level of satisfaction of the patient or attendant.

Prasad & Ghosh (2020) pointed out that increase in the beneficiary base resulted substantial increase in the revenues and huge surpluses of ESI Corporation. The deficiencies in the use of resources under ESI scheme can be addressed by redesigning the scheme according to Managed Care model. The managed care model health care system monitors and coordinates care through the whole range of services and promotes cost effective use of services.

Sriram & Pichaandy (2020) conducted a study to identify the benefits and barriers to the effective adoption of a Health Management Information System among patients in the ESI Corporation hospital and dispensaries in the Tirunelveli sub-region and also to determine the ways in which the system can be improved. The authors found that the application of information technology in the healthcare sector enhances the effectiveness of the care provided to patients and it helps to meet consumer expectations for service and access to information. The study recommended the involvement of ESI patients in HMIS software development. Patients' involvement in the software development would lay a foundation for the development of personal electronic health records for the ESIC patients in the future.

Deshmukh & Upadhye (2019) made an attempt to measure the patient satisfaction of outpatient department at ESI hospital in Nagpur, India. Results reported that most of the patients chose ESI hospital for treatment because the ESI hospitals are nearer to their residence and the insured persons get free services from ESI hospitals. Results also showed that patient satisfaction was average at the registration counter and for the basic facilities such as seating arrangement, adequacy and cleanliness of toilets, waiting room at the dispensary etc. But most of the patients were satisfied with the time given by the doctor and availability of the doctor.

Garg & Singh (2019) examined the various services and facilities at ESI hospitals and analysed the satisfaction of beneficiaries in this regard. Findings showed that most of the ESI dispensaries do not have sufficient moving area in the building and the conditions in the ESI dispensaries are not as per the expectations of beneficiaries. Majority of the ESI dispensaries do not have facilities for emergency, antenatal and postnatal check-up, cold storage, diagnostic centre etc. Due to lack of infrastructural facilities in the ESI dispensaries, the level of dependence on tie-up hospitals is more among the beneficiaries.

Jain & Kaondal (2019) investigated the influence of various dimensions of service quality on the satisfaction of ESI beneficiaries by using the SERVQUAL model. Tangibility, reliability, responsiveness, assurance and empathy were the dimensions considered under SERVQUAL model. The results of the study showed that there is no significant difference between employment particulars of ESI beneficiaries and their perception towards various dimensions of service quality. Findings further showed statistically significant moderate positive correlation between various dimensions of service quality and beneficiaries' satisfaction.

Jayantkumar & Dasharathbhai (2019) examined the patient satisfaction of outpatient department in ESI hospitals at Ahamedabad, Vadodara and Surat in the state of Gujarat. The study considered 6 independent variables such as physical facilities, physician services, pharmacy services, registration services, waiting time and working schedule and one dependent variable which is patient satisfaction. The researchers found that the main factors contributing to the satisfaction of patients are

physical facilities, physician services, registration services and working schedules. The least contributing factors are waiting time and pharmacy services.

Kaondal (2019) recommended that ESI doctors should be familiarised with the occupational disease and injuries of their area and conduct monthly meeting of ESI doctors, Social Security Officers and representatives of the establishments to co-ordinate the social security and safety measures. The study further suggested establishing a public relation machinery under ESI Corporation for giving information to the workers about their rights and new benefits under the scheme. The study also proposed organising free medical camps periodically for identifying occupational diseases and sharing information to the workers regarding the process of availing benefits under ESI scheme.

Chellasamy & Ligy (2018) assessed the impact of the awareness level on the satisfaction of employees towards ESI scheme. Regression analysis revealed significant impact of awareness level on the satisfaction of employees. The researchers suggested conducting panchayat and block wise awareness programmes and displaying the procedures and regulations under ESI scheme in regional language to increase the awareness level of public about ESI scheme.

Garg (2018) made an attempt to assess the working mechanism of Employee State Insurance Corporation. The study pointed out that the functioning of advisory bodies of the ESI corporation is not satisfactory and there is no adequate representation of the employees and employers in these bodies. Similarly, most of the employers are not satisfied with the working of inspectorate and a large number of cases were pending with grievance redressal cell and employees' insurance court. Various other problems pointed out in the study are lack of awareness of various schemes of ESI, delay in getting payment, lengthy procedure for claiming benefits etc. The article suggested that personnel of inspectors and revenue recovery machinery must be sympathetic and courteous towards the employers. Mobile hospital can also be introduced for the benefit of the policy holders in rural areas.

Kusuma et al. (2018) identified that ESI scheme was better utilised in case of healthcare needs than RSBY. The study suggested to expand ESI scheme to all

workers in the informal sector to achieve equity in healthcare. This expansion would facilitate better utilisation of the resources of ESI. The study pointed out that conducting regular health camps by ESI will improve confidence among the workers regarding social security system.

Sasikala (2018) observed that the variables such as long distance from the workplace, poor service quality, insolent behaviour of personnel, lack of confidence, poor sanitation facility, lack of cleanliness, lack of adequate specialists and latest equipment are showing positive relationship with the variable non-preference of ESI hospitals. Prolonged waiting period is the major problem faced by the respondents while availing the services of ESI Corporation which is followed by behaviour of staff, distant location and cumbersome formalities.

Singh (2018) listed the challenges and problems in the working and service delivery of ESI scheme. Poor administration of medical facilities is the major problem pointed out in the study. The study proposed creation of a separate agency and private sector collaboration for administering health benefits under ESI scheme. Other suggestions include setting up of ombudsman for ESI services, launching a mobile application for communication with the ESI officials, treating each insured person as VIP, conducting awareness camps and seminars, scheduling the working time of ESI dispensaries as per the convenience of the policy holders etc.

Varughese et al. (2018) stated that the utilisation of ESI benefits depends upon the awareness level of employees and the awareness level depends upon the age, gender, education, occupation and experience of the employees. The results explained that most of the respondents are not getting the informative material published by the institution about ESI scheme and they are not satisfied with the measures taken by the institution for creating awareness about the scheme.

Begum (2017) made an attempt to evaluate the perception of doctors, nurses and other staffs relating to the infrastructural problems in Employees' State Insurance Hospitals and the level of dependence of ESI hospitals with the tie-up hospitals in Karnataka. The study found that the most of the ESI hospitals and dispensaries do not have their own buildings and the facilities in the existing buildings are

insufficient. ICUs, ICCUs, Dialysis units and Blood Banks are not well equipped and the equipment at operation theatres are of average quality. Inadequacy of the cold storage facilities, lack of proper sanitation facilities, insufficient ESIC aid and appliances, non-availability of surgical equipment, lack of ambulance facilities and lack of mortuary facilities are some other infrastructural problems reported in the study. Findings also showed that scarcity of manpower is another major issue faced by ESI hospitals and dispensaries.

Krishnamurthi & Sasikala (2017) tried to analyse the awareness of beneficiaries regarding the ESI scheme and the benefits available to them. The study revealed significant relationship between the gender and the awareness about the formalities to avail the ESI benefits. It further showed that male beneficiaries are more aware about the formalities than the female beneficiaries.

Kumar (2017) examined the execution process and the adequacy of various provisions laid down in the ESI Act. Some of the respondents opined that the major reason for the poor execution of the Act is the irresponsible attitude and behaviour of the personnel in ESI hospitals and dispensaries. The study recommended a provision of reward and punishment for the personnel working in the various departments of ESI Corporation for its effective functioning. It also suggested periodic grievance redressal meetings at district and block level to redress the complaints of aggrieved parties under the scheme.

Mitra (2017) tried to study the effectiveness of medical benefits provided under ESI scheme in Kolkata. Findings of the study showed that most of the respondents are not satisfied with the treatment in ESI dispensaries and other facilities offered under medical care. The researcher found that most of the ESI dispensaries handle high patient loads and are not properly equipped with infrastructure facilities and medicines. Due to these reasons majority of the ESI policy holders prefer private hospitals for treatment.

Sasikala & Krishnamurthy (2017) made an attempt to identify the problems faced by the insured persons under ESI scheme in Coimbatore district. Among the problems faced by the insured persons in availing the services of ESI Corporation

‘cumbersome formalities in availing the benefits’ has the highest mean score which is followed by prolonged waiting period, rude behaviour of the staff and unsuitable timing of the dispensary. Among the problems faced by the insured persons in availing the medical benefits ‘poor diagnostic services’ are ranked first, which is followed by unavailability of medicines, delay in reimbursement of treatment amount and poor quality of medicines.

Muthulakshmi (2016) observed that the major factor influencing the policy holders to take treatment in ESI hospitals is free treatment which is followed by convenience. Majority of the respondents opined that claiming benefits under the ESI scheme is difficult. The major problem faced by the insured persons is lack of doctor at the ESI dispensaries followed by lack of medical facilities, lack of medicines, distance to the ESI dispensaries, bottlenecks in procedures, lack of awareness of various schemes of ESI, lack of support by the employer, difficulty in claiming benefits etc.

Parri & Ranjithkumar (2016) tried to identify the reasons for not using the medical benefit scheme by some of the insured persons after retirement. Garrett score used in the study showed that poor medical care is the main reason which is followed by poor attention after retirement, high amount of contribution and poor confidence.

Baishya (2015) suggested to improve the corporate governance of the corporation by holding regular meetings and to create a database of the insured persons in order to prevent misuse of medical benefits. The researcher proposed to the Corporation to develop an effective MIS for ensuring timely settlement of claims and to distribute printed material about the scheme in a language known to the policy holders.

Battu & Chundi (2015) suggested stringent monitoring mechanism under ESI authorities to ensure ESI coverage for all eligible factories and establishments. In order to reduce the physical and financial constraints, the researchers suggested to the central government to bear the entire cost of running the scheme. The researchers also proposed the introduction of multiple card system in which employees and their dependents can conveniently make use of medical facility under

the scheme anywhere in the country. Different contribution rates for different industries and occupations have also been suggested in this study.

Rashida (2015) reported that all workers are aware about sickness benefits, dependant's benefits and leave benefits. Payment of funeral expense is the least known benefit under ESI scheme. Most of the respondents under study are getting information about the ESI scheme through interpersonal communication and majority of the industrial workers are utilising the sickness benefit.

Anandhi & Sivagnanasithi (2014) made an attempt to study the factors induced the insured persons for treatment in ESI dispensaries. Among the factors induced the insured persons for treatment in ESI dispensaries free medical care stands at the first which is followed by medical certification and good treatment. Among the factors prevented the insured persons from taking treatment in ESI dispensaries lack of medicines and facilities stands at the first which is followed by lack of doctors and lack of confidence. The study suggests that the insured persons should be allowed to take treatment from the hospital of their choice and the expenses are to be reimbursed by the corporation.

Divya & Vijayachandran Pillai (2014) showed that occupation will influence the awareness level about ESI scheme and the employees of educational institutions are more aware about ESI scheme than the employees of shops and financing companies. Findings also revealed that the occupation status does not influence the satisfaction level of ESI beneficiaries.

Dev (2013) recommended to frame a policy in which the insured persons can seek treatment from any hospital and the expenses will be subsequently reimbursed by the Corporation. It further recommended to give proper guidance to the insured persons regarding the formalities for claiming benefits and extending computerisation to all services of the ESI Corporation. Timely constitution of advisory bodies such as regional boards and local committees, conducting advisory body meetings at the regular intervals and introduction of mobile hospital concept were other suggestions given through the study.

Padma Priya (2013) tried to identify the gap between the expectations and perception of insured persons on ESI dispensaries and hospitals. A significant gap is observed between the expectations and perceptions of the insured persons in respect of the services offered by ESI dispensaries and hospitals. Highest gap score is observed in respect of the assurance dimension. The study suggested that ESI staff should be impartial, friendly, sympathetic and courteous to patients. For this purpose, ESI staff should be given some training. There should be adequate stock of medicines in all ESI dispensaries and hospitals. Centralised patient information record should be maintained in all ESI hospitals and dispensaries.

Verma et al. (2013) made an effort to determine the service quality dimensions under ESI scheme on patient's satisfaction. Chi-square test used in the study showed significant association between availability of doctor, behaviour of doctor, availability of medicines, quality of medicines and satisfaction with ESI services. The article recommended that the emergency services should be made available 24 hours a day for satisfaction of the insured persons.

D. Verma & Kumar (2012) examined the awareness level of the various benefits and provisions of Employees' State Insurance Act, 1948 among the industrial workers. The study pointed out that the level of awareness is low in the case of dependent, disablement and funeral benefits. The study suggested the use of modern communication media, conducting training programmes among workers and displaying the abstract of the Act in the notice boards in local language understood by the workers for improving the awareness level of industrial workers. The study also pointed out the role of regulatory agencies and labour union in increasing the awareness about the provisions of ESI scheme among the workers.

Mehra et al., (2012) conducted a study to assess the need related to worksite health promotion opportunities for workers covered by Employees' State Insurance Corporation. The study suggested that the Employees' State Insurance program gains a lot by keeping the workforce healthy and the corporation will incur lower payments for treatment of diseases. It will also enhance the image of ESI Corporation among the beneficiaries.

R. Verma et al. (2012) recommended that ESI dispensaries must be set up in the industrial area to make it more accessible and acceptable to the beneficiaries. It also suggested increase in the OPD timings and the facility of 24 hours emergency health care services for creating life support measures.

Sekar & Jeyakodi (2012) stated that utilisation of ESI benefits depends upon the awareness of employees about the scheme. The results showed significant association of age, gender and experience of the respondents with their awareness of the sickness benefit. The researchers suggested the joint effort of the corporation, employees, employees' organisations and the state governments in the development of ESI programs.

Dash & Muraleedharan (2011) analysed the extent of utilisation of health services of insured persons under the ESI scheme and its role in protecting the insured persons against huge health expenditure. The study found that the utilisation of healthcare is mainly determined by the socio-economic factors of beneficiaries. The researchers recommended that the government should construct more ESI hospitals/dispensaries and add more private hospitals to the panel of recognised hospitals to improve the accessibility under ESI scheme.

Senthil kumar (2011) made an attempt to analyse the policy holders' attitude towards ESI benefit and the working of ESI Corporation in Madurai. Findings revealed that most of the respondents came to know about the ESI scheme through the employers. Most of the respondents prefer to take treatment from ESI hospitals and only a few respondents face problems in availing ESI benefits. The grievances of most of the respondents are redressed. The overall performance of the ESI scheme in Madurai is found to be satisfactory as per the study. The study suggested to insist the employers to appoint a separate staff to manage the works of the ESI with company.

Jose (2006) conducted a study to analyse the effectiveness of the benefits provided to insured persons under the ESI scheme and also evaluated the working of the machinery of the corporation for the administration of the ESI scheme in Kerala. Findings showed that most of the respondents are not satisfied with the measures

taken by the corporation in providing information about the ESI scheme. Lack of quality of the medical care prevented the majority of the respondents from continuing in the medical benefit scheme offered by the corporation. Insured persons are not satisfied with the amount of cash benefit under the scheme. Similarly, there is much delay in getting cash benefits except sickness benefit. The respondents are not satisfied with the services of the administrative staffs. Most of the employers are not satisfied with the working of the inspectorates and revenue recovery machinery. Several complaints are pending in ESI courts and grievance redressal cell of the corporation. The study also revealed that the corporation maintained huge amount of reserves in all the years under study, but the return on the reserve fund investment is very low.

Rajamannar (2006) suggested that the medical facilities under the ESI scheme can be improved by giving good treatment by appointing specialised doctors in ESI hospitals and dispensaries. Provision of no claim bonus award for an insured person who does not claim any benefit during a year may be introduced. The amount of sickness benefit and the period under maternity benefit should be increased. Computerisation should be introduced to improve communication with the policyholders. In order to supervise the work of the ESI local offices, a vigilance committee can be formed. The Corporation should take initiative to give training to the employees to reduce accidents while working.

Bhat & Mavalankar (2000) found that duality of control by the ESI Corporation and the state government creates problem in the administration of ESI scheme. The management information system is not working properly under the scheme. The study suggests some reforms in the ESI scheme such as making the scheme autonomous which is managed by the workers and employers while the government lays down the guiding framework and also extending the scheme to unorganised workers through fixed income contribution.

Gumber & Kulkarni (2000) pointed out the scope for improvement of ESI facilities by opening underutilised facilities of ESI hospitals to the general public against nominal charges and allowing private practitioners to use its labs, evening OPDs,

operation theatres etc. The study suggests replacing panel doctors with mobile facilities to support the rural population. The study also proposes separation of health service function of ESI scheme from the cash benefit component in order to improve the quality of healthcare services as well as to reduce corruption in the disbursement of cash benefits.

### **2.2.2 Literature Reviews on Social Security**

This section reports the previous studies which discusses the importance and goals of social security programmes, various social security measures in developed and developing countries, challenges in the administration of social security programmes, social insurance literacy, social security service quality etc. The study considered only publications during the last 25 years.

Berkowitz (2025) explained the significance of social insurance on assuring health equity. Social insurance offers income support to those people having risk of insufficient income due to inability to work. The researcher observed that social insurance programs mainly protect people in some social roles such as childhood, pursuit of higher education, care giving, work limiting disability, unemployment and old age. It offers benefits only to eligible people and reduces macro-economic costs. The study further pointed out that social insurance reforms need an organised political coalition.

Boonstra et al. (2022) studied the concept of social insurance literacy among the workers receiving disability benefits. Findings of the study revealed an association between individual social insurance literacy scores and socio-economic features. The study suggests that social security institutions must take proper measures to identify and support people with limited social insurance literacy.

Mehrotra (2022) evaluated India's Social Security Code 2020 by analysing the principles and design for universalising social security by 2030. The author observed that around 91% of India's workforce is in informal sector and they are not covered by any form of social security. Indian Parliament passed Social Security Code 2020 with the intention of universalising social security. Through the study, the author

proposed different models for universalising social insurance for all workers. One model suggests that the new firms registering for GST should compulsorily register for the Employee Provident Fund Organisation and Employee State Insurance Corporation. Another model suggests that social insurance should be offered on a voluntary basis to different categories of workers. Subsidisation of the contribution of workers with insufficient contribution capacity is another model highlighted in the study.

Gupta (2021) discussed the salient features of Social Security Code, 2020 in detail. The article points out the differences between the provisions in older legislations and the provisions in new code. The article states that the social security organisations under the code have to prepare a budget of probable revenues and expenditure for each financial year and should submit the same to appropriate government. The researcher pointed out that the code is not comprehensive and it does not consider all kinds of workers. Similarly, the code differentiates between the employees of same establishment based on their income and do not support the demands of gender justice in India. The decentralised mode of supervision under the code leads to various inefficiencies. It will adversely affect migrant workers and ultimately lead to corruption. The researcher recommended a centralised body of administration to overcome most of these issues.

Ma & Cheng (2021) estimated the effect of social insurance contributions on workers' wages by using China Employee- Employer matching Survey data. The results of the study pointed out that the firms may transfer the increased burden of social insurance on to their workers and it may adversely affect the earnings level of workers. The decrease in the wage level of workers may result a decrease in the consumption level of goods and which ultimately lead to slow economic growth. The authors suggested that instead of increasing the social insurance contribution for firms and workers, the government should consider alternative ways of increasing the social insurance fund.

Molina-Vera (2021) provides evidence on how changes in the social security benefits encouraged formalisation of labour. The author pointed out that increase in

health insurance coverage as a social security benefit may change the incentives and encourage individuals to move from unregistered to registered firms and thereby increases formal employment rate.

Qian & Wen (2021) reviewed the major problems to expanding social insurance coverage for the informal workers in China. The authors pointed out that under a decentralised social insurance system, most of the informal workers do not like to be a part of the social insurance system because of low benefits and high compliance costs. Compliance with regulatory requirements is considered as another reason for under-coverage in the social insurance system. The study reported that the development and implementation of information system and data exchange mechanisms at various government levels are essential to reduce institutional barriers to register with the social security system.

Ståhl et al. (2021) defined social insurance literacy as the extent to which people understand different procedures and regulations involved in social insurance system and the extent to which social insurance system helps the clients to understand the system by providing information. The concept of social insurance literacy was defined in the article through a scoping literature review of the various concepts in social insurance field. The concepts reviewed for this purpose are financial literacy, health literacy, legal capability, insurance literacy and social security literacy. The study suggests that while developing a measure based on social insurance literacy, balance should be achieved between practical feasibility and comprehensiveness.

Zhang et al. (2021) examined the impact of social insurance contribution ratio on the productivity of private enterprises in the heavy pollution industry. The results of the study show that high amount of social insurance contribution encourage enterprises to improve human resource allocation efficiency and labour efficiency. However, the increase in the social insurance contribution ratio enhances labour cost and reduce the fund for technological progress in these enterprises. Thus, increase in the social insurance contribution ratio negatively affect the productivity of these enterprises. Therefore, it is crucial to fix the social insurance contribution ratio at a reasonable rate.

Bordoloi et al. (2020) explained different laws and schemes which govern social security for unorganised workers in India. The study tries to identify the problems and challenges existing in India's current labour legislations while universalising social welfare. The authors found that most of the provisions of Unorganised Workers Social Security Act have been retained in the new Social Security Code. Further some accountability and monitoring mechanisms in providing social security benefits have been relaxed in the social security code. The study recommended developing a common database for unorganised workers, streamlining their registration process and creating awareness about social welfare programs among unorganised workers.

Cubas & Silos (2020) examined how social insurance encourages occupational mobility. The authors argued that if the workers have less opportunity to insure earnings risk and are risk averse, they may continue in an unfit occupation without considering the opportunities offered by the labour market. Hence the study pointed out that lack of insurance is a source of worker misallocation. The study developed a theoretical model showing the interaction between earnings risk, social insurance and occupational mobility and found that when workers are willing to take more risk, occupational mobility increases.

John et al. (2020) examined various types of discrimination and human rights violation in connection with social security and health rights faced by Inter State Migrant Workers in India. Social security issues faced by migrant workers include non-provisioning of entitlements of government schemes, poor access to available schemes and services, long working hours, poor quality of accommodation, low wage compared to local workers, poor social interaction, social exclusion, limited access to health care services etc.

Kuka (2020) estimated the extent to which unemployment insurance mitigates the negative health effects of job loss. Higher unemployment insurance payments also lead to improved mental health and reduce the stress level and related issues among individuals. Thus, it produces improved self-reported general health status among unemployed during recession. But at the same time high unemployment insurance

benefits and longer duration can also lead to reduced job search, lower precautionary savings and longer unemployment spells.

Ma & Oshio (2020) conducted a longitudinal study to investigate the influence of 2 social insurance programs in China such as the New Rural Social Pension Insurance and the New Rural Co-operative Medical Scheme on the health outcomes of middle aged and older adults in rural areas. Study found that participation in the New Rural Social Pension Insurance was positively associated with some health outcomes. It is also found that participation in New Rural Co-operative Medical Scheme was not associated with any health outcome. Hence the authors recommended to reform these social insurance programs to optimise their positive impact on health.

Ministry of Law and Justice (2020) proposed the Code on Social Security, 2020. It is an act to amend and consolidate the laws relating to social security with the objective of extending the social security to all employees in the organised and unorganised sectors. As per this labour code, social security organisations include The Central Board of Trustees of Employees' Provident Fund, The Employees' State Insurance Corporation, The National Social Security Board for Unorganised Workers, The State Unorganised Workers' Social Security Board, The State Building and Other Construction Workers' Welfare Board and any other organisation or special purpose vehicle declared to be the social security organisation by the central government. Chapter IV of this new labour code explains about Employees' State Insurance Corporation.

Guan (2019) investigated the manner in which social insurance schemes improved self-rated health comparison among migrants employed in China. The study used multiple logistic regression models for analysing the relationship between unemployment insurance, pension insurance, work injury insurance and self-rated health comparison. The results of the study confirmed that the effects of social insurance on self-rated health comparison were mediated by the health insurance of migrants who are employed in China.

Nisa' & Sari (2019) analysed the relationship of social health insurance literacy with the utilisation of social insurance for maternity care. It is found that lack of social

health insurance literacy could affect participation in social health insurance and utilisation of its various health services. Social health insurance literacy enables people to understand the benefits of social health insurance. Hence literacy along with program promotion through media influence community participation in the program.

Shanmugam & Mahadevan (2019) observed that unorganised sector workers contribute significantly to the national wealth but they have no proper access to social security measures. So, he made an effort to assess the awareness level on labour welfare and its association with the socio-economic profile of the unorganised sector workers in Salem district. Results of the study showed that the level of awareness is positively associated with employees' age, family size, type of residence, work experience and the period of availing welfare benefits.

Kodama & Yokoyama (2018) examined the impact of increase in social insurance premium on employment, working hours and pay roll costs due to Japan's 2003 social insurance premium reforms. The authors found that increase in labour cost without productivity gains produced negative effect on both firms and workers. The authors observed that the social insurance premium reform provided good excuse for job cuts for large firms with over-employment and thus resulted a reduction in the level of employment and total labour cost in Japan.

Selvi (2018) in his study stated that social security is one of the human rights. But the money spent for social security in India is very low. So, there should be an efficient mechanism in the country to ensure social security to everyone in the society. Study suggested that in order to make the unorganised workers aware of the social security benefits, awareness campaigns are to be organised in a massive manner.

Zhao (2018) tried to assess whether information about social insurance schemes, enrolment process, cost and benefits influence participation in urban pension and health insurance programs among China's rural-urban migrants. Results indicated that in cities, if the premiums are low in relation to earnings, information encourages health insurance participation. But health insurance participation declines in cities if

the premiums are relatively high. The author suggested institutional reforms for unifying health insurance programs and offering subsidies in premium to lower income workers to attain universal coverage.

Hoda & Rai (2017) reviewed and analysed major labour regulations in India and evaluated them against the minimum standards mentioned in various ILO conventions. Findings revealed that the social security system in the country is comprehensive and it enables the workers to cope with crises such as illness, employment injury, death or old age. But it is subjected to a number of deficiencies which is mainly related to the unorganised sector. The authors also observed that the benefits under ESI scheme are truly remarkable.

Lee & Torm (2017) investigated the influence of social security provisions on the performance of small and medium sized firms in Vietnam. The results of the study showed that there is a positive correlation between social security coverage and firm survival. Firms which increase their social security measures experienced increase in their revenue per worker. Firms which contribute to social security can attract more motivated employees and can enhance the motivation level of their existing workers. Social security measures motivate the unorganised firms to register and thereby to become an organised firm.

International Social Security Association (2016) developed a set of guidelines to enable social security institutions to develop and improve service performance. Social security service quality refers to “how responsive a social security institution is to the multi-dimensional service requirements of its members and beneficiaries, given the institution’s human, financial and ICT resources and available support from the partners”. The guidelines are organised under 3 parts. The first part deals with structural issues to be addressed to support and facilitate the development of high-quality services for their clients such as extending coverage under financial constraints, addressing inequality, ensuring sustainability of the system, investment in social security education and culture etc. The second part deals with specific initiatives of the social security institutions to improve service quality such as measuring service performance against published standards, publishing performance

results, using feedback from the participants to improve the product development life cycle. The third part focuses on the continuous process to achieve excellent service provision. The researchers observed that treating people with respect, dignity and courtesy are essential to excellent service delivery. The study recommends that service quality can be improved by investing in the skills and capability of the staffs involved in service delivery.

Gottlieb (2015) explained the adequacy of social insurance benefits from the viewpoint of 8 fundamental goals of social insurance such as income compensation; ensuring a decent standard of living; reducing income risk arising from physical incapacity; universality, simplicity and a high take up of social rights; protecting insurability by balancing the expected benefits to the insured and the amount of contributions paid over the lifetime; risk reduction; intergenerational equity and containing work and savings disincentives. For this purpose, social benefits are divided in to 5 clusters such as universal benefits; earning substitutive benefits; selective benefits; benefits for physical incapacity and benefits intended to provide the insured with a decent minimum income. The authors defined the adequate level of contributions of an individual as a situation in which the benefits expected during the life time exceed contributions.

Rejda (2015) illustrates the basic principles of social insurance in his book ‘Social Insurance and Economic Security’ by explaining the features of the largest social insurance program in the United States- Old-Age, Survivor and Disability Income (OASDI) program. The author states that a financially sound social insurance scheme should have a definite plan for financing its benefits. According to him the major objectives of social insurance programs are to ensure economic security to the population, to reduce poverty, to protect important economic values and thereby provide stability to the economy.

Yao & Kim (2015) examined the gender differences of rural migrant workers participating in 3 social insurance programs such as pension insurance, work injury insurance and medical insurance in 4 cities in China. Study found that occupational

mobility decreased the possibility of social insurance participation and its impact is more among female workers when compared to male workers.

Witkowska & Lakstutiene (2014) made an attempt to determine the level of service quality of social insurance institutions. The study was carried out among the customers of Social Insurance Institutions and the Agricultural Social Insurance Fund in north-eastern Poland. The researchers applied SERVQUAL model with a seven-point Likert scale for analysing the service quality of social insurance institutions. The biggest gap between the expected and perceived service quality was found in respect of 'responsiveness' dimension. The study further shows that older and better educated customers are more satisfied with the social insurance service quality. The researchers recommend that in order to improve the service quality and customer support; the social insurance institutions should give more importance for the professional preparation of their employees.

Abdul Nasar & Ummathur (2013) discussed the evolution, history and the need of social security schemes in Kerala. Social security schemes in Kerala have 2 faces such as protective and promotional. Old age pension, assistance to disabled people, insurance etc are protective measures. Whereas welfare fund boards come under promotional measure. The study listed the problems in the functioning of welfare funds in Kerala such as disproportionate distribution of benefits under various schemes, low enrolment of workers, dual enrolment, bogus workers, difficulty to collect contribution etc. The authors suggested that the state should contribute large amounts to those funds in which the contribution from the workers and employers are insufficient.

George E Rejda (2011) examined the social insurance programs in the United States to determine the extent to which such programs support the principles of social justice. The study also analysed the antipoverty effects of social insurance programs. The author stated that social insurance programs support the principle of social justice if they reduce economic insecurity from old-age, disability, unemployment or death; increase work incentives; reward increase in productivity; reduce income

inequality; reduce poverty rate of the poor people and improve the overall quality of life for workers and their families.

Vonk & Kapuy (2008) explained the provisions relating to the refund of social insurance contributions to temporary migrant workers. The authors observed that temporary migrant workers are not getting any benefit in return for the payment of social insurance contributions. It is mainly due to the strict provisions and conditions stipulated in the social security legislations. Therefore, the reimbursement of social insurance contributions can be advocated as a measure to encourage migrants to remain in the country on a temporary basis.

Goswami (2007) felt that Kerala should take great pride in being the pioneer in India in initiating the social security measures for the poor and the unorganised. He found that since the welfare benefits are distributed through banks, the workers developed banking habits and they became more organised. It also reduced the conflicts between the worker and the employer. He also pointed out the limitations of the welfare fund model in the study. The major limitations are low benefits, difficulty in collecting contributions from the employers, poorer coverage of workers, poor administration of fund, lack of support from the trade unions and political parties, exclusion of migrant workers etc.

Government of India (2007) proposed that for reducing the gap in social security coverage, measures are to be taken at two levels. The first level is the restructuring of the existing institutional arrangements for the organised sector by removing the existing deficiencies and improving the service quality. The second level is creating a legal and administrative framework for extending the social security coverage to the unorganised sector. The first level can be achieved by improving the collection of contribution, delivery of benefits and record keeping. The issue at the second level can be addressed by introducing flexibility in the legislative and administrative framework through proper means tested schemes based on area, occupation, income etc.

Toots (2006) tried to analyse the service quality of internet based social security services through the application of institutional theory. The study investigated the

effect of institutional features such as power concentration, organisational hierarchy and the number of policy actors on the quality of e-services. Dependent variables used in the study for evaluating the quality of public websites are content, usability, interactivity and aesthetics. The results of the study demonstrated that the websites which provide practically relevant information encourage active engagement. The study proposed multichannel access to public services which combines both internet based and office-based services in order to build a new institutional design for attaining welfare state.

Bhattacharya et al. (2005) analysed the satisfaction level of workers in the urban non-state sector with the coverage of urban social insurance scheme in China and compared their perception level with workers in the state sector. The findings show that wholly foreign-owned enterprise had the highest proportion of workers receiving pension, unemployment, maternity and industrial injury insurance while private-owned enterprise workers had the lowest level of social insurance coverage. It also reports that workers in shareholding firms, state owned enterprises, joint ventures and wholly foreign owned enterprise are more satisfied with social insurance.

Saini (2005) made an attempt to analyse the major issues involved in the working of social security laws in India and the extent to which these laws ensure social protection in the country. The major issues in the working of the social security system pointed out in the study are high degree of bureaucracy and corruption. The researcher argued that the key instrument of social security in India which is ESI scheme suffers from various shortcomings. The study suggested to entrust the administration of the ESI scheme to a body of experts to improve its governance structure. For preventing the duplication of benefits and administrative efforts, an integrated framework of social security has been proposed in the study. The researcher also proposed the formation of separate welfare funds for people who are not covered under any other social security scheme.

Planning Commission (2002) reported that the social security system existing in the country is mainly designed for the organised sector. To cover the entire labour force,

many of the existing laws, programs and institutions need to be restructured. With the support of Self-Help Groups and voluntary organisations, community based and location specific social security schemes can be encouraged. The study recommends to extend the ESI scheme and Provident Fund scheme to the unorganised sector through innovative approaches. Innovative measures can be started on an experimental basis by targeting some specific groups such as head loaders, rickshaw pullers, auto rickshaw drivers etc.

### **2.2.3 Literature Reviews on Service Quality and Satisfaction**

This section discusses the previous studies relating to service quality and satisfaction. The studies conducted in the area of social security, health insurance and healthcare sector for analysing service quality and satisfaction level are mostly listed in this section. Some studies are concerned with assessing the service quality only whereas some studies assess both service quality and satisfaction and also the relationship between them. In addition to which, this section also lists some studies which shows the mediation effect of satisfaction in the relationship between service quality and behavioural outcomes.

Zahara (2024) examined the role of marketing communications and service quality on patient satisfaction participating in the National Health Insurance registered at the Pratana Hegar Clinic, Bandung Regency. It is revealed that marketing communication and service quality influence the satisfaction level of National Health Insurance Participants in the same manner and the influence of service quality is more dominant than marketing communication in this regard. Marketing communication and service quality also affect the trust of patients.

Jeyaprabha (2023) analysed the influence of electronic service quality dimensions on electronic satisfaction and electronic loyalty. The researcher evaluated the mediating role of electronic satisfaction between electronic service quality and electronic loyalty. The moderating role of website familiarity, technophobia, variety seeking behaviour of customers, involvement, income and education of customers on the association between electronic service quality and electronic loyalty have also been investigated in the study. Design, functionality, privacy, reliability and

recovery were the e-service quality dimensions used in the study. Findings showed that electronic satisfaction has positive influence on electronic loyalty of the customer and it mediates the association between electronic service quality and electronic loyalty of customer. The relationship between electronic service quality and electronic loyalty is positively moderated by website familiarity and involvement. But variety seeking behaviour and technophobia negatively moderates this link.

Alshammari et al. (2022) examined the impact of perceived quality of e-health services on patient behavioural intention to use e-health services and the moderating effect of knowledge on e-health on this relationship. This cross-sectional study was conducted on Saudi patients. Results indicated that information quality, system quality and perceived usefulness have significant influence on the intention to use E-health services. It is also found that knowledge of e-health has a significant moderation effect on the relationship of information quality, system quality and perceived usefulness with intention to use E-health services.

Bhattacharyya (2022) studied the effect of determinants of service quality and service convenience on perceived value in the health insurance sector, the effect of perceived value on customer satisfaction and the role of perceived value and customer satisfaction on customer patronage in the health insurance sector. The study also examined the moderating role of rust, inertia, word of mouth and type of organisation issuing the policy on customer patronage. Results revealed that the determinants of service quality and service convenience effect the perceived value in the health insurance sector. Perceived value affects customer patronage directly and also through customer satisfaction. Trust and word of mouth are significant in the health insurance sector and inertia is less significant.

Rexhepi et al. (2022) examined the expectation and perception of people regarding the quality of services in Primary Health Care in Kosova. SERVQUAL instrument is used in the study for measuring consumer perceptions of service quality. Gap analysis revealed that tangibility dimension has the highest gap whereas empathy dimension produced the lowest gap. Findings indicated that the gap between

expectation and perception is not significantly different among different genders, locations and age groups of patients. But this gap is statistically significant in patients of different ethnicity and different educational level.

Turki Alshurideh (2022) investigated the manner in which the electronic customer relationship management affects the quality of service at private hospitals in Jordan. Reliability, responsiveness, assurance and empathy are the dimensions used for measuring service quality. Findings demonstrated that E-CRM has a positive impact on service quality. Results indicated that hospital's website plays a crucial role in improving the customers' view of the service quality. Hence the design, structure and content of the website should be appropriate for patients for the purpose of ensuring a higher level of electronic service quality.

Verma et al. (2022) identified the major factors influencing the e-healthcare service quality and its association with consumer satisfaction using a multidimensional 5Qs model of e-healthcare service quality. The model comprises 5 dimensions such as quality of object, quality of process, quality of infrastructure, quality of interaction and quality of atmosphere. The result showed that quality of interaction and quality of atmosphere are the other major factors influencing e-healthcare service quality. Quality of process is the least influencing factor.

Vigonte et al. (2022) investigated the service quality and satisfaction level of the Philippine Health Insurance Corporation. The researchers also investigated the mediating role of awareness and trust between the satisfaction and service quality during the Coronavirus pandemic. Results indicated that service quality played a significant role in the satisfaction of PhilHealth's members. Mediation analysis showed that awareness and trust indirectly affect the positive relationship between PhilHealth service quality and its members' satisfaction. It has also been found that trust and awareness are significant predictors of service quality and satisfaction.

Abdel Fattah et al. (2021) investigated the influence of service quality on customer loyalty and the mediating role of customer satisfaction and customer perceived value in the case of health insurance products in Malaysia. Findings pointed out that retaining loyal customers is positively and directly influenced by service quality and

indirectly through the mediating variables of customer perceived value and customer satisfaction.

Geng et al. (2021) aimed to measure whether the patients with chronic diseases are satisfied with China's public health insurance programs and whether their satisfaction differs by type of insurance. For this purpose, the researchers established a theoretical model comprising of patients' awareness of insurance policies, fulfilment of patients' expectations of insurance benefits, patients' perceived value of health insurance coverage, patients' satisfaction with health insurance programs, patients' complaints and trust in health insurance programs. Results indicated that the exogenous variables such as awareness of insurance policies, perceived value of insurance coverage and fulfilment of expectations of insurance benefits have indirect effects on patients' complaints and trust and direct effect on patients' satisfaction with insurance.

Ha Nguyen & Nagase (2021) examined the relationship between various factors such as patient expectation, total quality management, perceived service quality, patient satisfaction, patient complaint and patient loyalty in an integrated model of customer satisfaction and loyalty. Results indicated that perceived expectation has a positive influence on Total Quality Management and Total Quality Management has a positive influence on perceived service quality. Total Quality Management, perceived expectation and perceived service quality influences perceived satisfaction and perceived complaints and perceived satisfaction influence perceived loyalty.

Júnior et al. (2021) developed a hierarchical and multidimensional model for the measurement of health insurance service quality. The model is based on the assumption that perceived health insurance quality is made up of a three-stage hierarchical structure involving interaction quality, environment conditions and service outcome. The results showed that quality of interaction and quality of results have insignificant connection with the overall perceived service quality. This study also pointed out the greater contribution of waiting time, tangibles and social factors to the perceived service quality.

Leelavathi (2021) made a comparative analysis of the performance and service quality provided by public and private health insurance companies and also analysed the challenges to universal coverage of health insurance in Karnataka. The study considered 5 dimensions of service quality such as service design, service delivery, responsiveness, competency and security and found that all these dimensions are strongly associated with customer satisfaction. It is also found that the dimension of 'security' contributes more towards customer satisfaction which is followed by competency, responsiveness, service delivery and service design. Findings also revealed that compared to private sector health insurance companies, public sector general insurance companies offer more security to their policyholders. Similarly public sector companies demand only fewer procedural formalities, easy method of claim settlement and short span of claim re-imburement.

Mahmud et al. (2021) investigated the quality of the health care services offered by foreign medical institutions in order to explore the outbound medical tourists' satisfaction and loyalty in the context of a developing country's perspective. HEALTHQUAL model is applied in the study to analyse the impact of service quality dimensions on creating overall satisfaction and loyalty among outbound medical tourists. Results revealed that all dimensions of the modified HEALTHQUAL scale such as empathy, tangibility, efficiency and safety have significant positive effect on medical tourists' overall satisfaction and satisfaction has a positive effect on loyalty.

Noorossana et al. (2021) examined the structural relationship between inpatient satisfaction and service quality dimensions in the context of Iranian Health care delivery system. Exploratory factor analysis revealed 4 dimensions of service quality such as interpersonal relationship, administrative processes, amenities and physician care. The result of structural equation modelling proves that various dimensions of service quality are positively related with patient satisfaction. Findings indicate that patients are more satisfied when the employees of the hospital treat them with courtesy, give importance to their problems and respect their patients' preferences.

Swain & Singh (2021) made an attempt to analyse the difference in the pattern of influence of perceived service quality on insured and uninsured patients' satisfaction. The study considered 10 parameters of service quality which is again classified in to technical and functional service quality. Clinical procedures, outcome quality, price and billing and trustworthiness are the parameters considered for measuring technical service quality. The functional quality parameters are ambience, resource availability, administrative procedures, staff attitude, waiting time and information availability. Regression analysis revealed a direct positive relationship between perceived service quality and satisfaction of insured and uninsured patients. But there is a difference in the pattern of influence between insured and uninsured group. It has been found in the study that compared to uninsured group an increasing number of functional service quality dimensions become significant predictors of patient satisfaction in the case of insured group

Akdere et al. (2020) investigated patients' perceptions of service quality in a public hospital in Turkey by using SERVPERF measurement model and also analysed the predictors of service quality. The most important dimension of service quality identified in the study is responsiveness which is followed by assurance and reliability. The findings suggest that healthcare organisations must give at most importance to the needs and expectations of their customers and the authorities should engage in continuous measurement and improvement of their service quality as part of their quality management process.

AlOmari (2020) studied about the health care service quality of 5 private hospitals in the Syrian capital Damascus. The SERVQUAL dimensions such as tangibility, empathy, assurance, reliability and responsiveness were considered in the study to measure the gap between patients' perception and expectations in health care service quality. Gap analysis showed that the widest gap among the statements of service quality is related to listening skills of hospital staffs and for spending enough time with patient. Tangibility dimension showed positive gap score in the study and it has a significant role in balancing the deficiency in other service quality dimensions.

Lai et al. (2020) studied about the influence of service quality and perceived price on the revisit intention of patients to hospitals. They also examined the mediating role of perceived price on the relationship between service quality and revisit intention. Perceived price includes both monetary price and behavioural price. Findings revealed that service quality has a significant effect on the behavioural price, monetary price and revisit intention. It is also found that monetary and behavioural price mediate the relationship between service quality and revisit intention in a significant manner.

Sabrin (2020) observed that the services provided by the hospital is the most important factor considered by the respondents in selecting a health insurance policy. Goodwill and linkages of the hospital, tax benefits, easy accessibility and comprehensive coverage of the health insurance policy are the other important factors considered. The study suggested to take appropriate steps to improve the awareness level and service quality of health insurance companies to retain existing customers and to attract new customers.

Chikwawawa (2019) examined the service quality of National Social Security Authority's service in Harare and assessed the satisfaction level of pensioners with its service quality. Results revealed that service quality in respect of tangibility, assurance and empathy are fairly good. But service quality under the dimensions of reliability and responsiveness are not quite good due to slow processing of benefits, inaccuracies in communication, lack of responses to customer wants etc. Findings also showed that customer satisfaction at the National Social Security Authority is low. Service quality dimensions such as tangibles and reliability have greatest impact on customer satisfaction which are followed by empathy and assurance. Therefor NSSA must concentrate on tangibles, reliability and empathy to improve customer satisfaction.

Ezhilarsi A (2018) analysed and compared the service quality perceptions of the customers in the public and private sector general insurance companies and also assessed the customer satisfaction with the quality of service provided by public and private sector general insurance companies in Chennai city. Results revealed that

both in the private sector and public sector, the service quality dimensions such as tangibility, reliability, responsiveness, assurance and empathy significantly lead to customers' satisfaction. Adoption of the newest technology, computerised networking among various branches, offering superior variety and quality services to customers and designing attractive product schemes with attractive premium structure were the major suggestions in the study.

Fatima et al. (2018) assessed private health care service quality and its contribution towards patient loyalty and the mediating role of patient satisfaction between health care service quality and patient satisfaction. The study considered 6 factors for analysing service quality such as physical environment, customer-friendly environment, responsiveness, communication, privacy and safety. Among the factors of service quality, communication has the highest mean score and responsiveness has the lowest mean score. Findings revealed that there is a positive correlation between health care service quality and patient satisfaction and patient satisfaction has a significant positive effect on patient loyalty. It is also found that patient satisfaction partially mediates the relationship between health care service quality dimensions and patient loyalty.

Krishnekumaar (2018) analysed the service quality offered by selected health insurance companies in Chennai and studied the impact of selected demographic profile characteristics on the service quality and satisfaction. The researcher also investigated the impact of service quality on purchase decision and satisfaction. For this purpose, the study considered 8 dimensions of service quality such as tangibility, reliability, commitment, empathy, assurance, premium price, know-how quality and service responsiveness. Gap analysis revealed that the respondents' expected values are higher than the experienced values for all dimensions of service quality except reliability and empathy. Results also showed that all service quality dimensions have significant positive correlation with the purchase decision of the respondents towards health insurance policies.

Kumar *et al.* (2018) made an attempt to find out the role of customer knowledge as a moderator on the relationship between service quality of social insurance industry

and customer satisfaction in Malaysia. The study also investigated the link between the service quality of social insurance organisations and the customer satisfaction. Delivery of sufficient knowledge will increase the level of awareness among customers and the relationship between service quality and customer satisfaction will become stronger. Hence, customer knowledge can be considered as a moderating variable to strengthen the link between the service quality of social insurance industry and customer satisfaction. Therefore, social insurance industry should focus on updating information and delivering prompt knowledge to its customers as a mean to improve the level of customer satisfaction.

Swain & Kar (2018) explored various dimensions of hospital service quality and developed a conceptual framework showing relationship between hospital service quality, patient satisfaction and behavioural intention. The researchers identified 6 areas of hospital service quality such as technical quality, infrastructural quality, procedural quality, personnel quality, interactional quality and social support quality. The 6-Q model supports the direct relationship between hospital service quality and patient satisfaction as well as the mediating role of patient satisfaction between hospital service quality and behavioural intention. The study suggests that the health care managers should give the highest importance to technical and procedural quality and the remaining 4 areas should also be managed to improve patients' experience during hospital stay.

Zhou & Shi (2018) developed a new social insurance handling service quality evaluation index system by using the expectation-perception model of service quality as the analysis framework. The study evaluated the service quality of a social insurance agency in Zhengzhou. The evaluation index system considered 5 dimensions of service quality such as environmental facilities, business capability, response capability, guarantee capability and humanised management. The results showed a significant difference between the expectation and perception of the respondents related to service quality. Highest gap is found in respect of the dimension 'humanised management' which is followed by 'business capability' and 'response capability'. The study suggests that the service standards are to be

modified based on public demand and the social insurance agencies must use advanced technology for creating awareness and disseminating information to the public.

Agyapong et al. (2017) examined the mediating role of patients' satisfaction in the relationship between perceived service quality and behavioural intentions. The study adapted perception measure of SERVQUAL scale to analyse the service quality. Findings showed significant positive association between perceived service quality and satisfaction; and perceived service quality and behavioural intention. Satisfaction mediates the positive association between perceived service quality and behavioural intention and it is a significant predictor of behavioural intention in health care. Hence the health service managers should give importance to customer satisfaction by improving patient - provider interaction guidelines, responsive attitude, empathetic concern and ability to inspire trust and confidence of patients.

Graa et al. (2017) measured different factors affecting the satisfaction of users of the Algerian Social Insurance Fund. The Perceived Service Quality model used in the study is based on 6 dimensions such as relations, transparency, reliability, tangibility, insurance and ethics. Among the dimensions, the relation has the most impact on user satisfaction followed by reliability. It means that public gives more attention to the interaction between them and the employees of the social insurance fund, friendliness of the staff, empathy and their willingness to help them.

Okey et al. (2017) investigated the impact of service cost on satisfaction, service quality perception and the service continuance intention of customers of health insurance. The researchers found that customers' service quality perception is a direct result of their comparison of costs and benefits. The study proposed that perceived service cost can be considered as an important determinant of customers' perceived service quality and a vital predictor of customer satisfaction. It is also found that customer satisfaction is significantly associated with service usage continuance intention. It is also recommended that the health insurance firms should continuously monitor, track and document their customers' expectations, service quality perceptions, cost sensitivity and satisfaction level and should compare this

data with competitors to predict the behavioural intention of customers' towards continuing or discontinuing with the service providers.

Aldosari et al. (2016) examined the relationship between cooperative health insurance service characteristics such as availability and service quality and expatriates' satisfaction by incorporating customer knowledge as a mediating variable. Findings revealed that the availability and the perceived service quality of cooperative health insurance plan are positively related to expatriates' satisfaction. Results also showed that the relationship between the availability of CHI services and expatriates' satisfaction and also the link between service quality of CHI services and expatriates' satisfaction are mediated by customer knowledge. The researchers pointed out that providing sufficient knowledge and awareness to customers regarding cooperative health insurance plans plays a significant role in the effective implementation of CHI and it also helps in enhancing expatriates' satisfaction.

Kamra et al. (2016) analysed the factors affecting patient satisfaction and their relationship with the demographic features of respondents and the subscription to health insurance for tertiary level health services. The study is conducted in the context of multi-speciality hospital services in India. As per the findings, the most important factor affecting patient satisfaction is affordability and convenience which is followed by fulfilment of clinical requirements and nursing and staff care. The least important factor affecting patient satisfaction is facilities at reception and OPD.

Meesala & Paul (2016) analysed the impact of SERVQUAL dimensions on patients' satisfaction in a developing country like India. The study also assessed the mediating role of patient satisfaction in increasing the patient loyalty. Results revealed that responsiveness and reliability have direct effect on patient satisfaction and patient satisfaction directly influence patients' loyalty to hospitals. It is further found that patient satisfaction mediates the relationship of reliability and responsiveness with patient loyalty. As per the findings, the most important areas to be focused are timely delivery of services, caring of employees, billing accuracy, promptness of services, communication about the time-of-service delivery and

employees' willingness to help patients. The major areas to be improved to encourage revisit intention of patients are attitude, communication and delivery.

Abdelfattah et al. (2015) examined the influence of service quality attributes towards customers' loyalty in the case of health insurance products in Klang Valley area in Malaysia. The study also investigated the mediation role of perceived value between service quality and customers' loyalty. The study adopted the Gronroos service quality model for evaluating the service quality attributes such as functional quality, technical quality and firm's image. Findings revealed that functional quality, technical quality and firm's image have significant positive influence on customers' perceived value and customers' perceived value was positively related to customers' loyalty.

Gonzales et al. (2015) compared the expectations and perceptions of the customers of social security system in Calamba branch. Results of gap analysis revealed that the largest gap score is found under the dimension 'reliability' which is followed by 'responsiveness' and 'assurance'. The smallest gap score is in respect of 'tangibility' dimension. Findings indicated that the most significant dimension for the customers is the 'assurance' dimension and the least important is the 'tangibility' dimension

Zahedifard et al. (2014) examined the effect of service quality dimensions of social security insurance on the satisfaction level of policy holders and also investigated about the dimensions to be improved for increasing their satisfaction level. By investigating the importance-performance quality dimensions of social security insurance services, the study proposed strategies for improving its quality of services. The study used 6 dimensions for analysing the service quality such as reliability, assurance, empathy, tangibles, responsiveness and social responsibility. The importance-performance matrix revealed that empathy dimension is located in the first quadrant of the matrix which is having high importance but low performance. Hence empathy should be given improvement priority. Results also showed that social responsibility dimension has a lesser effect on insurant satisfaction. So, it need not be considered as a priority for improvement.

Al-Borie & Sheikh Damanhour (2013) compared the patient satisfaction with service quality of public and private hospitals in Saudi Arabia. The results indicated statistically significant difference between expectations and perceptions for all five dimensions under SERVQUAL scale in respect of both public hospitals and private hospitals. The service quality of private hospital is better than the public hospitals. The best dimension in public hospitals is tangibles which include hospital staff appearance, easily accessible location and availability of modern equipment and technology. In the case of private hospitals, the best dimensions are convenient and easily accessible locations followed by medical staff cordiality and friendliness when dealing with patients.

Atinga (2012) investigated the manner in which the policy holders of National Health Insurance scheme in Ghana perceive the healthcare service quality of public hospitals. The study used 4 dimensions to analyse the policy holders' views on service quality such as interaction with service providers, provider demeanour, physical infrastructure/ facilities and waiting time. The results established that the patients' interaction with the service provider, behaviour of the service provider, physical outlook, environment and facilities of the hospitals are associated with the perception of overall quality of care received. Hence the study suggests to invest in maintenance and improving the physical facilities of hospitals, equip health care providers with knowledge to be courteous, friendly, polite and helpful to patients and the providers should develop a positive behaviour towards patients.

Kim (2011) developed and tried to validate a model which states the relationship between service orientation, service quality, customer satisfaction and customer loyalty. Results showed that a high degree of service orientation for the contact employee significantly affected the customer's perception of service quality. The perceived service quality significantly influenced customer satisfaction. Service quality plays a mediating role between service orientation and customer satisfaction. Customer satisfaction has a significant influence on customer loyalty and it acts as a mediator between service quality and customer loyalty. The study suggests offering

ongoing training and rewarding good performance of employees to enhance employee service orientation.

Badri et al. (2009) studied the relationship between health care service quality and patient satisfaction taking in to consideration patients' condition before and after discharge by developing a structural equation model. Health care service quality is measured by using 3 constructs such as quality of care, process and administration and information. Respondents' level of satisfaction is measured with the help of 2 factors such as general satisfaction and relative satisfaction. Results indicate that perceived healthcare quality and care process positively influence patient satisfaction. But information influences satisfaction negatively. In addition to that patient health status can be considered as an intermediate variable influencing both satisfaction and 3 quality constructs.

Sivakumar & Srinivasan (2009) examined the relationship between service quality and behavioural outcomes of hospital consumers such as satisfaction, re-patronage intention and positive word-of-mouth by taking involvement as the moderating variable. SERVPERF scale was used for measuring the service quality. Findings indicate that low involvement hospital consumers when exposed to better tangible and reliability factors representing service quality experience more satisfaction than high involvement consumers. Similarly, they tend to engage in positive word-of-mouth communication than consumers with high involvement. The variable involvement act as both moderator as well as predictor in the relationship between service quality and behavioural outcomes of consumers.

Santos (2003) developed a conceptual model of the determinants of e-service quality. The focus group discussions revealed that both active dimensions and incubative dimensions are important in the case of e-service quality. The incubative dimensions can be developed even before launching a website which includes ease of use, appearance, linkage, content, structure and layout. The active dimension refers to the support, speed and attention that a website can provide to its customers.

Lee et al. (2000) compared the SERVQUAL model with the performance model and examined the direction of causality between service quality and satisfaction.

Findings revealed that the reliability and the discriminant validity of SERVQUAL was below SERVPERF scale. Performance only scale explains more variance in overall service quality than SERVQUAL. It is also found that satisfaction mediates the relation between service quality and repurchase intention. The result indicates that service quality is an antecedent of customer satisfaction and customer satisfaction exerts a stronger influence on purchase intention. Hence the service managers should try to improve both service quality and factors related to customer satisfaction.

### **2.3 Research Gap**

Previous literature revealed that a large number of studies have been conducted relating to ESI scheme and various social security measures. Similarly enormous amount of research is available on service quality and satisfaction. From the above discussed thematic review, the research gap can be identified as below:

- Previous literature showed that there are studies which assess the awareness and knowledge level of ESI policyholders. But no study has made a comprehensive evaluation of the awareness level of ESI policyholders regarding the amount of premium, salary limit for coverage, various ESI benefits and new initiatives of the ESI Corporation. Similarly, no comprehensive study has been found identifying the knowledge level of ESI policyholders regarding the medical facilities, procedural formalities, grievance redressal procedure etc. However, the present research incorporates all these indicators for examining the awareness and knowledge level of ESI policyholders and the comparison of awareness and knowledge level across various demographic groups and ESI profile.
- Some of the previous studies examined the level of ESI benefit utilisation. But no attempt has been made to find the association of level of ESI benefit utilisation with various demographic variables. The current research analyses the level of ESI benefit utilisation based on various demographic details, ESI details and awareness and knowledge level of ESI policyholders.

- Most of the researches in this area mainly focused on analysing the effectiveness of ESI scheme by using a few indicators only without considering the new initiatives of ESI Corporation. But this research involves a comprehensive evaluation of the service quality by considering all the relevant dimensions affecting service design and delivery during the post reform period.
- Some of the previous literature recognised the satisfaction level of ESI policyholders by using categorical scale. The satisfaction level towards various services of ESI Corporation is not identified separately in the previous studies. However, this study analysed the satisfaction level of ESI policyholders towards various benefits and services of ESI Corporation on a comprehensive basis.
- No attempt has been made so far to analyse the sense of social security offered by the ESI Corporation to ESI policyholders by considering the goals of social insurance such as health protection, income security and risk coverage. The present research involves a novel attempt undertaken by the researcher to assess the sense of social security experienced by the ESI policyholders. This research also establishes the relationship between service quality and sense of social security and the mediating role of satisfaction in this relationship. None of the previous researches has established such a relationship in the context of ESI scheme.
- It is also evident that there is hardly any research relating to ESI scheme establishing the relationship between awareness/ knowledge level and policyholders' satisfaction. But the present research tests this relationship.
- Literature review also reveals that a very few studies have been conducted in Kerala to analyse the effectiveness of ESI scheme. Majority of such studies are very old and are based on secondary data. The scope of most of the studies based on primary data are limited to a small geographical area. But the present research work is a novel attempt to analyse the service quality of ESI Corporation in Kerala during the post reform period to provide valuable insights for the improvement of service quality and sense of social security.

## **2.4 Conclusion**

This chapter provides a comprehensive review of the previous studies conducted by various researchers relating to the current study. Previous studies are arranged under three broad headings such as ESI Corporation, Social Security, Service Quality and Satisfaction. At the end of the chapter, research gap has also been identified and reported. This review chapter guide the researcher to adopt an appropriate methodology for the current research.

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## *Chapter 3*

# **THEORETICAL FRAMEWORK**

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### **3.1 Introduction**

A major segment of the world population lives under conditions of poverty and deprivation. They live in remote areas with less education and poor health, mostly employed in unsecured jobs with inadequate access to markets, financial institutions and productive assets. They are highly vulnerable to socio-economic risks caused by job loss, diseases, disability, natural calamities etc. The vulnerability of this marginalised group to various socio-economic risks can be reduced by introducing various measures which protect their life, enhance their human capital and support them during crises. Such measures and programmes are collectively known as social security. Social security simply refers to the protection from the unfortunate social scenario. It is designed to help people to reduce or eliminate uncertainties and losses in life. It involves the economic security offered by the society in general or by the family, communities, organisations and other social groups for the social well-being of an individual for his journey from birth to death (Rao, 2005).

Social security can be viewed as one of the most important devices for mitigating the economic uncertainties of the working population. It was developed in Western countries to provide welfare to the labour force in the context of industrialisation. Social security is a vital component of public policy and the extent to which it is implemented in a country shows a nation's advancement towards the ideal of a welfare nation (Singh et al., 1969). The right to social security has been recognised by the constitution of many countries as a basic human right. Article 22 of the Universal Declaration of Human Rights of the United Nations points out that "Everyone, as a member of society, has the right to social security" (Pennings, 2018). Social security measures create a situation in the society in which people feel that they belong to society and the society meets the basic needs such as food,

education, housing, healthcare etc. It is the most important method through which an industry can attain the target of higher productivity.

### **3.2 Concept of Social Security**

Social security is a dynamic concept which is influencing social as well as economic policy of a country. In developing countries social security means the measures implemented through public resources such as promotional measures aimed at increasing income, protective measures aimed at forestalling economic distress and preventive measures aimed at ensuring relief from certain external shocks such as employment injury, death etc (Drèze & Sen, 1989). It involves the action programmes of government with the intention to promote welfare of the state through various measures ensuring access to food and shelter and to promote health and well-being for the population especially for the vulnerable sections such as children, the elderly, the sick and the unemployed. It protects the subscriber and his dependents by offering financial security and healthcare. In a welfare state, comprehensive social security programmes provide support for persons from birth to death (Sarma, 1981)

The effectiveness of social security is based on four tenets such as accessibility, affordability, adequacy and availability (Mohurle et al., 2022). It is an integral part of the Sustainable Development Goals, 2030. It contributes directly to the attainment of SDG 1 that is 'no poverty' and SDG 8 that is 'decent work and economic growth' (Spicker, 2023). It also plays an important role in constructing a healthy society. Social security measures offer protection to those people whose income are not sufficient for a reasonable standard of living. It gives emphasis on adequate and effective health care services to restore the full earning potential of an individual. It also relieves a person from extra ordinary cost of maintenance of health and leads to social transformation and good governance.

#### **3.2.1 Definitions**

The concept of social security has evolved over a period of time. The method and scope of social security differ from country to country according to the prevailing

labour regulations, traditions, standards etc. Hence there is no common definition for the term social security. However, some of the well accepted definitions of social security are given below

International Labour Organisation (1942) defines social security as “the security that society furnishes, through appropriate organisations, against certain risks to which its members are exposed. These risks are essentially contingencies against which the individuals of small means and meagre resources cannot effectively provide by his own ability or foresight alone or even in private combination with his fellows, these risks being sickness, maternity, invalidity, old age and death. It is the characteristics of these contingencies that they imperil the ability of the working man to support himself and his dependents in health and decency.”

According to Beveridge & W.H.B.B. (1942) social security refers to “ the security of an income to take place of the earnings when they are interrupted by unemployment, sickness or accident, to provide for retirement through age, to provide against loss of support by the death of another person and to meet exceptional expenditure, such as those connected with birth, death and marriage. The purpose of social security is to provide an income up to a minimum and also medical treatment to bring the interruption of earnings to an end as soon as possible.”

According to Robson (1943) “Social security is a way of ensuring freedom from want or poverty which is one of the formidable obstacles in the way of progress. Social security implies insurance against those misfortunes to which an individual remains exposed even when the condition of society as a whole improves. It does not include the various measures for improving the condition of society – full employment, minimum wage, factory laws, public health, housing, education and so forth.”

Fisher (1946) defined social security as “those measures of insurance, health, unemployment and old age, which are now part of the social organisation of most modern states, designed to protect individuals who have lost their assured positions.”

Social security can be defined as “the securing of an income to take the place of earning when they are interrupted by unemployment, sickness or accident, to provide for retirement through old age, to provide against loss of support by death of another person and to meet exceptional expenditure connected with birth, death or marriage. The purpose of social security is to provide an income upon a minimum and also medical treatment to bring the interruption of earnings to an end as soon as possible.” (Watkinson, 1949)

According to Friedlander & Apte (1982) “social security refers to a programme of protection provided by society against those contingencies of modern life – sickness, unemployment, old age, dependence, industrial accidents and invalidism – against which the individual cannot be expected to protect himself and his family by his own ability or foresight.”

Social security refers to “the protection which society provides for its members through a series of public measures against the economic and social distress that otherwise would be caused by the stoppage or substantial reduction of earnings resulting from sickness, maternity, employment injury, invalidity and death; the provision of medical care; and the provision of subsidies for families with children.” (International Labour Organisation, 1984)

Khanka (2007) defined social security as “the protection provided by the society to its members against providential mishaps over which a person has no control. The underlying philosophy of social security is that the state shall make itself responsible for ensuring a minimum standard of material welfare to all its citizens on a basis wide enough to cover all the main contingencies of life. In other sense, social security is primarily an instrument of social and economic justice.”

As per the above definitions the schemes which offer benefits to people to prevent or cure diseases, to provide support in the case of financial difficulties or to help people to return to productive activities can be considered as social security schemes.

### **3.2.2 Features of Social Security Programmes**

The following are the common features of social security schemes.

1. The objective of the social security scheme should be to provide either curative or preventive healthcare or to ensure income security in the case of involuntary loss of work-related income or provide additional income to individuals with dependents.
2. Social security system must be governed by proper legislations which offers certain individual rights and imposes specific obligations upon public.
3. Social security is a dynamic concept. Its scope changes with social, economic and political system existing in a country at a given time.
4. Social security system must be administered by a public or autonomous organisation.

### **3.2.3 Methods for offering Social Security**

There are two broad approaches for offering social security such as universalist approach and the occupationalist approach. The universalist approach covers the entire population whereas the occupationalist approach covers only the selected segment of the population engaged in specific industries. On the basis of these 2 approaches, social security can be provided through 2 methods such as social insurance and social assistance.

#### **3.2.3.1 Social Insurance**

Agarwala (1944) defined social insurance “as a co-operative device which aims at granting adequate benefits to the insured on a compulsory basis in times of unemployment, sickness and other emergencies with a view to ensure a minimum standard of living, a fund created out of the tripartite contributions of workers, employers and the state and without any means test and as a matter of right of the insured.” Social insurance can be defined as a device to provide benefits to people having meagre earnings in cash, which involves the contributive efforts of the insured, employer and sometimes the government (Bhagoliwal, 1982). It is a

program whose risks are transferred to and pooled by often a government organisation legally required to provide certain benefits (Lynch, 1992). According to the Committee on Social Insurance Terminology of the American Risk and Insurance Association “social insurance is a device for the pooling of risks by their transfer to an organisation, usually governmental, that is required by law to provide pecuniary or service benefits to or on behalf of covered persons upon the occurrence of certain predesignated losses” (Williams & JR, 1963).

Social insurance is concerned with setting aside of a part of current income for making provision against future contingencies and socio-economic risks. It creates risk pools which involves sharing of both risks and resources (Korpi & Palme, 1998). Social insurance programmes are mainly financed through the contribution of workers, employers and sometimes through state grant. The contributions are used for creating a special fund and the benefits are distributed from this fund. There are different types of social insurance schemes based on the manner of funding, method of administration and the payment of benefit (Lyons & Cheyne, 2011). Majority of the social insurance programs are compulsory in nature and they are designed for specific categories of employees. Social insurance benefits are designed for a longer period of time. Such programs must be operated and managed by a public authority or an institution constituted by law and must be accountable to the legislature. The eligibility requirements and the number of benefits are decided by statute. The success of the social security programmes depends upon the active support and participation of employees and employers. Provident Fund, Group Insurance and ESI Scheme are examples of social insurance.

### **3.2.3.2 Social Assistance**

Social assistance means the assistance provided by the government in the form of cash or kind to the needy and deserving persons out of the general revenues of the state. Social assistance programmes are designed for providing benefits to meet the minimum requirements of weaker sections of the society. Social assistance schemes are based on the principle of need. It is given as voluntary help which is based on the conditions and legalities between the state and the worker. Under social assistance

programmes, the beneficiaries are not required to make contribution to the government. These programmes are financed through state fund. These are also known as tax financed social benefits. Beneficiaries cannot claim benefits under social assistance scheme as a matter of right. On fulfilling the prescribed eligibility conditions, beneficiaries under social assistance programmes are entitled to receive their benefits. The amount of benefit under social assistance programmes depends upon the income and means of the beneficiaries and it is offered in accordance with the rules and regulations stipulated by the government from time to time. Old age and invalidity pensions, mothers' pension, unemployment assistance and medical assistance are examples of social assistance schemes. It also includes provision for the rehabilitation of the disabled (Idgunji, 1948).

Social assistance and social insurance programmes are two integral techniques of social security and they are complementary to each other. The persons who are not eligible for getting social insurance benefits can seek social security benefits under social assistance programmes. It is the responsibility of the state to manage its social welfare programmes by using both social assistance and social insurance to benefit the society as a whole. These two programmes are to be combined together to provide better protection to people against all possible social and economic risks.

#### **3.2.4 Significance of Social Security**

Social security is an essential component of various policies and programmes of different countries of the world to control and reduce the poverty, disease and unemployment. It is highly significant in both developed and under developed countries. It is a positive help granted to the people by the society. Social security measures are essential for achieving the social and economic development of a nation. It is a powerful tool to fight against the negative social consequences of globalisation (Ginneken, 2003). It is also a vital component of labour welfare. Effective enforcement of social security programmes enhances the level of trust and confidence of the working class. Social security measures improve the socio-economic conditions of the workers and helps to attain the goal of a welfare state. Social security schemes ensure the co-operation between the workers and the

management. It also reduces the absenteeism and labour turnover rate which results in the formation of stable and efficient workforce.

Social security programmes have a constructive role in the development of a nation. It is a powerful weapon to fight against the inequalities in the society. The former President of India Giri (1972) pointed out that “social security measures have two-fold significance for every developing country. They constitute an important step towards the goal of a welfare state, by improving living and working conditions and affording the people protection against the uncertainties of future. These measures are also important for every industrialisation programme, for not only to enable workers to become more efficient but they also reduce the wastage arising from industrial disputes.” The outbreak of COVID-19 pandemic has further increased the significance of social security programmes. In short social security is an effective tool to boost mass industrialisation in the country in a healthy and peaceful atmosphere.

### **3.3 International Organisations for social security**

Social security is currently a well-established and internationally accepted phenomenon. The international institutional framework of social security is very strong which addresses the contingencies and injustices caused by natural and economic forces through various rational and planned programmes. Some of the important international organisations for social security are American Commission on Organization and Administrative Systems (ACOAS), International Federation of Pension Fund Management Companies, Foundation for International Studies on Social Security, International Council on Social Welfare, International Labour Organization (ILO), International Organization for Pension Supervisors (IOPS), International Social Security Association (ISSA), Mutual Information System on Social Protection in the EU Member States and the EEA (MISSOC), Rehabilitation International etc. Among these institutions, International Labour Organisation (ILO) and International Social Security Association (ISSA) are the leading global organisations which contribute to the development of social security at international level.

### **3.3.1 International Labour Organisation (ILO)**

The International Labour Organisation was established in 1919 for promoting social justice and improving the living and working conditions of people worldwide. ILO is an international social security agency of United Nations established with the objective of safeguarding workers against sickness, disease and employment related injuries, protecting children, young persons and women and providing benefits in the case of old age and injury. Its headquarters is situated in Geneva, Switzerland. ILO formulated international standards regarding social security and it collected and disseminated information about social security programmes in different countries. It also provided guidance and technical assistance to other social security organisations to formulate proper social security schemes. The ILO has proposed various methods for organising, establishing and funding various social security schemes. ILO encourages excellence in social security administration through expert knowledge, professional guidelines, assistance and services to enable its members to develop dynamic social security systems and policy across the globe.

As per the reports of ILO, inadequate social security coverage is largely observed in the informal economies of the developing world (ILO, 2001). India is a founder member of the ILO. Presently ILO has 187 members (Ministry of Labour and Employment, 2024). Every year, the ILO conducts International Labour Conference in Geneva to plan its policies and standards which include both conventions and recommendations. ILO conventions are considered as International Labour Standards. The most important convention was held in 1952 known as ‘The ILO convention on social security (minimum standard) 1952’. It divided social security in to 9 components for the welfare of labour class as given below (International Labour Organisation, 1952):

**Table 3.1**

*Social Security Measures as per the Recommendations of the ILO Convention on Social Security (Minimum Standard) 1952*

| <b>Sl No.</b> | <b>Social Security Measure</b> | <b>Coverage</b>                                                                                                                                                                          |
|---------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1             | Medical Care                   | Pregnancy, confinement and its consequences, diseases which may lead to morbid conditions, hospitalisation, pre-natal and post-natal care                                                |
| 2             | Sickness Benefit               | Lack of capacity to work following morbid conditions resulting in loss of earnings                                                                                                       |
| 3             | Unemployment Benefit           | Loss of earnings during unemployment period where the person became unemployed due to lack of suitable employment                                                                        |
| 4             | Old age Benefit                | Benefit provided after retirement and the amount depends on the individual's working capacity before retirement.                                                                         |
| 5             | Employment Injury Benefit      | Morbid condition, inability of work, total or partial loss of earning capacity, death of bread winner in the family resulting from accident/ disease during employment.                  |
| 6             | Family Benefit                 | Responsibility for taking care of children throughout the period of contingency                                                                                                          |
| 7             | Maternity Benefit              | Pregnancy, confinement and its consequences resulting in the suspension of earnings. It also includes medical care including pre-natal confinement, post-natal care and hospitalisation. |
| 8             | Invalidism Benefit             | The need of workers having any disability, whose disability arising out of sickness or accident at the work place.                                                                       |
| 9             | Survivor's Benefit             | Periodical payment made to the dependents of a deceased worker                                                                                                                           |

Source: International Labour Organisation (1952)

The convention establishes minimum standard for all these 9 social security benefits. The convention also suggests that social security schemes must be administered on a tripartite basis including Governments, employers and workers. As per this convention, the policies governing social security should match with a country's

social and cultural values, historical context, institutions and the level of economic development.

### **3.3.2 International Social Security Association (ISSA)**

International Social Security Association started functioning in 1927. It is another international institution which is functioning exclusively for the development of social security at the global level. Its headquarters is situated at Geneva, Switzerland. ISSA aims at ensuring the co-operation of various agencies and institutions involved in protecting, promoting and developing social security throughout the world. It encourages excellence in social security administration through expert knowledge, professional guidelines, assistance and services to enable its members to develop dynamic social security systems and policy across the globe (International Social Security Association, 2018). The members of ISSA include government departments and central institutions administering social security. ISSA organises international technical meetings, discussions and seminars on social security. It also conducts research and investigation in to various social security problems. It publishes and distributes various documents on social security. The World Bibliography of Social Security is a quarterly publication of ISSA. It also collaborates with other international social security organisations. ISSA launched its Centre for Excellence in Social Security Administration in 2013. It offers services to social security administrators to facilitate good governance, high performance and service quality.

### **3.4 Social Security in India**

Social security policies constitute an important factor in the socio-economic growth of developing countries. However, the implementation of social security programmes is quite difficult in developing countries. Because developing countries are characterised by underdeveloped capital and insurance market, traditional labour structure, political instability, high level of unemployment and poverty. Social security schemes have been practised in India since long ago. But majority of such schemes were in the nature of social assistance. In olden days joint families, panchayats, religious and charitable institutions were offering social security

measures to the people having contingencies, calamities and misfortunes. But gradually the break-up of the joint family system as well as heavy industrialisation and urbanisation, increased the need for an institutionalised and well-regulated social security arrangement to address the social security issues in a planned manner. Organised form of social security measures is of recent origin. There has been high increase in the number of social security programs in India during the past few years. The social security legislations in India draw their authority and essence from the Directive Principles of the State Policy as contained in the constitution of India. However, when compared to the international scenario, the scope of Indian social security system is still very much limited (Ginneken, 2003). India's social security schemes cover pension, health insurance and medical benefits, disability benefit, maternity benefit and gratuity.

The following table presents the stages in the development of social security in India

**Table 3.2**

*Stages of Development of Social Security in India*

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| <b>Sl. No.</b> | <b>Stage</b>           | <b>Period</b> | <b>Major Features</b>                                                                                                                                                                                                                                                  |
|----------------|------------------------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1              | Period of Indifference | Up to 1918    | No adequate social security measures were prevalent in India. Some social security acts were in existence, but their scope was very limited                                                                                                                            |
| 2              | Period of Agitation    | 1918-1937     | This period is characterised by rapid industrialisation. Workers demanded social security measures and initiated strikes and agitations. Social security schemes were not taken deep roots in the country and none of them followed the principle of social insurance. |
| 3              | Period of Plan Making  | 1938-1947     | The resolution passed in the Tripartite Labour Conference held in 1943 helped the planning committee to design a programme of social security for labour in India. The Government of India appointed the Labour Investigation                                          |

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| Sl. No. | Stage            | Period       | Major Features                                                                                                                                                                                                                                                                                             |
|---------|------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         |                  |              | Committee in 1944 and the committee submitted its report in 1946. The Government of India appointed Health Survey and Development Committee under the chairmanship of Joseph Bhore in 1943 to make a survey of the existing social security measures.                                                      |
| 4       | Period of Action | 1948 onwards | Adarkar – Stack -Rao scheme inspired the enactment of ESI Act of 1948. This was the first comprehensive social insurance measure introduced in India. Afterwards several new social security measures addressing different issues of labour covering different types of labour have been enacted in India. |

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Source: Jose (2006)

### 3.4.1 An overview of the major social security legislations in India

Social security legislations in India have grown along with the industrialisation in the country. The Government has introduced several social security programs in India. However, it covers only a small segment of the organised workforce of the country having direct and regular employee-employer relationship in the organisation. The overall public expenditure on social security programmes is approximately 1.5% of the Gross Domestic Product which is lower than many of the middle-income countries across the world (Agewell Foundation, 2019).

Social security legislations in India can be broadly classified in to 2 groups such as contributory and non-contributory legislations. The contributory social security programmes are financed by the contributions paid by employees, employers and sometimes it is supplemented by the contributions by the government. The major contributory legislations are ESI Act, 1948 and Employees' Provident Fund and Miscellaneous Provisions Act, 1952. The important non-contributory legislations are the Workmen's Compensation Act, 1923, the Maternity Benefit Act, 1961 and the Payment of Gratuity Act, 1972 (Patel & Patel, 2019).

### **3.4.1.1 New Labour Code, 2020**

In order to consolidate and update 29 central labour legislations in India, the Ministry of Labour and Employment introduced four bills in 2019. These bills govern wages, industrial relations, social security, occupational safety, health and working conditions. It includes The Code on Wages, 2019; The Industrial Relations Code, 2020; The Occupational Safety, Health and Working Conditions Code, 2020 and The Code on Social Security, 2020 (Ministry of Labour and Employment, 2023).

### **3.4.1.2 Code on Social Security, 2020**

The Code on Social Security was passed by the Parliament in 2020 with the objective of bringing all informal and unorganised workers under social security system (Nadagoudar & Patil, 2021). The Code on Social Security aims to simplify and amend labour regulations by merging several social security laws in the country. It further intends to restructure the number of authorities under various laws and to reduce the multiplicity of definitions of social security to avoid confusions. The code encourages the use of technology to ensure compliance and enforcement of various provisions coming under it. It advocates that the use of technology facilitates transparency and accountability.

The code defined social security as “ the measures of protection afforded to employees, unorganised workers, gig workers and platform workers to ensure access to health care and to provide income security, particularly in cases of old age, unemployment, sickness, invalidity, work injury, maternity or loss of a breadwinner by means of right conferred on them and schemes framed, under this code” (Ministry of Law and Justice, 2020). Code on Social Security extended the benefits under ESI scheme to platform workers, gig workers and unorganised workers. The code also gives the authority to the central government to include self-employed people in its social security programmes. The code extended the scope for coverage of ESI scheme to all hazardous and life-threatening occupations irrespective of the number of workers employed there. Though the code has been criticised for some of

its provisions, it is a milestone effort towards the universalisation of social security benefits.

### **3.5 Employees' State Insurance Scheme**

The social security revolution presented by the Beveridge Report in the United Kingdom in 1942 sparked the interest and laid down a basis for the introduction of a new health insurance scheme in India. Professor B P Adarkar's report proposed a health insurance scheme for low-income workers in Textile, Engineering, Minerals and Metal industries. The scheme was designed to offer medical care and sickness benefit for the insured persons. The report was examined by ILO experts and suggested the integration of medical benefit, maternity benefit and employment injury benefit in the health insurance scheme. On the basis of Adarkar's report and ILO recommendations, Employees' State Insurance Act was enacted in the Legislative Assembly in April, 1948. The benefits offered under ESI Act conform to the ILO conventions. The scheme is based on the basic principle that "contribution according to the wages and the benefits as per needs". Hence a worker with low earnings receives the same benefits as that of a worker with higher earnings under ESI scheme.

The inauguration of ESI scheme was made on 24<sup>th</sup> February 1952, when the first prime minister Pandit Jawaharlal Nehru launched the ESI scheme at Kanpur (Ministry of Labour and Employment, 2025). ESI day is celebrated on 24<sup>th</sup> February in all offices of the ESI Corporation throughout the country. Initially the ESI scheme was operated only in 2 manufacturing centres in the country such as Kanpur and Delhi and only a few benefits were offered to the insured persons under ESI scheme such as medical benefit, sickness benefit, maternity benefit and dependent's benefit. Subsequently ESI scheme offered many more benefits to the insured persons such as extended sickness benefit, vocational training for the rehabilitation of disabled insured persons, funeral expenses, unemployment allowance, super speciality treatment etc. Since then, the ESI scheme has been gradually implemented in stages across the country. As of January 1, 2024, ESI scheme has been extended to 661 districts, covering 556 fully notified districts and 105 partially notified ones, in 36 states and all union territories of the country to meet the requirements of heavy

industrialisation. At present the scheme covers 20.83 Lakh factories and establishments all over the country and it has a total beneficiary base of over 13.31 crores (Employees' State Insurance Corporation, 2024)

### **3.5.1 Applicability of the ESI Scheme**

As per section 2(12) of the ESI Act, the scheme is applicable to non-seasonal factories with 10 or more employees. Additionally, the scheme has been extended to other categories of establishments in the industrial, commercial and agricultural sectors under section 1(5). It includes shops, cinemas, hotels, restaurants, newspaper firms, road motor transport services, private educational and medical institutions, Non-Banking Financial Companies, insurance business, airport authorities, port trust and warehouses with 10 or more employees (Employees' State Insurance Corporation, 2025)

The employees drawing wage/salary not exceeding Rs. 21000 per month are covered by the ESI scheme with effect from 1<sup>st</sup> January 2017. In the case of individuals with disabilities the maximum limit of earnings is Rs. 25000 per month. The wage ceiling for coverage is periodically updated by the Central Government based on the specific recommendations of ESI Corporation. All types of employees such as regular, contractual, casual and temporary employees are covered under ESI scheme. Medical examination is not required for registration. Similarly, there is no upper age limit for registration under ESI scheme.

### **3.5.2 Contribution**

Contribution is the amount of money payable to the Corporation by the principal employer in respect of an employee and includes the amount payable by the employee and the employer. Every contribution is payable in respect of a wage period and it is paid as a fixed percentage of wages. The employees covered by the ESI scheme contributes 0.75% of their wages and the employers are contributing 3.25% of their wages in respect of each employee. Employees whose wage do not exceed Rs. 176 per day are exempted from the payment of contribution with effect from 1<sup>st</sup> September 2019. However, employers are required to contribute their share in respect of such employees. The employers who employ physically disabled

persons will be exempted from the payment of employer's contribution for the first 3 years. During this period, the contribution will be paid by the government. The employer deposits the contribution either in cash or by cheque at specified branches of certain nationalised banks which is used for providing various benefits to insured persons and their dependents. The fund is also used for meeting administrative and other expenses.

### **3.6 Employees' State Insurance Corporation**

Employees' State Insurance Corporation is a statutory corporation created under the ESI Act to manage and supervise the functioning of ESI scheme in the country. ESI Corporation administers and executes the ESI scheme as per the provisions of ESI Act. The headquarters of ESI Corporation is situated in New Delhi. The Corporation has a wide network of hospitals and dispensaries for providing medical benefit and for providing super specialty treatment, it has tie-up arrangement with advanced medical institutions in the country. ESI Corporation is managing its operations with many field offices, regional offices, sub-regional offices, divisional offices, branch offices, pay offices, liaison offices and inspection offices set up in various states throughout the country.

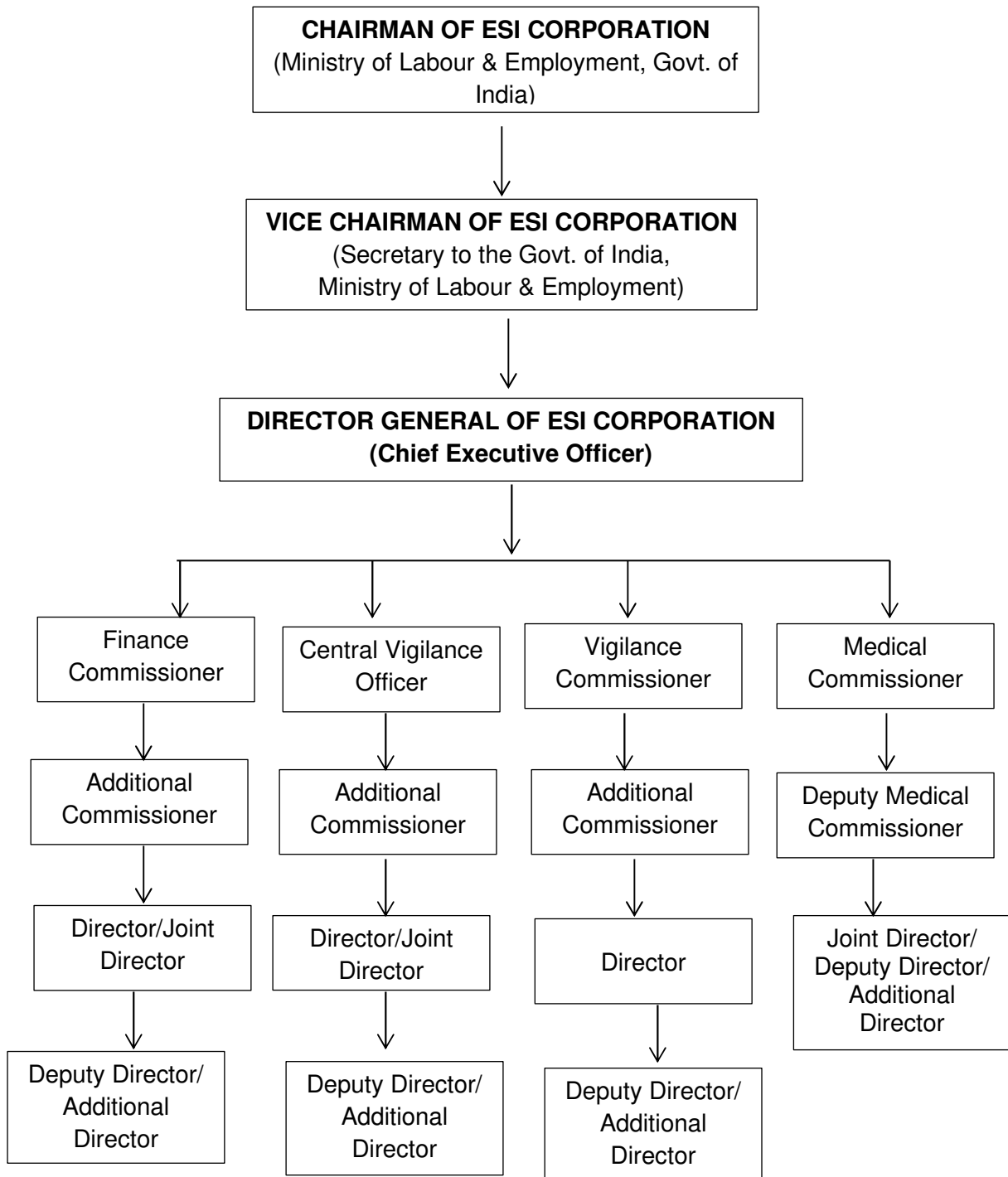
A lighted lamp is the logo of ESI Corporation which reflects the fortitude of the scheme. The logo shows that ESI scheme is trying to brighten the lives of workers and their families by replacing despondency with hope and offering both physical and financial support during difficult times.

The ESI Corporation received the esteemed "ISSA vision zero 2023" award. This award recognises the progress of ESI Corporation in improving service delivery, administrative efficiency and operational effectiveness. The major reason for these advancements has been the implementation of Information Technology enabled initiatives which highlights the dedication of ESI Corporation to leveraging technology for better service. This recognition by the International Social Security Association reflects ESI Corporation's global reputation and its significant role in advancing modern social security systems. The ICT initiatives of ESI Corporation have digitised its essential processes, reduced its paper work and simplified

administrative task for all stakeholders including insured individuals, employers and staffs. The following figure shows the organisational structure of ESI Corporation

**Figure: 3.1**

*Organisational Structure of ESI Corporation*



Source: <https://www.esic.gov.in/organization-chart>

### **3.6.1 Working Machinery of the ESI Corporation**

The Employees' State Insurance Act envisions the establishment of various mechanisms to ensure the effective operation of the ESI scheme across the country. Accordingly, Inspectorates, Revenue Recovery Machinery, Employees' Insurance Court and Grievance Redressal Cell have been set up and are functioning within the Corporation. The working machineries of the ESI Corporation are given below

#### **1. Inspectorates**

According to Section 45 (1) of the ESI Act, the Corporation has the power to appoint inspectors in order to ensure the compliance with the provisions of ESI Act. The inspectorate has the right to survey any factory or establishment at a reasonable time. The inspector can examine the accounts and other documents of the employer covered under ESI Act and can obtain the records from any register.

#### **2. Revenue Recovery Machinery**

Revenue Recovery Machinery was established in 1992 in all states. It is established to observe the recovery of all the dues from ESI registered units. It consists of recovery officer and Revenue Recovery inspectors at the regional level.

#### **3. Employees Insurance Court**

According to Section 74 of the ESI Act, state governments can establish ESI court for the local areas, with the number of judges being determined by the state government. The ESI court functions like a civil court and ensures speedy justice in connection with disputes arising under the ESI scheme.

#### **4. Grievance Redressal Cell**

Grievance Redressal Cell redresses the grievances of employers and employees covered under ESI scheme. Grievances are submitted through various channels including telephone, postal mail, e-mail, CPGRAMS (Centralised Public Grievance Redress and Monitoring System) and social media. ESI Corporation manages these grievances via a network of Public Grievance Officers stationed across its field offices and hospitals. In order to ensure prompt and on-the spot resolution of

beneficiaries' grievances, "Suvidha Samagams" are periodically organised at regional, sub-regional and divisional offices and branch offices.

**Table 3.3**

*Responsible officials for the redressal of grievances under ESI scheme at various levels*

---

| <b>Level of Grievance</b> | <b>Responsible Official</b>                 |
|---------------------------|---------------------------------------------|
| ESI dispensary            | Insurance Medical Officer                   |
| ESI hospitals             | Medical Superintendent                      |
| Branch Office             | Branch Manager                              |
| Regional Level            | Regional Director/ Public Grievance Officer |
| Corporate Level           | Director                                    |

---

Source: ESI Corporation (2015)

### **3.6.2 Advisory Bodies of the ESI Corporation**

The ESI Act also envisages creation of additional bodies like the Medical Benefit Council at the apex level, Regional Boards at the Regional Level and Local Committees at the grassroot level to advise the Corporation on matters related to the administration of the ESI scheme. The advisory boards give suggestions and recommendations for framing rules and regulations to facilitate the proper functioning of ESI Corporation.

#### **A. Medical Benefit Council (MBC)**

The Medical Benefit Council is a statutory body which provides advice to the ESI Corporation on matters related to medical care for the scheme's beneficiaries.

#### **B. Regional Boards**

Section 25 of the ESI Act empowers the Corporation to establish Regional Boards in regions or states where the ESI scheme is implemented to perform the function of an advisory body.

### **C. Local Committee**

ESI Corporation establishes local committees at the grass root level as an advisory body to ensure the smooth operation of the scheme. According to section 10A of the ESI regulations, Local Committees can be established for any area deemed suitable by the Regional Board.

#### **3.6.3 Sources and Application of Funds of the ESI Corporation**

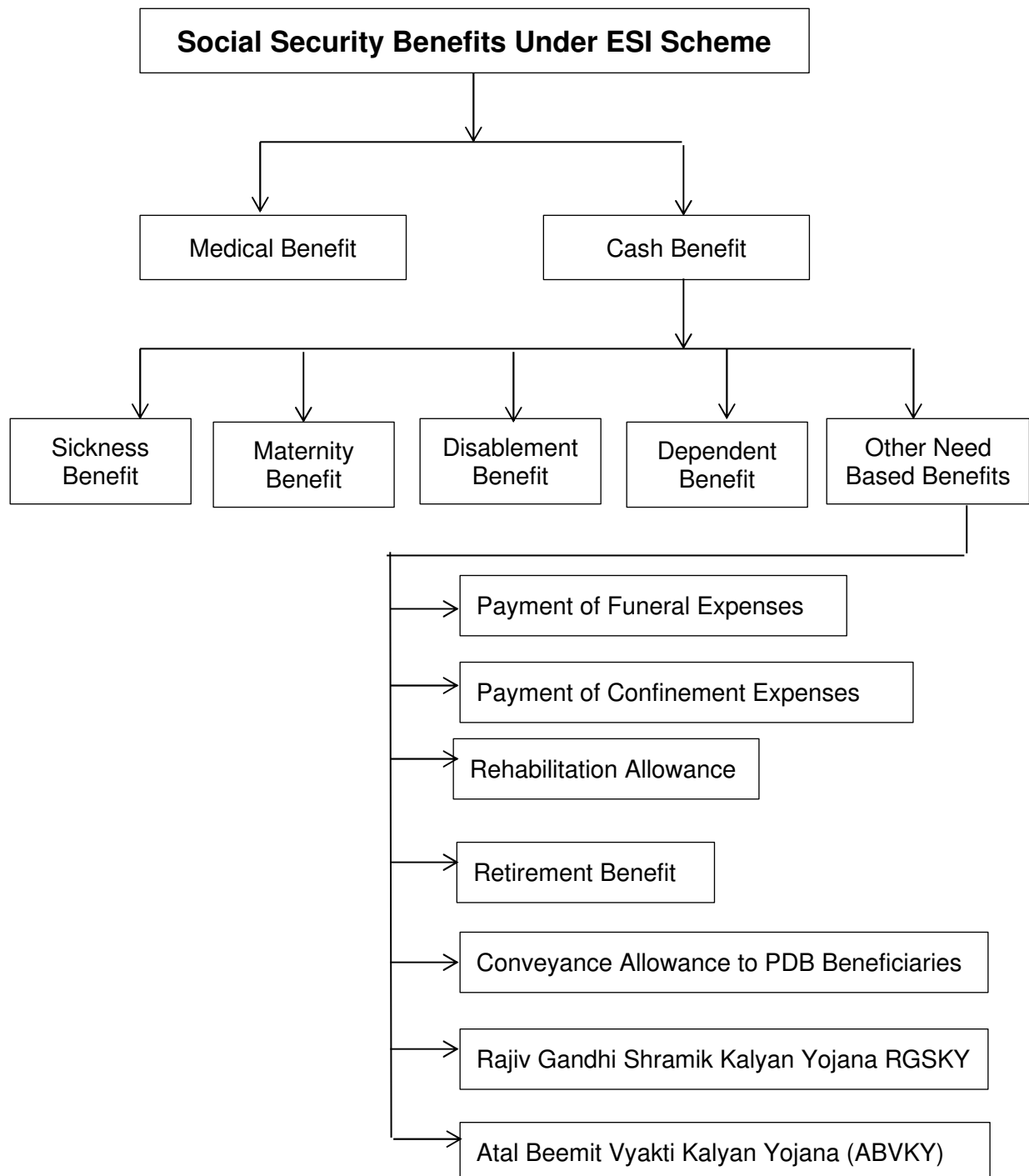
The main source of fund of the ESI Corporation is the contribution collected from employees and employers as a fixed percentage of wages. The Corporation may receive grants, gifts and donations from the government, local authority or any individual or organisation for various purposes of the ESI Act. All funds received by the ESI Corporation shall be deposited in to the ESI fund and it should be spent according to the provisions of the ESI Act.

#### **3.6.4 Social Security Benefits under ESI Scheme**

The insured persons and their dependents are the beneficiaries of ESI scheme. The insured persons are eligible for all benefits under ESI scheme while their dependents are eligible only for the medical benefit and dependent benefit. The ESI scheme offers the following social security benefits to the insured persons and their dependents (Employees' State Insurance Corporation, 2024).

**Figure: 3.2**

*Social Security benefits Offered by the ESI Corporation*



Source: Employees' State Insurance Corporation (2023a)

### **3.6.4.1 Medical Benefit**

Medical benefits are offered according to section 56 of the ESI Act. Medical benefit includes both medical care and free cost of medical treatment. The most important advantage of medical benefit is that the insured person and his family members are entitled for medical benefits from the first day of insurable employment. The eligibility remains in effect as long as the individual continues in insurable employment. Medical benefit includes out-patient treatment, in-patient treatment, domiciliary treatment, specialist consultation, supply of medicines, dressings, provision of artificial limbs, aids and appliances, confinement, ambulance services etc. Medical benefit also includes diagnostic facilities and health improvement services such as vaccination, preventive inoculation, regular health check-ups, family planning supplies, vasectomies, tubectomies etc.

Medical care offered to ESI beneficiaries include a wide range of services from primary to super specialty services. Primary medical facilities are offered through dispensaries and panel clinics. Secondary care is offered by ESI hospitals and diagnostic centers. Tertiary medical services are offered with the help of tie up arrangement with specific private and government hospitals and diagnostic facilities. ESI Corporation has tie-up arrangement with several reputed hospitals to offer cashless treatment for some specific disease to their patients. Treatments not available in ESI healthcare institutions are referred to these medical institutions. All insured persons eligible for medical benefits will also become eligible for super specialty benefits. In addition to Allopathy treatment, Ayurvedic, Yoga, Homeopathy, Unani and Siddha (AYUSH) treatments are also offered under ESI scheme. The Corporation also offers treatment for occupational diseases through the Occupational Diseases Centres which have been established in different parts of the country. Medical care is also offered to retired and disabled persons on a payment of a small amount of Rs. 120 per annum per couple.

**Table 3.4***Medical Infrastructure of ESI Corporation as on 1<sup>st</sup> January 2024*

| Details                                         | Number |
|-------------------------------------------------|--------|
| Number of ESI Hospitals                         | 161    |
| Hospitals directly run by the ESI Corporation   | 55     |
| Hospitals run by State Government               | 106    |
| Number of Dispensaries                          | 1574   |
| Number of Dispensary Cum Branch Offices         | 104    |
| Number of ISM (Indian System of Medicine) units | 406    |
| Number of sanctioned beds in ESI hospitals      | 27810  |
| Number of commissioned beds in ESI hospitals    | 20778  |
| Number of Doctors                               | 7896   |
| Number of Insurance Medical Practitioners       | 869    |
| Occupational disease Centres                    | 5      |

Source: Employees' State Insurance Corporation (2024)

**Table 3.5***Status of AYUSH Medical Services in India as on 1<sup>st</sup> January 2024*

| System of Medicine | No of units                          |                                           |
|--------------------|--------------------------------------|-------------------------------------------|
|                    | ESI Hospitals run by ESI Corporation | ESI Hospitals run by the State Government |
| Ayurveda           | 60                                   | 123                                       |
| Unani              | 0                                    | 11                                        |
| Siddha             | 0                                    | 51                                        |
| Homeopathy         | 42                                   | 46                                        |
| Yoga               | 48                                   | 25                                        |

Source: Employees' State Insurance Corporation (2024)

**3.6.4.2 Sickness Benefit**

Sickness benefit provides payment to insured persons for the period of leaves taken for sickness. The payment is given for the certified period of sickness subject to some restrictions. It is a kind of cash benefit paid to insured persons which is equal to 70% of the average daily wages earned by insured persons and is payable for a

maximum period of 91 days during 2 consecutive benefit periods. In order to qualify for the sickness benefit, the insured person must give at least 78 days contribution in a contribution period. Sickness benefit also includes extended sickness benefit and enhanced sickness benefit.

**a. Extended Sickness Benefit**

Extended sickness benefit is granted to insured persons suffering from serious diseases such as Tuberculosis/ Leprosy, mental and malignant diseases or any other specific long-term ailments considered by the medical Benefit Council. A common list of such diseases is prepared by ESI Corporation and revised periodically. Currently this list includes 34 diseases. The extended sickness benefit is allowed at a higher rate than sickness benefit which is 80% of average daily wage for a period of maximum 2 years. Extended sickness benefit is allowed after expiring the sickness leaves which is 91 days in a year. This benefit is available only for the insured persons and not for the dependents.

**b. Enhanced Sickness Benefit**

Enhanced sickness benefit is allowed to insured persons who undergo the sterilisation operations for family planning. It was introduced with effect from 1<sup>st</sup> August 1976. This benefit encourages insured persons to follow small family norms by undergoing vasectomy/ tubectomy operations. Enhanced sickness benefit is two times of the ordinary sickness benefit. It is given up to 7 days in case of vasectomy and up to 14 days for tubectomy. The period of enhanced sickness benefit is extendable in case of post operative complications.

**3.6.4.3 Maternity Benefit**

Maternity benefit is granted as per Section 50 of the ESI Act. It is a kind of cash benefit offered to insured women for the specific period of confinement, miscarriage or illness related to pregnancy or premature child birth. Maternity benefit is granted at 100% of the average daily wage. It is given for a maximum period of 26 weeks in the case of pregnancy and 6 weeks in the case of mis-carriage. The benefit is granted only in the case of first 2 kids. The duration of benefit for sickness arising out of

confinement is 30 days. Additionally, an insured woman who is a commissioning or adopting mother is entitled to 12 weeks of maternity benefit starting from the date the child is handed over to her. To qualify for the benefit, the insured woman must contribute not less than 70 days in the immediately preceding 2 consecutive contribution periods. The insured woman is required to submit a notice of pregnancy along with a certificate of pregnancy to her branch office to claim maternity benefit.

#### **3.6.4.4 Disablement or Employment Injury Benefit**

It is granted to insured persons who became disabled partially/ fully due to employment injury and continued to be an employee. The benefit is granted to the disabled insured persons for the full period for which he/ she is not able to work subject to the certification of Insurance Medical Officer/ Insurance Medical Practitioner. This benefit is granted to every insured person from the first day of IP registration without considering the payment of contribution. Disablement benefit includes both temporary disablement benefit and permanent disablement benefit.

##### **a. Temporary Disablement Benefit**

Temporary disablement benefit is payable to insured persons who became temporarily disabled due to work related injury or occupational disease for the period of certification by an Insurance Medical Officer/ Insurance Medical Practitioner. Temporary disability benefit is paid at the rate of 90% of average daily wage. This benefit is offered to all the beneficiaries till the disability lasts irrespective of the status of their contribution. In this case, the claimant should be an employee as per the provisions of ESI Act on the date of employment injury.

##### **b. Permanent Disablement Benefit**

Permanent disablement benefit is offered to insured persons who has sustained an injury that permanently impairs their working capacity. The injured person must be an employee as per the provisions of ESI Act to qualify for permanent disablement benefit. The amount of benefit is usually paid at the rate of 90% of the average daily wages. The payment is made monthly and it is done for the whole life at the rate decided by the medical board depending upon the extent of loss of capacity.

Conveyance allowance is also granted to permanently disabled beneficiaries on their personal visit to branch office for submission of life certificate in a year. The amount is directly deposited to the bank account of the beneficiary each month.

#### **3.6.4.5 Dependent's Benefit**

Dependent benefit offers financial support to the dependents of an insured person after his/her death due to employment related injury/ occupational disease. Insured persons are eligible for dependents benefit from the first day of getting registered as an IP of the ESI scheme. Benefit is granted to the dependents at the rate of 90% of the daily average wage of the deceased insured person. The minimum dependent benefit payable to all eligible dependents is Rs. 1200 per month with effect from 1<sup>st</sup> March, 2012.

#### **3.6.4.6 Other Benefits**

ESI beneficiaries also enjoy the following need-based benefits.

##### **a. Payment of Funeral Expenses**

Funeral expenses are given to the dependents of insured person or to the person who performs the last rites of insured person. Funeral expenses are given as a lumpsum amount subject to a maximum of Rs. 15000.

##### **b. Payment of confinement Expenses**

This benefit is granted to those insured women, whose confinement occurs at a place where medical facilities under ESI scheme are not available. Confinement expenses @ Rs. 7500 per case are paid for two confinements only.

##### **c. Rehabilitation Allowance**

The ESI Corporation also offers allowances for vocational and physical rehabilitation in cases of physical disablements due to employment injury. Vocational rehabilitation facility is granted to those insured persons who have permanent disability of 40% or more and whose age does not exceed 45 years on the date of application. Under this benefit, ESI Corporation is offering training to the

insured persons to secure jobs. The vocational rehabilitation allowance covers either the actual training fee paid or Rs. 123 per day, whichever is higher and is provided until the training is completed. The physical disablement allowance is paid at the employee's wage rate for the duration of their stay at the artificial limb center.

**d. Retirement Benefit**

Retirement benefits are granted to those employees who have reached the age of superannuation or gets retired under Voluntary Retirement Scheme. They are eligible to get medical benefit for themselves and for their spouse subject to the payment of a nominal contribution of Rs. 120 per year. Such a person should have been in insurable employment for at least 5 years before retirement. If the insured person died, the spouse will receive the benefit by paying the same amount. However, they cannot avail super speciality treatment and reimbursement of medical expenses.

**e. Rajiv Gandhi Shramik Kalyan Yojana (RGSKY)**

This scheme was introduced on 1<sup>st</sup> April 2005 by ESI Corporation to offer unemployment allowance to insured persons. The insured person must have paid the contribution for at least 78 days and must have worked in the insurable employment for the last 2 years to qualify for this benefit. An ESI insured person who loses his/her job after 3 or more years of covered employment is eligible for unemployment allowance if their job loss is due to the closure of a factory or establishment, retrenchment or permanent disability or inability of at least 40% resulting from an occupational hazard. This benefit is given for a maximum period of 24 months. Rate of benefit is equal to 50% of the average daily wage for the first 12 months and 25% of the daily average wage for the next 12 months. Medical care will be provided for the insured person and dependents from ESI health care institutions during the period of receipt of unemployment allowance.

**f. Atal Beemit Vyakti Kalyan Yojana (ABVKY)**

The Atal Beemit Vyakti Kalyan Yojana is a welfare scheme by the ESI Corporation that provides cash relief to unemployed insured individuals for up to 90 days.

Initially, the relief rate was set at 25% of the claimant's average daily earnings. The scheme, which started on 1<sup>st</sup> July, 2018 was originally introduced as a two-year pilot project but has since been extended twice, each time by one year. The relief rate has been increased from 25% to 50% of insured person's average daily earnings. To qualify, the individual must have been in insurable employment for at least 12 months before unemployment and have contributed for a minimum of 78 days in the one completed contribution period within those 12 months.

#### **g. Conveyance Allowance to PDB Beneficiaries**

Under this facility, Permanent Disablement Benefit Beneficiaries are entitled to receive a conveyance allowance of Rs. 100 for their annual personal visit to the branch office for submitting their life certificate.

**Table 3.6**

*Status of ESI Scheme in India as on 1<sup>st</sup> January 2024*

| <b>SI No.</b> | <b>Details</b>                                            | <b>Number</b> |
|---------------|-----------------------------------------------------------|---------------|
| 1             | No. of Districts in which ESI scheme has been implemented | 661           |
| 2             | No. of employers registered under ESI scheme              | 20.83 Lakh    |
| 3             | No. of employees registered under ESI scheme              | 3.05 Crore    |
| 4             | No. contributing employers under ESI scheme               | 7.07 Lakh     |
| 5             | No. of insured persons covered under ESI scheme           | 3.43 Crore    |
| 6             | No. of insured women under ESI scheme                     | 67.61 Lakh    |
| 7             | No. of beneficiaries under ESI scheme                     | 13.31 Crore   |

Source: Employees' State Insurance Corporation (2025)

#### **3.6.5 Recent Initiatives of ESI Corporation**

Prime Minister Narendra Modi launched the 2<sup>nd</sup> generation reform of ESI Corporation on 20<sup>th</sup> July 2015 known as ESIC 2.0 (Employees' State Insurance Corporation, 2016). During the post reform period also, the Corporation has taken several new initiatives for improving its service delivery mechanism (Employees' State Insurance Corporation, 2023b). As a result of which the insured persons covered under the scheme reached 3.43 crores in 2023 and the total number of

beneficiaries became 13.31 crores. The following are the major beneficiary centric value-added initiatives of ESI Corporation in the recent years.

**I. Digital Project Panchdeep**

Digital Project Panchdeep was started on 1<sup>st</sup> April 2015. It is one of the largest e-governance initiatives in the country, designed to offer online services to employers, insured individuals, ESI staff, third party and government agencies, suppliers and other stakeholders. It facilitates employer and beneficiary registration, contribution payments, distribution of cash benefits and documentation of medical services for all insured persons in online mode.

**II. Abhiyan Indradhanush**

As per this scheme, the bed sheets of ESI hospitals are changed regularly on the basis of VIBGYOR pattern. This mission aims to improve and maintain hygiene in the hospitals.

**III. E-biz platform**

The ESI Corporation has transitioned all its services to an electronic platform, making it as the first government department to take such an initiative. This integration enables a range of functions such as establishment and employee registration, online contribution, submissions and the issuance of claims and updating of e-pehchan cards. These initiatives have streamlined business processes and resulted in cost reduction.

**IV. Comprehensive ESIC Website**

ESI Corporation has launched a comprehensive website for its beneficiaries. The website helps insured persons to get answers to their questions regarding contribution, benefits, Pehchan cards, claims, compensations etc. in various local languages.

## **V. Health camps by ESI Corporation**

ESI Corporation organises health camps annually for the insured persons and their beneficiaries who had attained the age of 40 years or more.

## **VI. E-Pehchan cards**

ESI Corporation issued 2 Pehchan cards to insured persons, one for the insured persons and the other for the dependents of the insured persons. This is particularly useful when the insured person is working in one locality and the dependents are residing far away in another locality.

## **VII. IP our VIP Policy**

The insured persons are treated as very important persons and they are given priorities over others and their needs and problems are considered firstly.

## **VIII. Other value-added Initiatives of ESI Corporation**

1. Online access to electronic health records of ESI beneficiaries.
2. A medical helpline number was given to beneficiaries so as to enable them to access information from anywhere at any time.
3. Special OPD services for senior citizens and differently abled persons by specialist doctors.
4. Extending the coverage of ESI scheme to all states and Union Territories.
5. Extending the health scheme for selected segments of unorganised workers.
6. Setting up of State ESI Corporation society in all states as subsidiary of ESI Corporation.
7. Converting all dispensaries in to 6 bedded hospitals having all the facilities specified under India's Public Health Standards.
8. Renovation of ESI hospitals by white washing of buildings, ensuring cleanliness of the inner areas of hospitals and making outside areas green by plantations.

9. Implementing an effective queue management system and online registration facility in all ESI hospitals.
10. Quality control on drugs and medicines.
11. Offering behavioural training to paramedical and other hospital staffs for ensuring courteous patient interaction.
12. Establishing reception and 'May I help you facility' in every hospital to guide patients and their attendants.
13. Implementing a feedback system for all inpatients.
14. Installing proper and attractive signage at key locations in all hospitals to ensure clear communication with patients and beneficiaries.
15. Tracking every pregnant mother and newborn in the families of insured persons to ensure complete immunisation and safe delivery.
16. Establishing at least one mother and child care hospital with advanced facilities in every state.
17. Developing telemedicine services for beneficiaries in phases.
18. Extending AYUSH facilities to the dispensary level in phases.
19. Introduced Chinta Se Mukti mobile app through which the beneficiaries can put their complaints and grievances and can check the status of claims and benefits. The insured person gets all information regarding ESI scheme through this mobile app.
20. Introduced a health pass book which contains all OPD -slips and diagnosis details of insured persons and their dependents in chronological order.
21. Regularly conducting Suvidha Samagam to resolve the queries and clarify the doubts of insured persons related with the ESI scheme.

22. Online facility for submitting cash benefit claims and claim checking is allowed to ESI beneficiaries.
23. E-payment facility has been established to directly transfer cash benefits to the beneficiaries' bank accounts via the SBI gateway.
24. Introduced 'Ask An Appointment' mobile app for seeking online appointment, reschedule or cancel appointment in ESI hospitals/ dispensaries.
25. Unified Mobile Application Platform for New-age Governance (UMANG) enables ESI beneficiaries to search any ESI centre or tie-up hospital on the basis of distance and/ or services available therein.
26. Offering multilingual SMS facility to insured persons. As per this facility, the insured person can select a language for receiving SMS from ESI Corporation.
27. Home delivery of drugs to ESI beneficiaries of 60 years and above and to those having chronic diseases up to 90 days at a time.
28. E-sanjeevani Tele-consultation system of ESI Corporation offers video based clinical consultation. Through this facility patients can contact doctors from any place.

### **3.6.6 ESI Scheme in Kerala**

The ESI scheme was initially introduced in Kerala on 16<sup>th</sup> September 1956, covering 7 centres in Kollam, Alleppey, Ernakulam and Trichur. Gradually, the scheme has been extended to all major centres across the state. Currently the scheme is implemented in all districts of Kerala. In order to facilitate the distribution of cash benefits and to manage the implementation of ESI Act in Kerala, a Regional Office of the Corporation has been established in Trichur. ESI Corporation has also established 4 sub-regional offices in Kerala which are located in Trivandrum, Kollam, Ernakulam and Kozhikode. The branch offices established across various centres in the state manage the distribution of cash benefits to insured persons and their dependents. The Regional Office is headed by a Regional Director while the Branch Offices are led by Branch Managers. Two Dispensary Cum Branch Offices

are functioning in Kerala which are located in Munnar (Idukki district) and Thazhekode (Malappuram district).

The Directorate of Insurance Medical Services was established on 1<sup>st</sup> April 1985 to manage and supervise the medical aspect of ESI scheme in Kerala. The headquarters of the Insurance Medical Service Department is located in Thycaud, Trivandrum. The Director of Insurance Medical Services in Trivandrum performs the function of Chief Administrative Officer. In order to ensure the effective administration of ESI scheme in various regions, the government has also established 3 Zonal Deputy Directorates in Kozhikode, Ernakulam and Kollam. Medical services are provided through 9 state run ESI hospitals, 3 hospitals which are directly controlled by the ESI Corporation, 1 ESI annex and 147 full time dispensaries (*Insurance Medical Services*, 2024). Allopathic, Ayurvedic, Siddha and Homeopathic treatments are available for ESI beneficiaries in Kerala.

**Table 3.7**

*ESI Hospitals in Kerala as on 31<sup>st</sup> March 2023*

| Location                                                       | Sanctioned Beds | Commissioned Beds |
|----------------------------------------------------------------|-----------------|-------------------|
| <b>State Run ESI Hospitals in Kerala</b>                       |                 |                   |
| Alleppy                                                        | 55              | 55                |
| Ernakulam                                                      | 100             | 65                |
| Feroke                                                         | 100             | 100               |
| Mulamkunnathukavu                                              | 110             | 110               |
| Olarikkara                                                     | 102             | 102               |
| Palakkad                                                       | 50              | 50                |
| Perooorkada                                                    | 128             | 128               |
| Thottada                                                       | 50              | 50                |
| Vedavathoor                                                    | 65              | 65                |
| <b>Hospitals Directly Run by the ESI Corporation in Kerala</b> |                 |                   |
| Ashramam, Kollam                                               | 250             | 200               |
| Ezhukone                                                       | 150             | 150               |
| Udyogmandal                                                    | 150             | 114               |

Source: Employees' State Insurance Corporation (2024)

**Table 3.8***Status of AYUSH facility in Kerala*

| <b>Kind of Medical Service</b> | <b>No. of Units in the Hospitals directly run by ESI Corporation</b> | <b>No. of Units in the State Run Hospitals</b> |
|--------------------------------|----------------------------------------------------------------------|------------------------------------------------|
| Ayurveda                       | 3                                                                    | 11                                             |
| Siddha                         | 0                                                                    | 0                                              |
| Unani                          | 0                                                                    | 0                                              |
| Homeopathy                     | 3                                                                    | 13                                             |
| Yoga                           | 3                                                                    | 0                                              |
| <b>Total</b>                   | <b>9</b>                                                             | <b>24</b>                                      |

Source: Employees' State Insurance Corporation (2024)

**Table 3.9***Region wise coverage of ESI scheme in Kerala as on 31<sup>st</sup> March 2023*

| <b>Regional Office/<br/>Sub regional Office</b> | <b>Total Employers</b> | <b>Contributing Employers</b> | <b>Number of Insured Persons</b> | <b>Total Number of Beneficiaries</b> |
|-------------------------------------------------|------------------------|-------------------------------|----------------------------------|--------------------------------------|
| Thrissur                                        | 10569                  | 5614                          | 160290                           | 621925                               |
| Ernakulam                                       | 26998                  | 10996                         | 407270                           | 1580208                              |
| Kollam                                          | 11892                  | 4945                          | 150650                           | 584522                               |
| Kozhikode                                       | 16105                  | 6119                          | 163650                           | 634962                               |
| Trivandrum                                      | 10311                  | 3383                          | 132070                           | 512432                               |
| <b>Total</b>                                    | <b>75875</b>           | <b>31057</b>                  | <b>1013930</b>                   | <b>3934049</b>                       |

Source: Employees' State Insurance Corporation (2024)

### 3.7 Service Quality

Service quality has been widely studied in marketing literature and it is considered as a tremendously explored topic in the field of service marketing (Fisk et al., 1993). Service quality is a key factor for differentiating service performances and improving competitive advantage. According to A. Parasuraman et al., (1985), “perceived service quality refers to an attitude or universal judgement related to a

service's excellence, emphasising that it reflects the gap between consumers' perceptions and expectations."

Service quality is an abstract, complex and multi-dimensional concept which is perceived differently by different individuals (Gronroos, 1988; Parasuraman et al., 1985). It depends on both the outcomes of the service and the evaluations formed during its delivery. Since service quality is inherently subjective, it can be assessed in a better manner through customers' perceptions (Edvardsson, 1998; Ojasalo, 2019). Service quality perceptions show the cognitive reaction and evaluation of service attributes (Richard L Oliver, 1997). It can be measured by comparing between what customers feel about the service firm should offer and what the service firm actually delivers (Richard L Oliver, 1980; Grönroos, 1982; A. Parasuraman et al., 1985 ).

Various approaches are used to measure service quality. The conceptualisation and the measurement of service quality has attracted considerable number of debates and controversies in the service marketing literature (Brady & Cronin, 2001). Service quality evaluation poses a challenge for service providers due to the intangible, inseparable, variable and perishable nature of services (Bateson, 1992) . Since the services are intangible, it is difficult for the organisations to identify the manner in which consumers perceive their services and judge service quality (Zeithaml, 1981). On account of heterogeneity, the service performance often differs from person to person and from situations to situations. Hence it is difficult to ensure consistency in service performance. In the case of services, quality is not decided at the manufacturing plant, but it occurs during the process of service delivery. The service firm has less control over service quality because the consumer participation and the interaction between the consumer and service personnel largely influences the effectiveness of service delivery process. Service quality evaluation depends not only on the service outcome but also on the service delivery process.

### **3.7.1 Definitions**

Service quality is defined differently by different experts based on the nature of industry, context of the study and various theoretical perspectives. Some of the well-known definitions of service quality are given below:

A. Parauraman et al. (1988) defined perceived service quality as “a global judgement, or attitude, relating to the superiority of the service.”

Zeithaml et al., (1993) defined service quality as “consumers’ assessment of the overall excellence or superiority of the service.”

According to Ghobadian et al. (1994), service quality refers to “the degree to which offered services meet customer expectations.”

According to Johnston (1997) Service quality indicates “customers’ overall impressions of the services provided by an organisation, emphasising on their perceived inferiority or superiority.”

Lloyd-Walker & Ping Cheung (1998) further observed service quality “as a process of continuous improvement aimed at meeting and exceeding customers’ varied expectations.”

### **3.7.2 Importance of Service Quality**

Service quality is the most important concept for service providers (Zahari Wan Yusoff et al., 2010). The importance of service quality has grown over the years because of the cut throat competition in the service sector (Burch et al., 1995). Service quality largely influences a service organisation’s profitability and goodwill. Companies which deliver superior service experience achieve more growth rate in the market share (Buzzell & Gale, 1987) Lee et al. (2000) pointed out that service quality is an evolving strategic and critical concept for enhancing competitive edge and hence continuous assessment and improvement of service quality is essential.

Service quality is a priority for all organisations and managers must identify the factors which contribute to high quality services and develop effective methods to measure them. Recently the measurement of service quality has attracted the interest of several research scholars and practitioners. According to Shahin & Janatyan (2011), analysis and measurement of service quality is important for assessing and improving service quality. Understanding various components of service quality can assist service managers in identifying strengths and weaknesses of their service firms

and also it helps to benchmark against other companies within the same industry. Quality services are to be delivered for ensuring survival and success in today's competitive world (Reichheld & Dawkins, 1990). Moreover high level of service quality ensures some strategic benefits such as reducing costs, improving return on investment and boosting productivity (Gijzenberg et al., 2015). Many researchers also observed that service quality is a precursor to customer satisfaction (Brady & Robertson, 2001; Cronin & Taylor, 1992; Lee et al., 2000 ; Oliver, 1993; Spreng & Mackoy, 1996; Woodside et al., 1989) and it is related to customer loyalty (Omar & Musa, 2011), purchasing behaviour (Pérez Sánchez et al., 2007) and the repurchase intention (Olaru et al., 2008). It can also be used as a strategic differentiation weapon for creating and enhancing distinctive advantages (Lim & Tang, 2000).

### **3.7.3 Service Quality Models**

Measurement of service quality is inherently difficult and various researchers have adopted diverse methods to address this issue. Service quality research has initially evolved along 2 primary lines such as Nordic perspective which emphasis on functional and technical quality and the American perspective which analyse service quality by classifying in to specific dimensions. During 1990's, the contemporary school of thought modified traditional approaches and developed more comprehensive methodologies to measure service quality. Accordingly, numerous models of service quality have been identified across various fields all over the world. The dimensions of service quality vary on the basis of the nature of service sector. Some of the important service quality models developed by the academic researchers over the years are described below.

#### **1. Technical and Functional Quality Model**

Technical and functional quality model was developed by Gronroos (1984). According to him service quality has 3 major components such as technical quality, functional quality and image. Technical quality dimension represents the outcome the consumer receives because of his/ her interactions with a service firm. Technical dimensions include professionalism and skills. Functional quality refers to the manner in which service is delivered to the consumer. Attitude and behaviours,

accessibility and flexibility, reliability and trustworthiness and recovery are the functional or process related dimensions. Corporate image represents the consumers' overall impression about the firm. Reputation and credibility can be considered as the image related dimensions. Apart from technical quality and functional quality, factors such as tradition, ideology, advertising, public relations, pricing etc. influence the formation of corporate image in the minds of consumers. According to Gronroos, quality dimensions are interrelated. Technical quality is considered as a prerequisite for a successful functional quality. If the functional quality is good, temporary issues related with the technical quality can be compromised. Functional quality is considered to be more important than technical quality. The management should give more importance for improving the functional quality of a service firm. Therefore, interactive marketing efforts should be given more importance than traditional marketing activities. A service firm should monitor and manage both functional and technical quality for its long run success.

## **2. GAP Model of Service Quality and SERVQUAL**

The GAP model was developed by A. Parasuraman et al. (1985). This model states that service quality measurement involves comparison of customer expectation with actual service performance. As per GAP model, a set of gap or differences exists between management perceptions of service quality and the actual service delivery to consumers. These gaps are discussed below

### **A. Consumers Expectation – Management Perception Gap (Gap 1)**

The service marketers need not always understand what the consumer expect about a service. This misunderstanding may give rise to a gap between consumer expectation and management perceptions of consumer expectations.

### **B. Management Perception – Service Quality Specification Gap (Gap 2)**

The major cause behind this gap is lack of management commitment to service quality. It may also arise on account of resource constraints, adverse market conditions, management indifferences etc.

**C. Service Quality Specifications – Service Delivery Gap (Gap 3)**

Even though service organisations establish service standards, it is not always possible to ensure high quality service performance as per the standards set. It depends upon the performance and efficiency of the employees of service firm. This will affect service quality from the view point of consumers.

**D. Service Delivery – External Communications Gap (Gap 4)**

Service firms inform consumers about the service performance through advertising and other promotional measures. It affects service expectations. The firm should give promises correctly. The promises should be realistic. Promising more will increase customer expectations and it will lead to lower consumer perception when the informed promises are not fulfilled properly.

**E. Expected Service - Perceived Service Gap (Gap 5)**

Perceived service quality is the function of the amount and direction of the difference between expected service and perceived service. If expectations exceed perceptions, perceived quality falls below satisfactory levels, approaching unacceptable quality as the gap widens. If expectations match perceptions, perceived quality is deemed satisfactory. On the other hand, if expectations are lower than perceptions, perceived quality exceeds satisfaction, moving closer to ideal quantity as the gap between expected service and perceived service grows.

As per the Gap model, customers use 10 distinct service quality dimensions for evaluating service quality such as Reliability, Responsiveness, Competence, Access, Courtesy, Communication, Credibility, Security, Understanding/ Knowing the Customer and Tangibles (A. Parasuraman et al.,1985)

Later on A. Parasuraman et al. (1988) developed the SERVQUAL model by modifying the GAP model. SERVQUAL is the most widely used multiple item scale for measuring customer perception of service quality. It is a 22-item instrument presented in a 7-point Likert Scale based on 5 dimensions of service quality. Tangibles, Reliability, Responsiveness, Assurance and Empathy are the 5

dimensions of service quality as per SERVQUAL model. These 5 dimensions are finalised by eliminating the overlapping dimensions of GAP model to reflect customers' opinion on service quality. The 4 dimensions of GAP model such as Competence, Courtesy, Credibility and Security are condensed in to 'Assurance' dimension and another 3 dimensions of GAP model such as Access, Communication and Understanding/ Knowing the Customer are condensed in to a new dimension namely 'Empathy'. The dimension 'Assurance' indicates the knowledge and courtesy of employees and their ability to inspire trust and confidence. 'Empathy' represents the service providers' capacity to understand and solve the specific requirements and concerns of customers. It involves attentiveness and personalised care for customers to make the customers feel valued.

SERVQUAL instrument assesses a firm's service quality by using the average of difference scores between perceived service quality and expected service quality along each of the five quality dimensions. It also helps to determine the relative importance of the 5 dimensions upon influencing the overall quality perceptions of customers. SERVQUAL helps to categorise the customers of a service firm in to several perceived quality segments such as high, medium and low based on their individual SERVQUAL scores. This instrument can be applied across a wide spectrum of services.

### **3. Attribute Service Quality Model**

Haywood-Farmer (1988) designed Attribute Service Quality model based on 3 attributes such as (a) physical facilities, processes and procedures, (b) people behaviour and conviviality and (c) professional judgement. This model is mainly used in qualitative researches. Each of these attributes include several factors. Haywood-Farmer suggested that an appropriate mix of these 3 attributes ensure good quality service. Appropriate mix is decided on the basis of the degree of labour intensity, customisation of service processes and the interaction between the customer and the service process.

#### **4. Synthesised Model of Service Quality**

Brogowicz et al. (1990) developed Synthesised Model of Service Quality. According to this model, there are 3 components of service quality such as external influences, traditional marketing activities and company image. According to this model, the service personnel should determine what is the expectation of customers and the manner in which they expect to get that quality. The major tasks of management such as planning, implementation and control should concentrate on both the technical and functional outcome of service performance.

#### **5. SERVPERF Model**

The performance only model for measuring service quality namely 'SERVPERF' was developed by Cronin & Taylor (1992). It is a modified version of SERVQUAL model and overcome many of the drawbacks while applying SERVQUAL scale. This model measures only customer perception of service quality offered by the service firms. This model uses the same dimensions of RATER model to assess service quality. As per this model, service quality is similar to attitude and it can be measured by using only performance data rather than the difference between performance and expectations. Cronin and Taylor analysed the data across four sectors such as pest control, banks and insurance, dry cleaning and fast-food services to prove the superiority of their SERVPERF instrument over disconfirmation based SERVQUAL scale. The proponents of this model argue that SERVPERF has stronger validity and reliability than SERVQUAL and hence, performance-based measure is an improved method of measuring service quality construct. A higher perceived performance shows higher service quality. This model shows that service quality is an antecedent of consumer satisfaction and consumer satisfaction significantly affects purchase intention. The effect of service quality on purchase intention is lower than the effect of consumer satisfaction on purchase intention.

#### **6. Ideal Value Model of Service Quality**

Mattsson (1992) developed Ideal Value Model of service quality. This model involves a value- based approach to service quality. It considers service quality as

the outcome of satisfaction process. It involves comparison of the ideal standard with the experienced outcome of the service encounter. This model suggests that negative disconfirmation is an important determinant of customer satisfaction. Hence importance should be given to the customers' cognitive processes on the basis of which the perceived service concept is formed and modified.

### **7. IT Alignment Model**

Berkley & Gupta (1994) developed IT Alignment Model. The proponents of this model tried to establish a connection between the service and information system strategies of the organisation by studying a variety of sectors such as banking, courier, manufacturing, transportation and service industries. They observed that through appropriate use of the information system, most of the dimensions of service quality can be improved such as reliability, responsiveness, competence, access, communication, security, knowing and understanding of the customers. Information technology can also be used to control the service quality such as collecting customer data, monitoring quality and facilitating service recovery. The model suggests a proper co-ordination and alignment between service quality and information system strategies.

### **8. Attribute and overall affect Model**

Dabholkar (1996) developed two alternative models of service quality for technology based self-service options such as Attribute Based Model and Overall Affect Model. Customer's expectation of technology based self-service option is the base for developing attribute-based model and customers' feelings about the use of technology is the base for developing overall affect model. This model found that customers' expectation regarding the service quality of technology based self-service option influences their intention to use it to a great extent. The Attribute Based Model involves a cognitive approach to decision making in which consumers use a compensatory process to evaluate attributes associated with the technology driven self-service option to form service quality expectations. The Overall Affect Model involves an affective approach to decision making in which consumers use

overall predispositions to form service quality expectations for a specific technology driven self-service option.

### **9. Model of Perceived Service Quality and Satisfaction**

Spreng & Mackoy (1996) developed the model of Perceived Service Quality and Satisfaction. This model is a modification of R.L. Oliver (1993) Model. The model describes the influence of expectations, perceived performance, desired congruency and expectation disconfirmation on overall service quality and customer satisfaction. The model points out that when a firm lower expectation about its service performance, it results in lower perceptions of performance which may lead to lower level of satisfaction. The model recommends that managers should balance the positive and negative effects of expectations. It is also found that increasing expectations can increase satisfaction through perceived performance. But at the same time, it may lower satisfaction through disconfirmation. The researchers also suggest that meeting customers' desires is the key factor determining both satisfaction and service quality.

### **10. PCP Attribute Model**

The service quality model developed by Philip & Hazlett (1997) is in the form of a hierarchical structure. PCP attribute model points out that every service facility involves 3 overlapping areas. These 3 levels are Pivotal (output), Core (input) and Peripheral (process). Core attribute includes the combination of people, process and organisational structure through which a consumer interacts with the service system. So, they can attain the pivotal attribute. The pivotal attribute or output is the major determinant factor influencing the consumer's decision while selecting a particular service organisation and it also influence customers' satisfaction level to a great extent. Peripheral attribute represents incidental extras or frills designed to give a roundness to the service facility to make the consumer delight from the whole service experience. The model points out that if the pivotal attributes are achieved, the consumers feel satisfied. But if the services are used frequently, the core and peripheral attributes may start to gain significance.

### **11. Retail Service Quality and Perceived Value Model**

Sweeney et al. (1997) developed two different models such as Retail Service Quality and Perceived Value Model in order to measure the service quality and related factors in retail business. Both these models are closely connected with the customers value perception and explain the effect of service quality on value and willingness to purchase in a specific service encounter. Value is measured by comparing benefits with sacrifices. Retail service quality model points out that apart from product quality and price perceptions, both functional service quality and technical service quality perceptions directly influence value perceptions. Perceived value model states that functional service quality perceptions directly influence consumers' willingness to buy and it also influences technical service quality perceptions, which in turn influence product quality perceptions. However, neither technical quality perception nor functional quality perception directly influence value perceptions.

### **12. Oh's Service Quality, Customer Value and Customer Satisfaction Model**

Oh (1999) developed the integrative model of service quality, customer value and customer satisfaction. This model focused on the post purchase behaviour of the customers of services. This model explained that perceptions and perceived price affect the perceived service quality and it also influences the satisfaction and the perceived value of the customers. The model further states that if a customer is satisfied and received better perceived value, then there will be repurchase intention from the part of the customers. The model also explains that word of mouth communication is the combination of perceptions, customer satisfaction, repurchase intention and perceived customer value.

### **13. Antecedents and Mediator Model**

Dabholkar et al. (2000) developed Antecedents and Mediator model. This model offers a comprehensive explanation of service quality, its antecedents, outcomes and the mediators. As per this model, reliability, personal attention, comfort and the product features are the major factors of service quality and customer satisfaction

mediates the relationship between service quality and behavioural intention. This model also examines some of the conceptual issues in the measurement of service quality. The study observed that perceptions and measured disconfirmation provide several advantages over difference score and a cross-sectional measurement design is preferred to a longitudinal design for the measurement of service quality.

#### **14. Internal Service Quality Model**

Frost & Kumar (2000) introduced internal service quality model on the basis of the GAP model. This model examines the service quality dimensions in large service organisations and their relationships which measure service quality gaps among internal customers and internal suppliers. These gaps are given below:

Internal Gap 1: It is the difference in the support staff's perception of front-line staff's expectation.

Internal Gap 2: It is the difference between service quality specifications and the actual service delivery which results in internal service performance gap.

Internal Gap 3: It is the difference between front line staff's expectations and perceptions of support staff's service quality.

#### **15. Internal Service Quality DEA Model**

The Internal Service Quality DEA Model was introduced by Soteriou & Stavrinides (2000). This model is mainly applied by financial institutions to improve its services. DEA stands for Data Envelope Analysis. This model deals with 2 sets of inputs such as consumable resources such as personnel, space, time etc and account structure. This model gives the proper instructions to the branch because of that the resources of the firm will be utilised in an optimal manner. This model mainly serves as a guide for service quality improvements. The DEA model compares branches in respect of how well they convert their input resources to attain their desired level of service quality output. This model helps to identify under-performers and give suggestions for their improvement.

## **16. Internet Banking Model**

Broderick & Vachirapornpuk (2002) developed Internet Banking Model. As per this model, image and reputation of the organisation, expectations of the customer about the services, customer participation, actual service encounter and aspects of the service settings are the key elements. These key elements influence perceived service quality to a great extent in the context of internet. Findings of the study further highlights that the nature and extent of customer participation mostly impact the quality-of-service performance. It is also found that customers' zone of tolerance, the extent of role understanding by customers and emotional response determine expected and perceived service quality.

## **17. IT Based Model of Service Quality**

IT Based Model of service quality developed by Zhu et al. (2002) describes the significance of IT based service options. Service firms make use of IT to reduce costs and to deliver value added services for their customers. This model connects customer perceived IT based service options to traditional service quality dimensions and examines the relationship between IT based services and customers' perceptions of service quality. Many key variables affecting customers' views of IT based services are identified in this model. The linkages among the service quality dimensions as per SERVQUAL model, the constructs representing the IT based service quality, preference towards traditional services, experiences in using IT based services and perceived IT policies are emphasised under this model. This model also specifies the impact of these constructs on perceived service quality and customer satisfaction. The results point out that IT based services have a direct influence on the SERVQUAL dimensions and an indirect influence on the customer perceived service quality and customer satisfaction.

## **18. Luk and Layton's Model of Service Quality Gap**

Luk & Layton (2002) developed the model of service quality gap in 2002. This model adds 2 new gaps in addition to the 5 gaps existing in the traditional service quality model of A. Parasuraman et al. (1985). Gap 6 shows the difference in the

understanding of customers' expectations by the managers and the front-line service providers. Gap 7 shows the difference in the customers' expectations and service provider's perception of customers' expectations. The results of the study reveal that the gap between customer expectations and manager's perception of such expectation is much higher than the gap between customer expectations and service providers' understanding of such expectations.

### **19. Model of E-Service Quality**

The model of E-Service quality was developed by Santos (2003) in order to measure e-business service quality. According to this model e-service quality has 2 dimensions such as incubative dimension and active dimension. Incubative dimension involves factors such as ease of use, appearance, linkage, structure and layout and content. Active dimension consists of factors such as reliability, efficiency, support, communication, security and incentive. Both these dimensions can be used for increasing hit rates, stickiness and customer retention.

These are the major service quality models. Among these models, SERVQUAL is a widely applied standard tool for measuring service quality. It is valid for many types of service situations and is also a reliable service quality measurement model. However, several researchers have criticised the analysis of data using SERVQUAL scale (Babakus & Boller, 1992; Carman, 1990; Cronin & Taylor, 1992; Teas, 1993). Critics of SERVQUAL scale argue that using gap score as a psychological measure is found as inadequate (Van Dyke et al., 1999) and lacks foundation in psychological theories (Ekinci & Riley, 1998). Lack of clarity regarding the concept of 'expectation' within SERVQUAL is another criticism (Teas, 1993). The term expectation is not well defined and is interpreted differently by different people such as desires, wants, ideal standards, adequate service etc. Concerns have been raised regarding weak predictive and convergent validity, low reliability and unstable dimensionality (Engelland et al., 2000; Headley & Miller, 1993; Carman, 1990; A. Parasuraman et al., 1991; Babakus & Boller, 1992) Critics also opined that SERVQUAL is giving more importance to the process of service delivery rather than the results of service encounter (Gonroos, 1990; Brady & Cronin, 2001). The

length of the SERVQUAL questionnaire is also a notable issue while administering this scale. Hence many experts state that perception score alone, as measured by SERVPERF, can be used to assess service quality in a better manner than the difference score between perception and expectation (Babakus & Boller, 1992; Cronin & Taylor, 1992; Boulding et al., 1993; A. Parasuraman et al., 1991) Cronin & Taylor (1992) pointed out that SERVPERF offers a better model fit than SERVQUAL and the performance only scale has more reliability and convergent and discriminant validity. Hence this study used SERVPERF scale with modified dimensions suitable to the social insurance industry for the purpose of measuring the service quality of ESI Corporation.

### **3.8 Social Security Service Quality**

Delivery of quality service by a social security institution leads to greater trust and confidence in the social security system and results better social outcomes. Social security service quality refers to the extent of responsiveness of a social security institution to the multi-dimensional service needs of its beneficiaries and members by using the institution's human, financial and information and communication technology resources and also by using support from its allied organisations (International Social Security Association, 2016). International Social Security Association (ISSA) sets the service quality standards and guidelines for social security organisations. Nowadays social security organisations are investing huge amount in service quality to enhance trust and stability within the social security system (Lee-Archer, 2013). As per ISSA guidelines, social security service quality includes prompt, reliable and efficient access to social security benefits; delivery of social security service with respect and empathy; delivering right service to the right person at the right time; achievement of cost-effective outcomes and high trust and confidence in the capability of the social security institutions. As per the guidelines, to attain service quality a social security institution must measure its performance and compare it against service standards to predict future demand for services. The social security institution must invest in the skills and ability of its staffs to develop

a service culture and continuously improve its service performance to attain service excellence.

### **3.9 Conclusion**

This chapter explains the concept of social security, international organisations for social security and social security measures in India. It gives a detailed description of ESI scheme and the functioning of ESI Corporation in India. Social Security benefits and services offered by the ESI Corporation is also elaborated in the chapter. Further it contains the concept of service quality and prominent models of service quality. This chapter ends with describing the social security service quality.

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## *Chapter 4*

# **RESEARCH METHODOLOGY**

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## **4.1 Introduction**

Research methodology shows the procedural framework followed for conducting the research. This chapter explains the methodological approach used in the study to answer the research questions and to test the related hypotheses. It also elaborates the research design, population, sampling design, sources of data, tools of data collection and analysis, variables used in the study, results of pilot study, normality, reliability and validity checking, test of randomness and conceptual framework of the study.

## **4.2 Research Design**

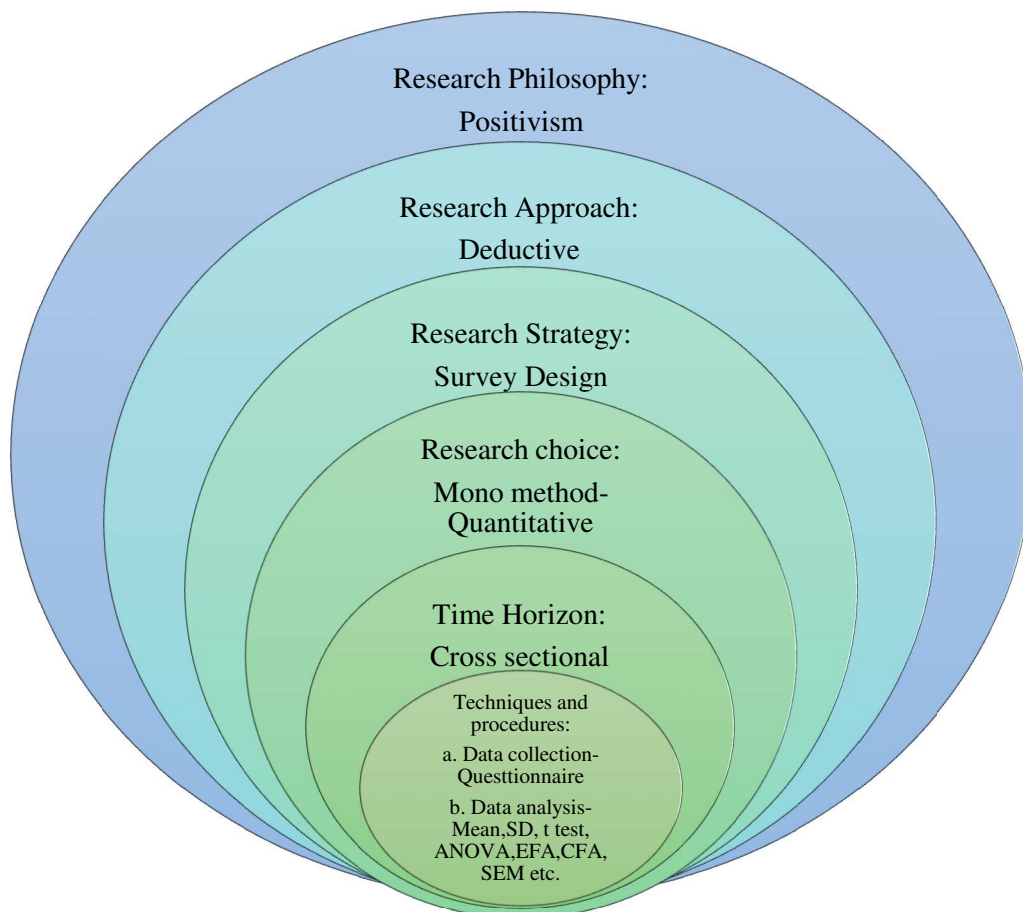
Research design provides the blue print for collection, measurement and analysis of data. The present research is both descriptive and analytical in nature. Since this study describes the variables and dimensions used for measuring awareness and knowledge level, service quality, policyholders' satisfaction and sense of social security, it is descriptive in nature. As this study explains the relationship between independent and dependent variable and mediation effect with the help of advanced statistical techniques, it is also analytical in nature.

## **4.3 Research Onion**

Saunders et al. (2012) designed research onion to describe various aspects of the research in a pictorial format. It provides guidance to the researcher throughout the research process. The research onion has 6 layers such as research philosophy, research approach, research strategy, research choice, time horizon and techniques and procedures for data collection and analysis. The research onion model of this study is shown in the following figure.

**Figure 4.1**

*Research Onion*



Source: Saunders et al. (2012) Research onion

**Table 4.1**

*Different Layers of the Research Onion of the Study*

| Sl. No. | Name of the Layer                                                                                            | Layer Employed in the Study                                                                                                                                                                                         |
|---------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | <b>Research Philosophy</b> – Set of beliefs, assumptions and principles which guide in designing methodology | <b>Positivism</b> – Positivism assumes that knowledge can be gained through observation, measurement and analysis of research data. The present study involves measurement, data collection and hypothesis testing. |

| Sl. No. | Name of the Layer                                                                                      | Layer Employed in the Study                                                                                                                                                                           |
|---------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2       | <b>Research Approach</b> – Plan and procedure for conducting the research work                         | <b>Deductive Approach</b> – Based on the existing literature and theories, the researcher set hypotheses in this study and tested through the collected data. The study also involves CFA             |
| 3       | <b>Research Strategy</b> – The way in which the researcher carries out the research work               | <b>Survey Design</b> – This research answers questions like what, when, who, where and how by collecting data from a sample of respondents and analysing it.                                          |
| 4       | <b>Research Choice</b> – Types of data used in the research                                            | <b>Mono Method (Quantitative)</b> – This study involves collection of data in quantitative form and its analysis using statistical techniques                                                         |
| 5       | <b>Time Horizon</b> – The number of points in time, the data are collected during the research process | <b>Cross Sectional</b> – The researcher collected data from the sample respondents only once during the research process for studying and comparing their characteristics at a certain point in time. |
| 6       | <b>Techniques and Procedures</b> – It shows data collection and analysis techniques and procedures.    | <b>Questionnaire</b> is used for data collection. <b>Percentage, Mean, SD, t test, ANOVA/ Welch’s test, EFA, CFA, SEM etc</b> are used for analysing data.                                            |

Source: Researcher

#### 4.4 Sources of Data

Both primary and secondary data are used for carrying out this research work.

##### 4.4.1 Source of Secondary Data

Secondary data required for this study are collected mainly from the following sources.

- Website of ESI Corporation, International Labour Organisation (ILO) and ISSA (International Social Security Association)
- Annual Report and Annual Accounts of ESI Corporation
- Brochures, Journals, Publications, Study Reports and Periodicals of ESI Corporation and Ministry of labour and Employment, Government of India.

- ESI Samachar, ESI Calendar, Standard Notes on ESI scheme and ESI Activity Book
- Employers' Guide Book and Employees' Guide Book published by the ESI Corporation
- Banners and Posters of ESI Corporation.
- Research Dissertations, Thesis, Books and Research Articles relating to the topic under study

#### **4.4.2 Sources of Primary Data**

Primary data are collected from the ESI policyholders working in factories and shops/ establishments in Kerala by using a structured questionnaire.

#### **4.5 Population of the Study**

The population of the study is the ESI policyholders working in Kerala.

#### **4.6 Sampling Design**

Sampling design shows the plans and methods used for selecting samples from the population and explains the procedure for calculating the sample size of the study (Kabir, 2016). The sampling design of the study is briefly explained below.

##### **4.6.1 Determination of Sample Size**

Krejcie and Morgan's formula is used for calculating the minimum sample size (Krejcie & Morgan, 1970)

$$\text{Sample Size (S)} = \frac{X^2NP(1-P)}{d^2(N-1) + X^2P(1-P)}$$

$$X^2 = 3.841, P = .50, d = 0.05, N = 1013930$$

$$S = 3.841 \times 1013930 \times .50 (1-.50) / (0.05)^2 (1013930-1) + 3.841 \times .50 (1-.50)$$

$$\text{Sample Size} = 384$$

As per Krejcie and Morgan’s formula, 384 is considered as the minimum sample size for the study. However, the application of covariance based Structural Equation Modelling in the study requires larger sample size (J. F. Hair et al., 2017; Ringle et al., 2018; Ryan, 2020). Hence the researcher decided to use sample-to-item ratio for fixing the sample size. As per this method, sample size should not be less than 5 times of the number of items used in the questionnaire (Gorsuch, 1983; Hatcher, 1994; Suhr, 2006). As the researcher used 90 items in the questionnaire, the sample size should be at least 450 (5 times of 90). On anticipating the non-response error and missing data, the final sample size is set as **470**.

#### 4.6.2 Sampling Technique

For selecting the respondents of the study, multistage stratified random sampling framework was followed.

#### 4.6.3 Sample Selection Process

The following are the steps involved in the sampling process.

1. In the first stage 10% of the branch office was selected at random by using lottery method under each regional/sub regional offices of ESI Corporation. The following table shows the number and the name of branch offices functioning under each regional/ sub regional offices of ESI Corporation.

**Table 4.2**

*Offices of the ESI Corporation in Kerala*

| RO/SROs   | No. of Branch Offices | Name of Branch offices                                                                                                                                         |
|-----------|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Thrissur  | 10                    | Alagappanagar, Chalakudy, Irinjalakuda, Kanjikode, Koratty, Ollur, Palakkad, Shornur, Thrissur, Thazhekode                                                     |
| Ernakulam | 14                    | Alwaye, Angamaly, Ernakulam, Ettumanoor, Fort Cochin, Kalamassery, Kottayam, Perumbavoor, Thodupuzha, Thoppumpady, Tripunithura, Udyogamandal, Velloor, Munnar |
| Kollam    | 14                    | Addor, Alappuzha, Chathannur, Cherthala, Ezhukone, Karunagappally, Kayamkulam, Kilikollur, Kollam, Kottarakkara, Kundara, Punalur, Puthur, Sasthamcotta        |

| RO/SROs    | No. of Branch Offices | Name of Branch offices                                                                                                                      |
|------------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Kozhikode  | 13                    | Cannannore, Feroke, Kallai, Kasargode, Kozhikode, Malappuram, Mavoor, Pappinissery, Payyannur, Thalassery, Valapattanam, Vatakara, Kalpetta |
| Trivandrum | 5                     | Anchal, Kallambalam, Kazhakuttom, Neyyattinkara, Thiruvananthapuram                                                                         |

Source: <https://www.esic.gov.in/branchs>

The following table shows the branch office selected at random under each regional/sub regional offices of ESI Corporation.

**Table 4.3**

*Branch Offices Selected for the Study*

| RO/SROs    | No. of Branch office selected | Selected Branch Office |
|------------|-------------------------------|------------------------|
| Thrissur   | 1                             | Palakkad               |
| Ernakulam  | 1                             | Kottayam               |
| Kollam     | 1                             | Alappuzha              |
| Kozhikode  | 1                             | Feroke                 |
| Trivandrum | 1                             | Kazhakuttom            |

Source: ESI Records

Palakkad branch office was selected from Thrissur regional office. Kottayam, Alappuzha, Feroke and Kazhakuttom branch offices were selected respectively from Ernakulam, Kollam, Kozhikode and Trivandrum sub-regional offices.

- For the purpose of deciding the no. of insured persons to be drawn as sample under each selected branch office, the researcher divided the population in to 2 strata such as IPs working in factories and IPs working in shops/ establishments. The researcher decided to draw proportionate number of insured persons working in factories and shops/ establishments under each selected branch office as shown below

**Table 4.4**

*Population and sample of ESI Insured Persons in Factories and Shops/ Establishments*

| Branch Office | Population       |                              |        | Sample           |                              |       |
|---------------|------------------|------------------------------|--------|------------------|------------------------------|-------|
|               | IPs in Factories | IPs in shops/ Establishments | Total  | IPs in Factories | IPs in shops/ Establishments | Total |
| Palakkad      | 9614             | 26771                        | 36385  | 29               | 82                           | 111   |
| Kottayam      | 9354             | 39422                        | 48776  | 28               | 120                          | 148   |
| Alappuzha     | 7126             | 9483                         | 16609  | 22               | 29                           | 51    |
| Feroke        | 11777            | 7742                         | 19519  | 36               | 23                           | 59    |
| Kazhakuttom   | 5125             | 27877                        | 33002  | 16               | 85                           | 101   |
| Total         | 42996            | 111295                       | 154291 | 131              | 339                          | 470   |

Source: ESI Records

The researcher decided to draw 111 insured persons (Factory -29, Shop/ Establishment-82) registered under Palakkad branch office, 148 insured persons (Factory -28, Shop/ Establishment-120) registered under Kottayam branch office, 51 insured persons (Factory -22, Shop/ Establishment-29) registered under Alappuzha branch office, 59 insured persons (Factory -36, Shop/ Establishment-23) registered under Feroke branch office and 101 insured persons (Factory -16, Shop/ Establishment-85) registered under Kazhakuttom branch office. Altogether, the researcher has drawn 131 insured persons from factories and 339 insured persons from shops/ establishment to constitute the total sample size of 470. Insured persons were drawn randomly by using lottery method from the sampling frame.

#### **4.7 Tools Used for Data Collection**

A structured questionnaire is used for collecting data from the policyholders of ESI Corporation. The questionnaire is divided in to 5 sections. The first section includes the demographic profile of ESI policyholders such as gender, age, marital status, educational qualification, income, area of residence and nature of the organisation. All questions in this section are categorical questions. The second section deals with the basic ESI details of the respondents and the statements used to measure their

awareness and knowledge about ESI scheme. ESI details are measured by using categorical questions. It involves questions relating to the duration of membership under ESI scheme, sources of awareness regarding ESI scheme, no of dependents as per ESI policy and the level of utilisation of ESI benefits. Awareness level (15 variables) is measured on a five-point Likert Scale ranging from Unaware to Extremely Aware and knowledge level (7 variables) is also measured on a five-point Likert Scale ranging from No Knowledge to Expert Knowledge. Third section includes the statements used to measure the service quality of ESI Corporation. 45 statements are used to measure service quality under 8 dimensions such as Reliability (5 statements), Tangibility (8 statements), Assurance (7 statements), Accessibility (6 statements), Communication (4 statements), Understanding of Policyholders (4 statements), Responsiveness (5 statements) and E-governance (6 statements). Fourth section involves 10 factors to assess the satisfaction level of ESI policyholders which is measured on a five-point Likert Scale ranging from Highly Satisfied to Highly Dissatisfied. Fifth section deals with 13 statements used for measuring the sense of social security feeling among the ESI policyholders. These 13 statements are grouped under 3 dimensions such as Health Protection (4 statements), Provision of Income Security (4 statements) and Risk Coverage (5 statements). Service quality and sense of social security are measured on five-point Likert Scale ranging from Strongly Agree to Strongly Disagree. The questionnaire ends with an open-ended question inviting suggestions from the respondents for improving the service quality of ESI Corporation.

#### **4.8 Variables of the Study**

The below table shows the variables used in the study along with the supporting literature

**Table 4.5**

*Variables of the Study*

| <b>Sl. No.</b> | <b>Construct/ Dimensions</b> | <b>Variables/ Items</b>                                                           | <b>Related Literature</b>                                                                      |
|----------------|------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| 1              | <b>Awareness (AW)</b>        | Amount of Premium Contribution (AW1)                                              | Ståhl et al. (2021); Boonstra et al. (2022); Razzaque & Hasan (2022); Kumar Sahu et al. (2022) |
|                |                              | Wage / salary limit for ESI coverage (AW2)                                        |                                                                                                |
|                |                              | Medical Benefits (AW3)                                                            |                                                                                                |
|                |                              | Sickness Benefit (AW4)                                                            |                                                                                                |
|                |                              | Maternity Benefit (AW5)                                                           |                                                                                                |
|                |                              | Dependent Benefit (AW6)                                                           |                                                                                                |
|                |                              | Disablement Benefit (AW7)                                                         |                                                                                                |
|                |                              | Payment of Confinement Expense (AW8)                                              |                                                                                                |
|                |                              | Payment of Funeral Expense (AW9)                                                  |                                                                                                |
|                |                              | Old age Medical Care (AW10)                                                       |                                                                                                |
|                |                              | Unemployment Allowance under Rajiv Gandhi Shramik Kalyan Yojana (RGSKY) (AW11)    |                                                                                                |
|                |                              | Availability of AYUSH (Ayurveda, Yoga, Unani, Siddha, Homeopathy) facility (AW12) |                                                                                                |
|                |                              | Ask an appointment mobile app (AW13)                                              |                                                                                                |
|                |                              | ESI medical help line number (AW14)                                               |                                                                                                |
|                |                              | Benefits available to family members (AW15)                                       |                                                                                                |
| 2              | <b>Knowledge (KW)</b>        | Medical Services/ facilities available in ESI hospitals/ dispensaries (KW1)       | Ståhl et al. (2021); Razzaque & Hasan (2022); Andal                                            |
|                |                              | Procedure for claiming cash benefit                                               |                                                                                                |

| Sl. No. | Construct/ Dimensions       | Variables/ Items                                                                      | Related Literature                                                                                                                                                                      |
|---------|-----------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         |                             | (KW2)                                                                                 | (2020); Kumar Sahu et al. (2022)                                                                                                                                                        |
|         |                             | Procedure for reimbursement of medical bill (KW3)                                     |                                                                                                                                                                                         |
|         |                             | List of empanelled hospitals for super speciality services (KW4)                      |                                                                                                                                                                                         |
|         |                             | Procedure for checking claim status of ESI Scheme online (KW5)                        |                                                                                                                                                                                         |
|         |                             | Procedure for grievance redressal (KW6)                                               |                                                                                                                                                                                         |
|         |                             | Services of ESI court (KW7)                                                           |                                                                                                                                                                                         |
| 3       | <b>Service Quality (SQ)</b> | ESI Corporation fulfils promises in a timely manner (RL1)                             | Witkowska & Lakstutiene (2014); Akdere et al. (2020); Meesala & Paul (2016); Lim & Tang (2000); Lim & Tang (2000a); Tucker & Adams (2001); Jun et al. (1998); Parasuraman et al. (1985) |
| A       | Reliability (RL)            | Staff of ESI Corporation is dependable in handling customers' problems (RL2)          |                                                                                                                                                                                         |
|         |                             | ESI Corporation provides hassle free claim settlement process (RL3)                   |                                                                                                                                                                                         |
|         |                             | ESI hospitals/ Dispensaries ensure correctness of medical reports and documents (RL4) |                                                                                                                                                                                         |
|         |                             | ESI premises are corruption free (RL5)                                                |                                                                                                                                                                                         |
| B       | Tangibility (TA)            | ESI healthcare facilities have technically graded and up to date equipments (TA1)     | Rexhepi et al. (2022); Zahedifard et al. (2014); Haddad et al. (1998); Witkowska & Lakstutiene (2014); Lim & Tang (2000); Lim & Tang (2000a); Parasuraman et al. (1985)                 |
|         |                             | ESI Corporation has adequate number of branch offices for customer service (TA2)      |                                                                                                                                                                                         |
|         |                             | There are sufficient staffs in ESI premises (TA3)                                     |                                                                                                                                                                                         |
|         |                             | The staff of ESI Corporation has neat and professional appearance (TA4)               |                                                                                                                                                                                         |
|         |                             | Sanitation and cleanliness in ESI                                                     |                                                                                                                                                                                         |

| Sl. No. | Construct/ Dimensions | Variables/ Items                                                                                    | Related Literature                                                                                                                                            |
|---------|-----------------------|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         |                       | Healthcare facilities are good (TA5)                                                                |                                                                                                                                                               |
|         |                       | Adequate bed facilities are available in ESI Healthcare institutions (TA6)                          |                                                                                                                                                               |
|         |                       | Medical accessories are sufficiently provided in ESI Healthcare institutions (TA7)                  |                                                                                                                                                               |
|         |                       | Standard medicines are provided in ESI Healthcare facilities (TA8)                                  |                                                                                                                                                               |
|         |                       | The staff of ESI Corporation has the knowledge and expertise to answer policyholders' queries (AS1) |                                                                                                                                                               |
|         |                       | The behaviour of ESI staffs creates confidence in policyholders (AS2)                               |                                                                                                                                                               |
|         |                       | ESI staff always treat customers with courtesy (AS3)                                                |                                                                                                                                                               |
| C       | Assurance (AS)        | ESI staffs are competent in redressing customers' grievances (AS4)                                  | Witkowska & Lakstutiene (2014); Zahedifard et al. (2014); Meesala & Paul (2016); Lim & Tang (2000); Lim & Tang (2000a); Parasuraman et al. (1985)             |
|         |                       | ESI Corporation maintains confidentiality of policyholders' information (AS5)                       |                                                                                                                                                               |
|         |                       | ESI doctors and nurses are professionally prepared to treat the patients (AS6)                      |                                                                                                                                                               |
|         |                       | It is safe to enter the ESI hospital/ dispensary premises to access healthcare (AS7)                |                                                                                                                                                               |
|         |                       | It is easy to access ESI Healthcare facilities (AC1)                                                | Rastogi & Sharma (2020); Asghari & Babu (2017); Lim & Tang (2000); Lim & Tang (2000a); Narang (2010); Tucker & Adams (2001); Gross & Nirel (1998); Jun et al. |
| D       | Accessibility (AC)    | Branch offices are conveniently located (AC2)                                                       |                                                                                                                                                               |
|         |                       | Branch office has operating hours convenient to all policyholders (AC3)                             |                                                                                                                                                               |
|         |                       | Timing of ESI dispensaries are convenient (AC4)                                                     |                                                                                                                                                               |

| Sl. No. | Construct/ Dimensions               | Variables/ Items                                                                                          | Related Literature                                                                                                                                       |
|---------|-------------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
|         |                                     | Specialists' services are available in ESI Healthcare institutions (AC5)                                  | (1998);<br>Parasuraman et al. (1985)                                                                                                                     |
|         |                                     | ESI scheme offers emergency health care services (AC6)                                                    |                                                                                                                                                          |
| E       | Communication (CO)                  | ESI Corporation provides accurate and updated information about its benefits and services (CO1)           | Santos (2003);<br>Asghari & Babu (2017); Swain & Kar (2018); Fatima et al. (2018);<br>Tucker & Adams (2001); Duggirala et al. (2008); Jun et al. (1998); |
|         |                                     | ESI Corporation provides information in a language understandable to policyholders (CO2)                  | Parasuraman et al. (1985)                                                                                                                                |
|         |                                     | ESI Corporation regularly organises awareness campaign (CO3)                                              |                                                                                                                                                          |
|         |                                     | ESI doctors listen to the patients and keep them informed about their health conditions (CO4)             |                                                                                                                                                          |
| F       | Understanding of Policyholders (UN) | ESI officials give me personal attention (UN1)                                                            |                                                                                                                                                          |
|         |                                     | Service providers at ESI Healthcare facilities are caring and understands patient concern (UN2)           | Jun et al. (1998);<br>Parasuraman et al. (1985); Bowers et al., (1994)                                                                                   |
|         |                                     | ESI Corporation has the policyholders' best interest at heart (UN3)                                       |                                                                                                                                                          |
|         |                                     | ESI Corporation offers reimbursement facility for medicines which are not available in ESI pharmacy (UN4) |                                                                                                                                                          |
| G       | Responsiveness (RE)                 | ESI Corporation keeps customers informed about when services will be performed (RE1)                      | Witkowska & Lakstutiene (2014);<br>Fatima et al. (2018); Lim & Tang (2000); Lim & Tang (2000a);<br>Tucker & Adams (2001); Jun et al. (1998)              |
|         |                                     | I receive prompt services from ESI Healthcare institutions (RE2)                                          |                                                                                                                                                          |
|         |                                     | ESI Corporation welcomes feedback from policyholders (RE3)                                                |                                                                                                                                                          |
|         |                                     | ESI officials guide the policyholders                                                                     |                                                                                                                                                          |

| Sl. No. | Construct/ Dimensions | Variables/ Items                                                                      | Related Literature                                                                                                                     |
|---------|-----------------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
|         |                       | regarding benefits and services (RE4)                                                 |                                                                                                                                        |
|         |                       | ESI staffs are always willing to help policyholders (RE5)                             |                                                                                                                                        |
|         |                       | ESI Corporation provides proactive information through SMS/e-mail (EG1)               |                                                                                                                                        |
|         |                       | The procedure for submitting online leave claim is simple (EG2)                       |                                                                                                                                        |
|         |                       | It is possible to check claim status under ESI Scheme online (EG3)                    | Rana et al. (2014);<br>Jaiyeoba et al. (2018);<br>Krishnekumaar (2018); Emmanuel Rajasekhar (2018);<br>Jeyaprabha (2023)               |
| H       | E-governance (EG)     | Cash benefits are directly transferred to the bank account of ESI beneficiaries (EG4) |                                                                                                                                        |
|         |                       | ESI Corporation has a well - structured informative website (EG5)                     |                                                                                                                                        |
|         |                       | ESI Corporation offers an effective online public grievance redressal mechanism (EG6) |                                                                                                                                        |
|         |                       | Communication of Information by ESI Corporation (SAT1)                                |                                                                                                                                        |
|         |                       | Infrastructure and diagnostic facilities (SAT2)                                       |                                                                                                                                        |
|         |                       | Procedural formalities (SAT3)                                                         | Jayantkumar & Dasharathbhai (2019); Divya & Vijayachandran Pillai (2014); Kamra et al. (2016); Badri et al. (2009); Swain & Kar (2018) |
|         |                       | Behaviour of ESI staffs (SAT4)                                                        |                                                                                                                                        |
|         |                       | Accessibility of the services (SAT5)                                                  |                                                                                                                                        |
|         |                       | Medical services (SAT6)                                                               |                                                                                                                                        |
|         |                       | Adequacy of cash benefits (SAT7)                                                      |                                                                                                                                        |
|         |                       | Online services of ESI Corporation (SAT8)                                             |                                                                                                                                        |
|         |                       | Grievance handling mechanism (SAT9)                                                   |                                                                                                                                        |
|         |                       | Premium contribution (SAT10)                                                          |                                                                                                                                        |
| 4       | Satisfaction (SAT)    |                                                                                       |                                                                                                                                        |

| Sl. No.          | Construct/ Dimensions                                           | Variables/ Items                                                                                                                    | Related Literature                                                                                                            |
|------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 5<br>A<br>B<br>C | <b>Sense of Social Security (SSS)</b><br>Health Protection (HP) | ESI scheme ensures free access to healthcare services (HP1)                                                                         | Bordoloi et al. (2020); Narang (2010); Swain & Kar (2018); Laxmi (2017)                                                       |
|                  |                                                                 | ESI scheme protects my family from the rising cost of healthcare (HP2)                                                              |                                                                                                                               |
|                  |                                                                 | ESI scheme offers better healthcare facilities (HP3)                                                                                |                                                                                                                               |
|                  |                                                                 | I have peaceful mind knowing the medical bill reimbursement facility under ESI scheme (HP4)                                         |                                                                                                                               |
|                  |                                                                 | Because of ESI coverage, I am not worried too much about unexpected financial loss arising from job related accident/ disease (IS1) |                                                                                                                               |
| B                | Provision of Income Security (IS)                               | ESI policy coverage positively impacts my quality of life (IS2)                                                                     | Bordoloi et al. (2020); Gottlieb (2015); Rejda (1997); Weedige et al. (2019); Andal (2020); Muthulakshmi (2016); Laxmi (2017) |
|                  |                                                                 | Payment of ESI contribution is not a financial burden for the working poor (IS3)                                                    |                                                                                                                               |
|                  |                                                                 | ESI benefits prevent extreme financial hardship (IS4)                                                                               |                                                                                                                               |
|                  |                                                                 | ESI policy reduces the stress; I may have about financial risks impacting my quality of life (RC1)                                  |                                                                                                                               |
| C                | Risk Coverage (RC)                                              | I feel I can handle emergencies better due to my ESI coverage (RC2)                                                                 | Prasad & Ghosh (2020); Andal (2020); Hoda & Rai (2017); Rejda (1997)                                                          |
|                  |                                                                 | ESI scheme will meet my old age needs (RC3)                                                                                         |                                                                                                                               |
|                  |                                                                 | ESI policy gives me confidence that I will be supported in crisis (RC4)                                                             |                                                                                                                               |
|                  |                                                                 | ESI policy protects the social usefulness of productive workforce (RC5)                                                             |                                                                                                                               |

Source: Literature Review

#### **4.9 Period of Data Collection**

Primary data are collected from the ESI policyholders during the period from April 2023 to March 2024. Secondary data are collected during the period from December 2020 to February 2025.

#### **4.10 Pilot Study**

Pilot study helps to determine the feasibility of the research design. According to Porta (2008) “a pilot study is a small-scale test of the methods and procedures to be used on a large scale.” Through pilot study, it is possible for the researcher to test the reliability, validity and feasibility of the research instrument. Pilot study helps to identify the shortcomings of the existing research design and thereby improve it before finalising. Here a pilot study was conducted among 100 ESI policyholders before finalising the questionnaire for primary data collection. After conducting the pilot study, required modifications are made in the questionnaire and then it was finalised.

#### **4.11 Data Cleaning**

Data cleaning was done by removing the outliers and missing data. Among the 470 questionnaires collected, 12 questionnaires were deleted because of missing data and 8 questionnaires were removed since it represents outliers. Hence the balance 450 questionnaires were used for the final data analysis purpose.

#### **4.12 Tools Used for Data Analysis**

Various statistical and mathematical tools and techniques are used for the analysis of primary data. The tools used in the study for the analysis of primary data are given below.

##### **4.12.1 Descriptive Statistics**

Descriptive statistics are used to describe the data collected from the primary sources. In this study, Percentage (%), Arithmetic Mean ( $\bar{x}$ ) and Standard Deviation ( $\sigma$ ) are used to describe the data. A percentage is a fraction out of 100 and it is

calculated by dividing the number by the whole and multiplying with 100. Arithmetic Mean/ Average is the most popular measure of central tendency which is obtained by dividing the sum of all values by the number of values. Standard deviation is the most popular measure of dispersion which is the square root of the mean of the squares of the deviations of individual values from the arithmetic mean. In this study, percentage is used to describe the demographic profile and ESI details of policyholders. Mean and standard deviation are used for describing the awareness and knowledge level, service quality, satisfaction and sense of social security of ESI policyholders. Mean and standard deviation values also facilitated the interpretation of statistical tests like independent sample t test, ANOVA, one sample t test etc.

For the purpose of interpreting the responses collected by using five point Likert scale, the researcher has adopted the following range suggested by Nyutu et al. (2021) and Sözen & Güven (2019) as given below.

**Table 4.6**

*Likert Scale Range for Interpretation*

| <b>Likert Scale Description</b> | <b>Likert Scale</b> | <b>Likert Scale Range</b> |
|---------------------------------|---------------------|---------------------------|
| Strongly Disagree               | 1                   | 1.00- 1.80                |
| Disagree                        | 2                   | 1.81-2.60                 |
| Neutral                         | 3                   | 2.61-3.40                 |
| Agree                           | 4                   | 3.41-4.20                 |
| Strongly Agree                  | 5                   | 4.21-5.00                 |

Source: Nyutu et al. (2021)

#### **4.12.2 Levene’s Test of Homogeneity of Variance**

Levene’s test of homogeneity of variance is used to examine whether there is equality of variance of multiple groups. It is used to check whether the assumption of equal variance is satisfied before applying statistical tests such as ANOVA and t test. The Levene’s test uses F test to check the null hypothesis that the variances are equal across groups. If ‘p’ value is more than 0.05, the variances are assumed to be equal and can proceed with ANOVA.

#### **4.12.3 Independent Sample t Test**

This test is used to check the significance of difference in the mean scores between two independent groups. Two variables are required for conducting independent sample t test, one is a categorical variable with two categories and the other one is a continuous variable. The null hypothesis in this case is population means are equal. Certain assumptions are required to be satisfied for applying independent sample t test such as the assumption of independence, normality and equality of variance. Further the sample data should be an outlier free distribution. In this study, independent sample t test is used for comparing the mean score of awareness, knowledge, service quality, satisfaction and sense of social security based on the demographic profile of the policyholders with 2 categories such as gender, marital status and the nature of organisation.

#### **4.12.4 One Sample t test**

One sample t test is used to check whether the population mean is statistically different from a specific value. This specific hypothetical value often derives from theory. This is a parametric test which is also known as single sample test. It compares the sample mean with the population mean. Data independence, randomness and normality assumptions are to be satisfied for applying one sample t test.

#### **4.12.5 One-Way ANOVA**

One-Way ANOVA or Analysis of Variance is used to check whether there is any statistically significant difference in the mean score of three or more independent groups. It is a parametric test and the null hypothesis is that all group means are equal. Certain assumptions need to be fulfilled for applying One-Way ANOVA such as the assumption of homoscedasticity, normality, independence and outlier free distribution. In this study, One-way ANOVA is used for comparing the mean scores of awareness, knowledge, satisfaction and sense of social security according to the demographic profile of policyholders and ESI details with more than 2 categories.

#### **4.12.6 Welch's Test**

Welch's test is used to check the equality of population means. It is a substitute test for ANOVA, if the assumption of equality of variance across groups for conducting ANOVA is not met (Garson, 2012). All the assumptions of ANOVA except homogeneity of variance are to be satisfied for applying Welch's test. In this study, Welch's test is used for comparing the mean scores of awareness, knowledge, service quality, satisfaction and sense of social security across various demographic groups and ESI details with more than two categories when the variances across groups are not equal.

#### **4.12.7 Post Hoc Test for Multiple Comparison**

On conducting ANOVA if the null hypothesis is rejected, Scheffe's Post Hoc test is used for multiple comparison of the categorical variables. Scheffe's Post Hoc test shows the pair wise comparison of sample groups. Tamhane's T2 Post Hoc test is used for multiple comparison if the null hypothesis is rejected as per Welch's test. The term post hoc means 'after the fact' and multiple comparison means comparison across all possible pairs of the groups under consideration.

#### **4.12.8 Chi-Square Test**

Chi-Square test is used to check the independence/ association of two categorical variables or to assess the goodness of fit between observed and expected frequencies. It is a non-parametric and distribution free test. In this study, chi-square test is used to check the association of the level of ESI benefits utilisation with various demographic groups, ESI details, awareness and knowledge level of ESI policyholders.

#### **4.12.9 Regression Analysis**

Regression studies the relationship between a continuous dependent variable and one or more continuous independent variables (Skiera et al., 2022). Dependent variable is also known as endogenous variable and independent variable is also known as exogeneous variable. Regression analysis helps to understand the manner

in which the changes in the independent variable causes changes in the dependent variable and it can be used for prediction purpose.

#### **4.12.10 Cronbach's Alpha**

Cronbach's Alpha is used for checking the reliability or internal consistency of the research instrument by comparing the amount of shared variance or covariance among the items which make up an instrument to the amount of overall variance (Taber, 2018). If Cronbach's Alpha  $\geq 0.7$ , then strong internal consistency is assumed and the Cronbach's alpha value  $\geq 0.60$  is considered to be significant (Cronbach & Meehl, 1955). In this study, Cronbach's alpha is used for testing the reliability of the scales used for measuring awareness, knowledge, service quality, satisfaction and sense of social security.

#### **4.12.11 Exploratory Factor Analysis (EFA)**

Exploratory Factor Analysis is a statistical technique which is used to explain the variability among observed correlated variables in terms of some unobserved variables which is lower in number called factors (Gaskin & Happell, 2014). EFA is usually applied for testing the validity of research instrument. EFA is required to be performed on each construct to check if there is any difference in item dimension with previous studies (Nik mohamed et al., 2023). It helps to reduce the data to a few variables/ factors and to explore the underlying theoretical structure of the phenomena. When a scale is used with modified words, removing items and adding new items, it will affect the scale's integrity and hence EFA is to be conducted (Smith, 1995). In this study, EFA is used for establishing the factor structure of the constructs such as awareness, knowledge, service quality, satisfaction and sense of social security.

#### **4.12.12 Confirmatory Factor Analysis**

Under Confirmatory Factor Analysis, a theoretical measurement model is proposed to explain the relationship between the underlying common factors and the observed variables. Then various criteria are used to examine the extent to which the observed sample data are consistent with the proposed model. It involves checking whether

the results confirm the hypothesised model (Knoke, 2005). The following steps are involved in CFA.

- a. Defining theoretical constructs: It involves a pretest to evaluate the items of the construct to ensure that they represent the concept in an accurate manner.
- b. Developing a proposed model: Then a model is proposed to show the theoretical relationship between the observed variables and their latent constructs.
- c. Designing a measurement model: In this case, the researcher designs a measurement model by employing two methods such as rank condition and order condition.
- d. Assessing Model Fit: In this step, the validity of the measurement model is assessed through a number of model fit indices and also by examining factor loadings.

In the current study, Confirmatory Factor Analysis is applied for confirming the factor structure of awareness, knowledge, service quality, satisfaction and sense of social security.

#### **4.12.13 Structural Equation Modelling**

Structural Equation Modelling (SEM) is a hypothesis driven, multi variate statistical technique which is used to check the causal relationship among several variables (Stephan & Friston, 2009). SEM can be defined “as a class of methodologies that seeks to represent hypothesis about the means, variances and covariances of observed data in terms of a smaller number of structural parameters defined by a hypothesised underlying conceptual or theoretical model” (Kaplan, 2001). SEM involves clearly defining 2 types of variables such as endogenous variables (dependent variables representing outcomes/ effect) and exogeneous variables (independent Variables which are the causes or predictors influencing endogenous variables). SEM combines Confirmatory Factor Analysis and multiple regression. There are two types of SEM such as Covariance Based SEM (CB- SEM) and Partial Least Squares SEM (PLS-SEM). CB SEM is used in this study to establish the

relationship between service quality and sense of social security as well as the relationship between awareness/ knowledge and satisfaction level of ESI policyholders. SEM is also used for studying the mediation effect of variables.

#### **4.13 Software Used for Data Analysis**

Statistical software was used for analysing the data. It includes SPSS (Statistical Package for Social Sciences) version 22 and AMOS (Analysis of Moment Structure) version 23. SPSS is used for doing descriptive analysis, Exploratory Factor Analysis and the comparative analysis of variables across demographic groups and ESI details. AMOS is used for Confirmatory Factor Analysis and Structural Equation Modelling.

#### **4.14 Test of Randomness**

Run test is applied in the study to check the randomness of data. The result of run test shows that the ‘p’ values of all the variables are above 0.05. Hence the study assumes the randomness of the collected data.

#### **4.15 Test of Normality**

Normality test is employed to examine whether the data is normally distributed or not. To test the normality of data, One Sample Kolmogorov- Smirnov (One sample KS) test is firstly applied. But as per the result of One Sample KS test, the data is not normal as the ‘p’ values are less than 0.05. Hence the researcher decided to check the skewness and kurtosis values. The results regarding skewness and kurtosis values of different constructs used in this study are presented below.

**Table 4.7**  
*Skewness and Kurtosis Values of the Variables*

| <b>Items</b> | <b>Skewness</b> | <b>Kurtosis</b> | <b>Items</b> | <b>Skewness</b> | <b>Kurtosis</b> |
|--------------|-----------------|-----------------|--------------|-----------------|-----------------|
| AW1          | .144            | -.908           | RL1          | -.104           | -.139           |
| AW2          | -.643           | -.393           | RL2          | -.229           | -.475           |
| AW3          | -.170           | -.295           | RL3          | .393            | -.294           |
| AW4          | .202            | -.639           | RL4          | -.476           | -.032           |

| Items | Skewness | Kurtosis | Items | Skewness | Kurtosis |
|-------|----------|----------|-------|----------|----------|
| AW5   | .294     | -.718    | RL5   | -.073    | -.734    |
| AW6   | .478     | -.583    | TA1   | .575     | .095     |
| AW7   | .451     | -.676    | TA2   | .012     | .121     |
| AW8   | 1.333    | 1.260    | TA3   | .110     | -.226    |
| AW9   | 1.502    | 1.753    | TA4   | .030     | -.305    |
| AW10  | 1.436    | 1.353    | TA5   | -.214    | -.139    |
| AW11  | 1.009    | .829     | TA6   | .115     | -.340    |
| AW12  | .333     | -.526    | TA7   | .326     | -.005    |
| AW13  | 1.254    | 1.157    | TA8   | .126     | -.178    |
| AW14  | .483     | -.621    | AS1   | -1.110   | .054     |
| AW15  | .082     | -.480    | AS2   | .374     | -.612    |
| KW1   | .102     | -.376    | AS3   | 1.467    | 1.489    |
| KW2   | .390     | -.775    | AS4   | .518     | -.499    |
| KW3   | .002     | -.495    | AS5   | .006     | -.582    |
| KW4   | .638     | .112     | AS6   | 1.214    | 1.966    |
| KW5   | .404     | -.833    | AS7   | -1.143   | 1.063    |
| KW6   | 1.120    | .629     | AC1   | .100     | -.655    |
| KW7   | 1.720    | 1.389    | AC2   | .110     | -.648    |
| SAT1  | .806     | 1.481    | AC3   | .118     | -.434    |
| SAT2  | -.451    | -.261    | AC4   | .477     | -.020    |
| SAT3  | .762     | 1.338    | AC5   | .803     | .811     |
| SAT4  | .183     | -.336    | AC6   | .206     | -.656    |
| SAT5  | .108     | -.446    | CO1   | .520     | -.135    |
| SAT6  | -.064    | -.210    | CO2   | -.223    | .449     |
| SAT7  | -.276    | -.158    | CO3   | 1.176    | .255     |
| SAT8  | -.426    | -.047    | CO4   | .304     | -.038    |
| SAT9  | .715     | .926     | UN1   | .368     | 1.377    |
| SAT10 | -.089    | -.513    | UN2   | .581     | 1.153    |
| HP1   | -.105    | -.198    | UN3   | -.141    | -1.790   |
| HP2   | .258     | -.818    | UN4   | -.092    | -.934    |

| Items | Skewness | Kurtosis | Items | Skewness | Kurtosis |
|-------|----------|----------|-------|----------|----------|
| HP3   | .347     | -.389    | RE1   | 1.294    | 1.771    |
| HP4   | -.092    | -.212    | RE2   | 1.926    | 1.865    |
| IS1   | -.085    | -.192    | RE3   | .085     | .135     |
| IS2   | .370     | -.365    | RE4   | -.773    | 2.639    |
| IS3   | -.635    | -.389    | RE5   | -.519    | .300     |
| IS4   | .240     | -.694    | EG1   | 1.008    | 1.213    |
| RC1   | .672     | .532     | EG2   | .661     | .332     |
| RC2   | .432     | -.211    | EG3   | -.773    | 3.987    |
| RC3   | .751     | .256     | EG4   | .198     | -.652    |
| RC4   | -.305    | .656     | EG5   | .513     | -1.173   |
| RC5   | .231     | -.233    | EG6   | .246     | .190     |

Source: Primary Data

The above table discloses the details regarding the values of skewness and Kurtosis of different variables used to measure the objectives of the study. According to J. Hair et al. (2010) data becomes normal when the skewness values ranges between -2 and +2 and kurtosis values ranges between -7 and +7. Here the skewness and kurtosis values of all variables fall within this range, hence the data are assumed to be normal and decided to proceed with parametric test.

#### **4.16 Reliability and Validity Assessment of the Measurement Scales**

A reliable and valid research instrument is an essential requirement for collecting accurate data as a part of the research process. It helps to eliminate the bias or errors in the measurement scale. Reliability shows “the extent to which measurement of a phenomenon provides stable and consistent results” (Carmines & Zeller, 1979). Validity explains how well the collected data covers the actual area of investigation (Ghauri & Grønhaug, 2005). There are two types of validity, Content and Construct Validity.

**Content validity** is defined as “the degree to which items in an instrument reflect the content universe to which the instrument will be generalized” (Straub et al.,

2004). In this study, the researcher examined the content validity through consultation with the experts in various fields such as ESI Corporation, Insurance Medical Services, Statistics, Quantitative Techniques and Service Quality. Discussion has also been made with the ESI policyholders. Based on the opinion of various experts in the relevant fields and feedback from all the consulted persons, suitable alterations and modifications were incorporated in the research questionnaire and thereby content validity was ensured before finalising the research instrument.

**Construct Validity** explains the empirical relationship between measuring instruments & theoretical concepts. The Construct Validity is further divided into Convergent and Discriminant Validity. Convergent validity measures whether all items are measuring a single theoretical construct. It shows the extent to which consistency is obtained by the research instrument across multiple operationalisations. It is assessed by conducting Confirmatory Factor Analysis. If an item has Average Variance Extracted (AVE) more than 0.50, it has convergent validity and should be retained in the study. Discriminant validity shows the independence of the constructs used for the study. It measures the extent to which various constructs used in the study are different from each other. Constructs used in a research instrument is said to have discriminant validity if the Average Variance Extracted value of any 2 constructs exceeds the square of the correlation among the 2 constructs (Fornell & Larcker, 1981; Henseler et al., 2015)

After checking the content validity, the scale used to measure various constructs of the study is validated in two steps. Firstly, an Exploratory Factor Analysis (EFA) is performed on 100 sample collected for pilot study and then Confirmatory Factor Analysis (CFA) is performed on total 450 samples. The factors derived from Exploratory Factor Analysis (EFA) were confirmed by applying Confirmatory Factor Analysis (CFA). Here, the validity checking is done for the Likert scale constructs namely, Awareness (AW), Knowledge (KW), Service Quality (SQ), Satisfaction (SAT) and Sense of Social Security (SSS). In the case of each construct

both EFA and CFA are performed. Exploratory Factor Analysis (EFA) is described in this chapter and Confirmatory Factor Analysis is included in the eighth chapter as a part of Structural Equation Model.

**Exploratory Factor Analysis** requires certain assumptions to be fulfilled namely correlation and sampling adequacy. The Bartlett test of Sphericity measures the adequacy of correlation. The Kaiser-Meyer-Olkin (KMO) test can measure whether the sample size is adequate for conducting factor analysis (George & Mallery, 2007)

#### **4.16.1 Exploratory Factor Analysis (EFA) – Awareness (AW)**

Exploratory Factor Analysis (EFA) applying Principal Component Method (PCM) is employed for analysing the factor structure of ‘**Awareness**’ (AW).

**Table 4.8**

*Result of KMO and Bartlett’s Test – Awareness (AW)*

| <b>KMO and Bartlett's Test</b>                   |                    |          |
|--------------------------------------------------|--------------------|----------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. |                    | .946     |
|                                                  | Approx. Chi-Square | 5711.220 |
| Bartlett's Test of Sphericity                    | D f                | 105      |
|                                                  | Sig.               | .000     |

Source: Primary Data

In this case, KMO value is 0.946 which is above the recommended limit of 0.70. Bartlett’s Test of Sphericity Chi-Square = 5711.220,  $p < 0.01$  indicates that the correlation between the items is sufficiently large for Principal Component Analysis (PCA).

**Table 4.9***Result of Exploratory Factor Analysis – Awareness (AW)*

| Construct                                 | Statements                                                                 | Code | Factor Loadings | Eigen Value | Variance Explained | Cronbach's Alpha |
|-------------------------------------------|----------------------------------------------------------------------------|------|-----------------|-------------|--------------------|------------------|
| Awareness (AW)                            | Amount of Premium contribution                                             | AW1  | .715            |             |                    |                  |
|                                           | Wage/ Salary limit for ESI coverage                                        | AW2  | .713            |             |                    |                  |
|                                           | Medical Benefits                                                           | AW3  | .819            |             |                    |                  |
|                                           | Sickness Benefit                                                           | AW4  | .860            |             |                    |                  |
|                                           | Maternity Benefit                                                          | AW5  | .783            |             |                    |                  |
|                                           | Dependent Benefit                                                          | AW6  | .882            |             |                    |                  |
|                                           | Disablement Benefit                                                        | AW7  | .869            |             |                    |                  |
|                                           | Payment of confinement Expenses                                            | AW8  | .736            |             |                    |                  |
|                                           | Payment of Funeral Expenses                                                | AW9  | .803            | 9.163       | 61.088%            | 0.951            |
|                                           | Old age Medical Care                                                       | AW10 | .770            |             |                    |                  |
|                                           | Unemployment Allowance under Rajiv Gandhi Shramik Kalyan Yojana (RGSKY)    | AW11 | .722            |             |                    |                  |
|                                           | Availability of AYUSH (Ayurveda, Yoga, Unani, Siddha, Homeopathy) facility | AW12 | .802            |             |                    |                  |
|                                           | Ask an appointment mobile app                                              | AW13 | .717            |             |                    |                  |
|                                           | ESI medical help line number                                               | AW14 | .690            |             |                    |                  |
|                                           | Benefits available to family members                                       | AW15 | .810            |             |                    |                  |
| <b>Total Variance Explained – 61.088%</b> |                                                                            |      |                 |             |                    |                  |

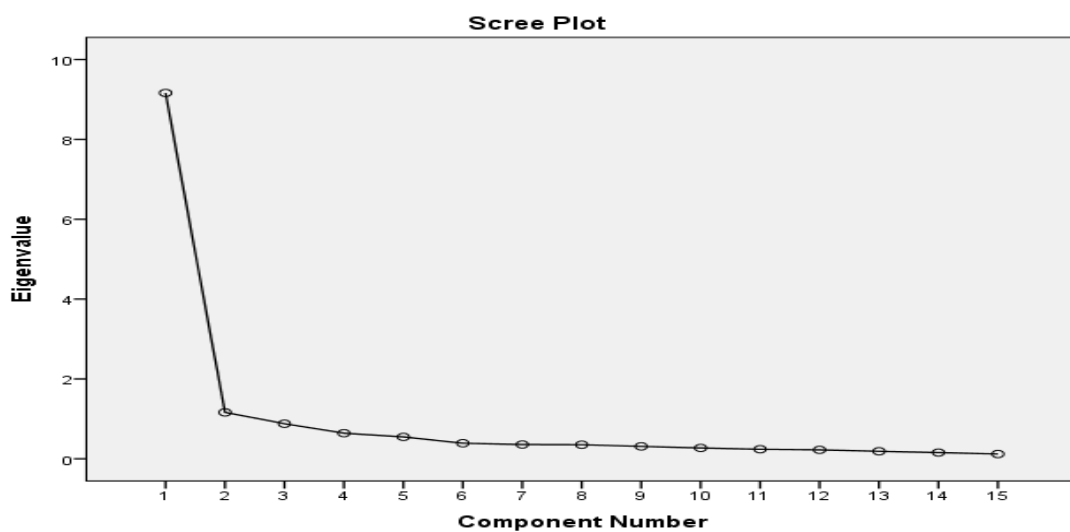
Source: Primary Data

The result of Exploratory Factor Analysis (EFA) shows that all items have adequate factor loadings (above 0.40). Fifteen items under the variable 'Awareness' (AW) is explaining about **61.088** per cent of the total variance and Eigen value is more than 1

in this case. One variable (AW16- Preventive healthcare services) is removed from the measurement of awareness due to factor loading of less than 0.40. So the criteria of Construct Validity (Eigen value of  $>1$  and Factor loadings of at least 0.40) (Straub et al., 2004) is satisfied. Hence the selected items under the dimension ‘Awareness’ (AW) have good level of construct validity.

**Figure 4.2**

*Scree-Plot of Exploratory Factor Analysis – Awareness*



The scree-Plot also shows that only one factor has eigen value greater than 1.

**Reliability:**

The Cronbach's alpha Co-efficient is used to test the reliability. A Cronbach's alpha value greater than or equal to 0.70 is considered acceptable for the factor to be reliable (J. Hair et al., 2010). The *Cronbach's Alpha Reliability Co-efficient* value of all the variables coming under the construct ‘Awareness’ is **0.951**, hence strong internal consistency is assured and the statements are considered as highly reliable.

**4.16.2 Exploratory Factor Analysis (EFA) – Knowledge (KW)**

Exploratory Factor Analysis (EFA) using Principal Component Method (PCM) is employed for analysing the factor structure of **Knowledge (KW)**.

**Table 4.10***Result of KMO and Bartlett's Test – Knowledge (KW)*

| <b>KMO and Bartlett's Test</b>                   |                    |          |
|--------------------------------------------------|--------------------|----------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. |                    | .897     |
|                                                  | Approx. Chi-Square | 2006.186 |
| Bartlett's Test of Sphericity                    | Df                 | 21       |
|                                                  | Sig.               | .000     |

Source: Primary Data

KMO value is .897 which is above the recommended limit of 0.70. Bartlett's Test of Sphericity Chi-Square = 2006.186,  $p < 0.01$  indicates that there is adequate correlation between items for Principal Component Analysis (PCA).

**Table 4.11***Result of Exploratory Factor Analysis – Knowledge (KW)*

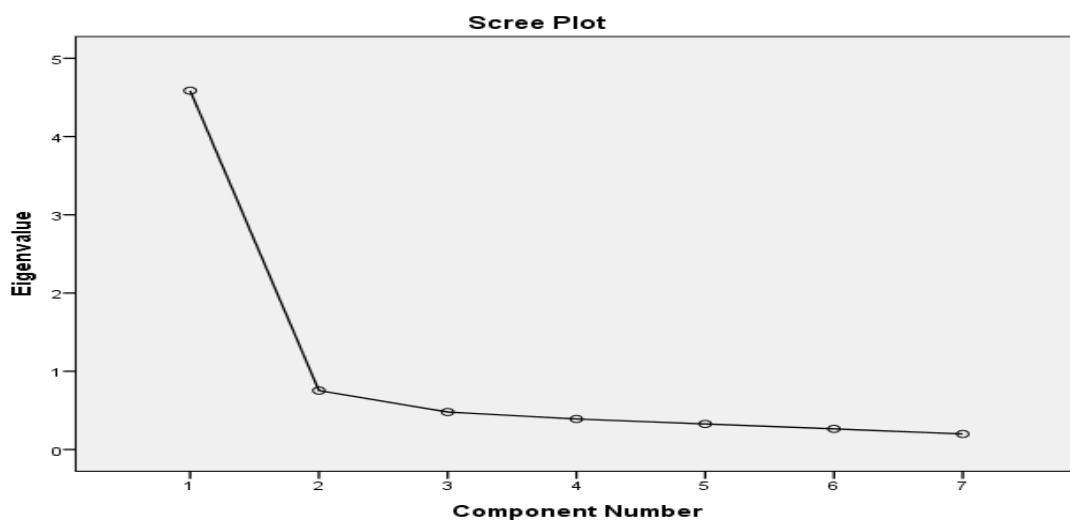
| <b>Construct</b>                          | <b>Statements</b>                                                     | <b>Code</b> | <b>Factor Loadings</b> | <b>Eigen Value</b> | <b>Variance Explained</b> | <b>Cronbach's Alpha</b> |
|-------------------------------------------|-----------------------------------------------------------------------|-------------|------------------------|--------------------|---------------------------|-------------------------|
| <b>Knowledge (KW)</b>                     | Medical Services/ facilities available in ESI hospitals/ dispensaries | KW1         | .715                   |                    |                           |                         |
|                                           | Procedure for claiming cash benefit                                   | KW2         | .713                   |                    |                           |                         |
|                                           | Procedure for reimbursement of medical bill                           | KW3         | .819                   |                    |                           |                         |
|                                           | List of empanelled hospitals for super specialty services             | KW4         | .860                   | 4.587              | 65.522%                   | 0.907                   |
|                                           | Procedure for checking claim status of ESI Scheme online              | KW5         | .783                   |                    |                           |                         |
|                                           | Procedure for grievance redressal                                     | KW6         | .882                   |                    |                           |                         |
|                                           | Services of ESI court                                                 | KW7         | .869                   |                    |                           |                         |
| <b>Total Variance Explained – 65.522%</b> |                                                                       |             |                        |                    |                           |                         |

Source: Primary Data

The result of Exploratory Factor Analysis (EFA) shows that all items have adequate factor loadings of more than 0.40. The seven items included under the construct ‘Knowledge’ (KW) explains about 65.522 per cent of the total variance and Eigen value is more than 1 in this case. One variable (KW8 – Procedure for availing super speciality treatment) is removed from the measurement of knowledge due to factor loading of less than 0.40. So, the criteria of Construct Validity are satisfied. Hence the items under ‘knowledge’ (AW) have good level of construct validity.

**Figure 4.3**

*Scree-Plot of Exploratory Factor Analysis – Knowledge*



According to the scree-plot also, only one factor has eigen value greater than one.

**Reliability: -**

The *Cronbach’s Alpha Reliability Co-efficient* values of all the variables coming under the construct ‘knowledge’ is **0.907**, hence strong internal consistency is assured and the statements are considered as highly reliable.

**4.16.3 Exploratory Factor Analysis (EFA) – Service Quality**

Exploratory Factor Analysis (EFA) using Principal Component Method (PCM) with Varimax Rotation is employed for analysing the factor structure and correlation between 47 statements included in the scale for measuring the **Service Quality (SQ)** of ESI Corporation. The results are presented below.

**Table 4.12***Result of KMO and Bartlett's Test – Service Quality (SQ)*

| <b>KMO and Bartlett's Test</b>                   |                    |           |
|--------------------------------------------------|--------------------|-----------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. |                    | .916      |
|                                                  | Approx. Chi-Square | 13093.138 |
| Bartlett's Test of Sphericity                    | Df                 | 990       |
|                                                  | Sig.               | .000      |

Source: Primary Data

In this case, KMO value is **0.916** which is above the recommended limit of **0.70**. Bartlett's Test of Sphericity Chi-Square = **13093.138**, **p<0.01** indicates that the correlation between the items is sufficiently large for Principal Component Analysis (PCA).

**Table 4.13***Result of Exploratory Factor Analysis – Service Quality (SQ)*

| Constructs       | Statements                                                                      | Code | Factor Loadings | Eigen Value | Variance Explained | Cronbach's Alpha |
|------------------|---------------------------------------------------------------------------------|------|-----------------|-------------|--------------------|------------------|
| Reliability (RL) | ESI Corporation fulfils promises in a timely manner                             | RL1  | .729            | 13.08       | 29.07%             | 0.858            |
|                  | Staff of ESI Corporation is dependable in handling customers' problems          | RL2  | .785            |             |                    |                  |
|                  | ESI Corporation provides hassle free claim settlement process                   | RL3  | .669            |             |                    |                  |
|                  | ESI hospitals/ Dispensaries ensure correctness of medical reports and documents | RL4  | .732            |             |                    |                  |
|                  | ESI premises are corruption free                                                | RL5  | .779            |             |                    |                  |

| Constructs       | Statements                                                                                    | Code | Factor Loadings | Eigen Value | Variance Explained | Cronbach's Alpha |
|------------------|-----------------------------------------------------------------------------------------------|------|-----------------|-------------|--------------------|------------------|
| Tangibility (TA) | ESI healthcare facilities have technically graded and up to date equipment                    | TA1  | .617            | 5.020       | 11.15%             | 0.890            |
|                  | ESI Corporation has adequate number of branch offices for customer service                    | TA2  | .681            |             |                    |                  |
|                  | There are sufficient staffs in ESI premises                                                   | TA3  | .766            |             |                    |                  |
|                  | The staff of ESI Corporation has neat and professional appearance                             | TA4  | .718            |             |                    |                  |
|                  | Sanitation and cleanliness in ESI Healthcare facilities are good                              | TA5  | .664            |             |                    |                  |
|                  | Adequate bed facilities are available in ESI Healthcare institutions                          | TA6  | .676            |             |                    |                  |
|                  | Medical accessories are sufficiently provided in ESI Healthcare institutions                  | TA7  | .655            |             |                    |                  |
|                  | Standard medicines are provided in ESI Healthcare facilities.                                 | TA8  | .626            |             |                    |                  |
| Assurance (AS)   | The staff of ESI Corporation has the knowledge and expertise to answer policyholders' queries | AS1  | .659            | 2.656       | 5.903%             | 0.861            |
|                  | The behaviour of ESI staffs creates confidence in policyholders                               | AS2  | .750            |             |                    |                  |
|                  | ESI staff always treat customers with courtesy                                                | AS3  | .684            |             |                    |                  |
|                  | ESI staffs are competent in redressing customers' grievances                                  | AS4  | .650            |             |                    |                  |
|                  | ESI Corporation maintains confidentiality of policyholders' information                       | AS5  | .622            |             |                    |                  |
|                  | ESI doctors and nurses are professionally prepared to treat the patients                      | AS6  | .671            |             |                    |                  |
|                  | It is safe to enter the ESI hospital/ dispensary premises to access healthcare                | AS7  | .680            |             |                    |                  |

| Constructs                          | Statements                                                                                          | Code | Factor Loadings | Eigen Value | Variance Explained | Cronbach's Alpha |
|-------------------------------------|-----------------------------------------------------------------------------------------------------|------|-----------------|-------------|--------------------|------------------|
| Accessibility (AC)                  | It is easy to access ESI Healthcare facilities                                                      | AC1  | .792            | 2.357       | 5.238%             | 0.918            |
|                                     | Branch offices are conveniently located                                                             | AC2  | .822            |             |                    |                  |
|                                     | Branch offices has operating hours convenient to all policyholders                                  | AC3  | .811            |             |                    |                  |
|                                     | Timing of ESI dispensaries are convenient                                                           | AC4  | .769            |             |                    |                  |
|                                     | Specialists' services are available in ESI Healthcare institutions                                  | AC5  | .574            |             |                    |                  |
|                                     | ESI scheme offers emergency health care services                                                    | AC6  | .705            |             |                    |                  |
| Communication (CO)                  | ESI Corporation provides accurate and updated information about its benefits and services           | CO1  | .723            | 2.002       | 4.448%             | 0.785            |
|                                     | ESI Corporation provides information in a language understandable to policyholders                  | CO2  | .657            |             |                    |                  |
|                                     | ESI Corporation regularly organizes awareness campaign                                              | CO3  | .717            |             |                    |                  |
|                                     | ESI doctors listen to the patients and keep them informed about their health conditions             | CO4  | .672            |             |                    |                  |
| Understanding of Policyholders (UN) | ESI officials give me personal attention                                                            | UN1  | .800            | 1.791       | 3.984%             | 0.885            |
|                                     | Service providers at ESI Healthcare facilities are caring and understand patient concern.           | UN2  | .873            |             |                    |                  |
|                                     | ESI Corporation has the policyholders' best interest at heart                                       | UN3  | .808            |             |                    |                  |
|                                     | ESI Corporation offers reimbursement facility for medicines which are not available in ESI pharmacy | UN4  | .720            |             |                    |                  |

| Constructs                                | Statements                                                                       | Code | Factor Loadings | Eigen Value | Variance Explained | Cronbach's Alpha |
|-------------------------------------------|----------------------------------------------------------------------------------|------|-----------------|-------------|--------------------|------------------|
| <b>Responsiveness (RE)</b>                | ESI Corporation keeps customers informed about when services will be performed   | RE1  | .846            | 1.595       | 3.544%             | 0.894            |
|                                           | I receive prompt services from ESI Healthcare institutions                       | RE2  | .842            |             |                    |                  |
|                                           | ESI Corporation welcomes feedback from policyholders                             | RE3  | .702            |             |                    |                  |
|                                           | ESI officials guide the policyholders regarding benefits and services            | RE4  | .726            |             |                    |                  |
|                                           | ESI staffs are always willing to help policyholders.                             | RE5  | .813            |             |                    |                  |
| <b>E-governance (EG)</b>                  | ESI Corporation provides proactive information through SMS/e-mail                | EG1  | .600            | 1.307       | 2.904%             | 0.860            |
|                                           | The procedure for submitting online leave claim is simple                        | EG2  | .796            |             |                    |                  |
|                                           | It is possible to check claim status under ESI Scheme online                     | EG3  | .810            |             |                    |                  |
|                                           | Cash benefits are directly transferred to the bank account of ESI beneficiaries. | EG4  | .720            |             |                    |                  |
|                                           | ESI Corporation has a well - structured informative website                      | EG5  | .722            |             |                    |                  |
|                                           | ESI Corporation offers an effective online public grievance redressal mechanism  | EG6  | .664            |             |                    |                  |
| <b>Total Variance Explained – 66.241%</b> |                                                                                  |      |                 |             |                    |                  |

Source: Primary Data

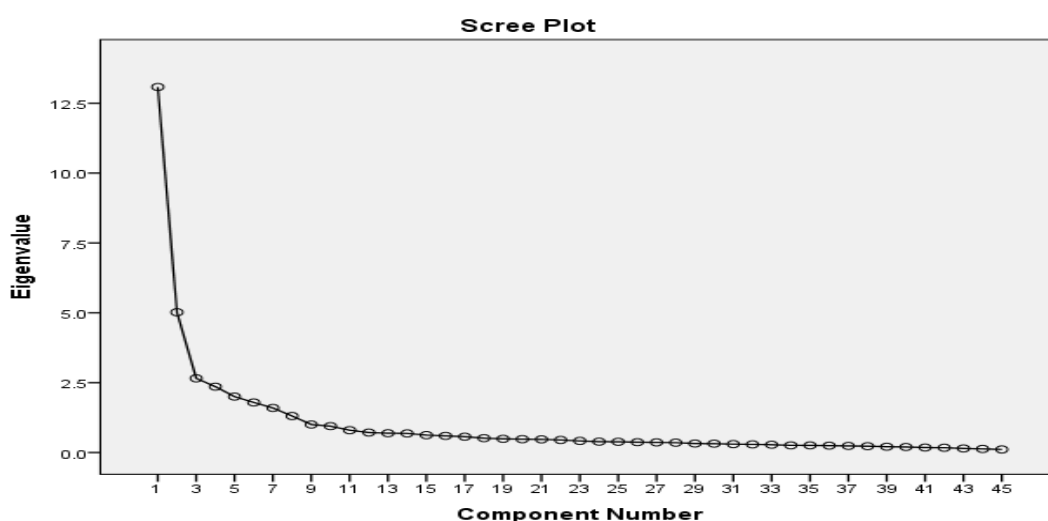
The result of Exploratory Factor Analysis (EFA) shows that the solution is based on **8 constructs** and all items are loading on their own factors. The **eight-factor solution** is explaining **66.241%** of the total variance. A total of five statements are included in first factor 'Reliability' (RL) which is explaining about **29.07%** of variance, eight statements are included in the second factor 'Tangibility' (TA) which is explaining about **11.15%** of variance, seven statements are included in the third factor 'Assurance' (AS) which is explaining about **5.903%** of variance, six

statements are included in the fourth factor ‘Accessibility’ (AC) which is explaining about **5.238%** of variance, four statements are included in the fifth factor ‘Communication’ (Co) which is explaining about **4.448%** of variance, four statements are included in the sixth factor ‘Understanding of policyholders’ (UN) which is explaining about **3.984%** of variance, five statements are included in the seventh factor ‘Responsiveness’ (RE) which is explaining about **3.544%** of variance, and six statements are included in the eighth factor ‘E-governance’ (EG) which is explaining over **2.904%** of the total variance. In total, eight- factors solution is explaining about **66.241%** of the total variance. Two variables (Infrastructure of ESI Corporation is adequate to use technology upgradations and ESI Corporation has networking of branches) are removed from the measurement of service quality due to cross loading issues.

The above table (Table – 4.13) shows all the factor loadings are above 0.40, and criteria of **Construct Validity** including both the **Discriminant Validity** (loading of at least 0.40, no cross-loadings of items above 0.40) and **Convergent Validity** (Eigen values greater than 1, loadings of at least 0.40 on the posited constructs) is satisfied. The result of Exploratory Factor Analysis shows that the selected factors under the dimension ‘**Service Quality**’ (SQ) have good level of validity.

**Figure 4.4**

*Scree-Plot of Exploratory Factor Analysis – Service Quality*



The Scree-plot also shows that **eight factors have eigen value greater than 1.**

**Reliability:**

The *Cronbach's Alpha Reliability Co-efficient* values of all the variables coming under the constructs of the study namely, Reliability (0.858), Tangibility (0.890), Assurance (0.861), Accessibility (0.918), Communication (0.785), Understanding of policyholders (0.885), Responsiveness (0.894), and E-governance (0.860) are above 0.70, hence this scale is considered as highly reliable.

**4.16.4 Exploratory Factor Analysis (EFA) – Satisfaction (SAT)**

Exploratory Factor Analysis (EFA) using Principal Component Method (PCM) is employed for analyzing the factor structure of ‘**Satisfaction**’ (SAT) of policy holders regarding ESI scheme. The results are presented below.

**Table 4.14**

*Result of KMO and Bartlett's Test – Satisfaction (SAT)*

| <b>KMO and Bartlett's Test</b>                   |                    |          |
|--------------------------------------------------|--------------------|----------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. |                    | .930     |
|                                                  | Approx. Chi-Square | 2822.913 |
| Bartlett's Test of Sphericity                    | df                 | 45       |
|                                                  | Sig.               | .000     |

Source: Primary Data

The KMO value is 0.930 which is above the recommended limit of 0.70. Bartlett's Test of Sphericity Chi-Square = 2822.913 and  $p < 0.01$  indicates that the correlation between the items is sufficient for Principal Component Analysis (PCA).

**Table 4.15***Result of Exploratory Factor Analysis – Satisfaction (SAT)*

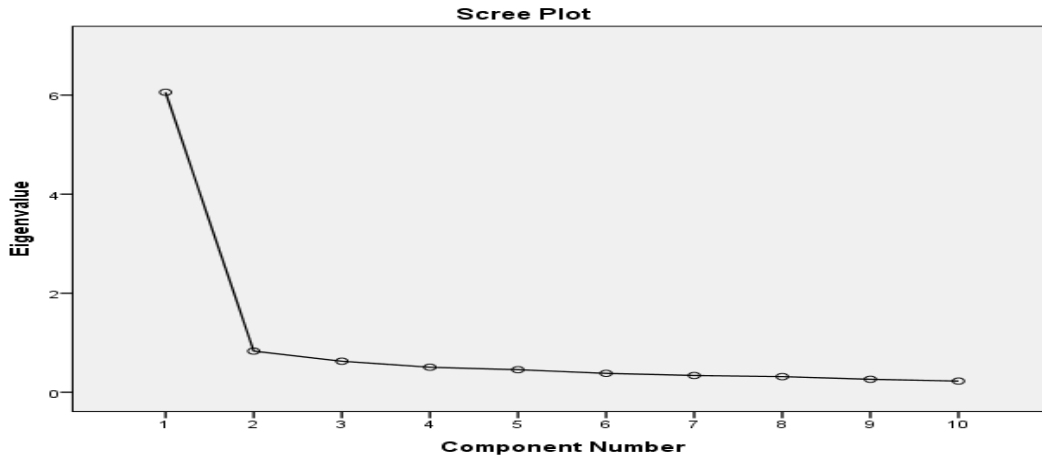
| Construct                                 | Statements                                      | Code  | Factor Loadings | Eigen Value | Variance Explained | Cronbac' s Alpha |
|-------------------------------------------|-------------------------------------------------|-------|-----------------|-------------|--------------------|------------------|
| Satisfaction (SAT)                        | Communication of Information by ESI Corporation | SAT1  | .715            | 6.057       | 60.572%            | 0.926            |
|                                           | Infrastructure and diagnostic facilities        | SAT2  | .713            |             |                    |                  |
|                                           | Procedural formalities                          | SAT3  | .819            |             |                    |                  |
|                                           | Behaviour of ESI staffs                         | SAT4  | .860            |             |                    |                  |
|                                           | Accessibility of the services                   | SAT5  | .783            |             |                    |                  |
|                                           | Medical services                                | SAT6  | .882            |             |                    |                  |
|                                           | Adequacy of cash benefits                       | SAT7  | .869            |             |                    |                  |
|                                           | Online services of ESI Corporation              | SAT8  | .736            |             |                    |                  |
|                                           | Grievance handling mechanism                    | SAT9  | .803            |             |                    |                  |
|                                           | Premium contribution                            | SAT10 | .770            |             |                    |                  |
| <b>Total Variance Explained – 60.572%</b> |                                                 |       |                 |             |                    |                  |

Source: Primary Data

The result of Exploratory Factor Analysis (EFA) shows that ten items included under the factor 'Satisfaction' (SAT) is explaining about 60.572 per cent of the total variance. The above table shows that all factor loadings are above 0.40. The criteria of **Construct Validity** (Eigen value of >1, loadings of at least 0.40 on the posited constructs) is satisfied. One of the items (Preventive healthcare facility offered) is removed from the measurement of satisfaction due to poor factor loading. The result of EFA shows that the selected factors under the dimension 'Satisfaction' (SAT) has good level of validity.

**Figure 4.5**

*Scree-Plot of Exploratory Factor Analysis – Satisfaction*



According to the scree-test also, only one factor has eigen value greater than 1.

**Reliability:**

The *Cronbach’s Alpha Reliability Co-efficient* values of all the variables coming under the construct Satisfaction is **0.926**, hence strong internal consistency is assured and the statements are considered as highly reliable.

**4.16.5 Exploratory Factor Analysis (EFA) – Sense of Social Security (SSS)**

Exploratory Factor Analysis (EFA) using Principal Component Method (PCM) with Varimax Rotation is employed for analysing the factor structure and correlation between 13 statements included in the scale for measuring the ‘**Sense of Social Security**’ (SSS) of ESI policyholders.

**Table 4.16**

*Result of KMO and Bartlett’s Test – Sense of Social Security (SSS)*

| <b>KMO and Bartlett's Test</b>                   |                    |          |
|--------------------------------------------------|--------------------|----------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. |                    | .901     |
|                                                  | Approx. Chi-Square | 4102.247 |
| Bartlett's Test of Sphericity                    | df                 | 78       |
|                                                  | Sig.               | .000     |

Source: Primary Data

Here, the KMO value is **0.901** which is above the recommended limit of **0.70**. Bartlett's Test of Sphericity Chi-Square = **4102.247**, **p<0.01** indicates that the correlation between the items is sufficient for conducting Principal Component Analysis (PCA).

**Table 4.17**

*Result of Exploratory Factor Analysis –Sense of Social Security (SSS)*

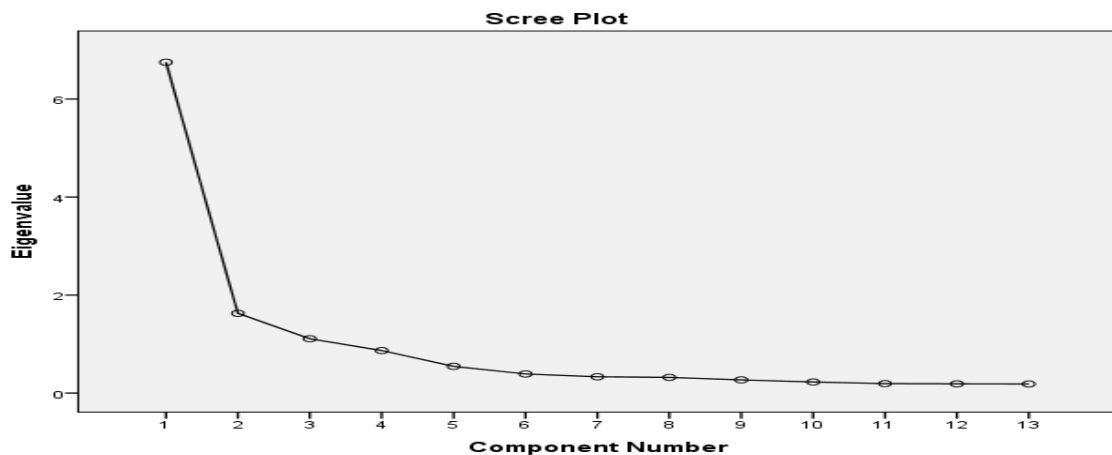
| Constructs                                | Statements                                                                                                                    | Code | Factor Loadings | Eigen Value | Variance Explained | Cronbach' s Alpha |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|------|-----------------|-------------|--------------------|-------------------|
| Health Protection (HP)                    | ESI scheme ensures free access to healthcare services                                                                         | HP1  | .788            | 6.750       | 51.92%             | 0.875             |
|                                           | ESI scheme protects my family from the rising cost of healthcare                                                              | HP2  | .745            |             |                    |                   |
|                                           | ESI scheme offers better healthcare facilities                                                                                | HP3  | .721            |             |                    |                   |
|                                           | I have peaceful mind knowing the medical bill reimbursement facility under ESI scheme                                         | HP4  | .818            |             |                    |                   |
| Provision Of Income Security (IS)         | Because of ESI coverage, I am not worried too much about unexpected financial loss arising from job related accident/ disease | IS1  | .762            | 1.627       | 12.51%             | 0.821             |
|                                           | ESI policy coverage positively impacts my quality of life                                                                     | IS2  | .743            |             |                    |                   |
|                                           | Payment of ESI contribution is not a financial burden for the working poor                                                    | IS3  | .772            |             |                    |                   |
|                                           | ESI benefits prevent extreme financial hardship                                                                               | IS4  | .716            |             |                    |                   |
| Risk Coverage (RC)                        | ESI policy reduces the stress; I may have about financial risks impacting my quality of life                                  | RC1  | .855            | 1.108       | 8.525%             | 0.921             |
|                                           | I feel I can handle emergencies better due to my ESI coverage                                                                 | RC2  | .820            |             |                    |                   |
|                                           | ESI scheme will meet my old age needs                                                                                         | RC3  | .865            |             |                    |                   |
|                                           | ESI policy gives me confidence that I will be supported in crisis                                                             | RC4  | .828            |             |                    |                   |
|                                           | ESI policy protects the social usefulness of productive workforce                                                             | RC5  | .703            |             |                    |                   |
| <b>Total Variance Explained – 72.964%</b> |                                                                                                                               |      |                 |             |                    |                   |

Source: Primary Data

The above table shows that all factor loadings are above 0.40, and the criteria of **Construct Validity** including both the **Discriminant Validity** (loading of at least 0.40, no cross-loadings of items above 0.40) and **Convergent Validity** (Eigen values greater than 1, loadings of at least 0.40 on the posited constructs) is satisfied. A total of four statements is included in first factor ‘Health Protection’ (HP) which is explaining about 51.92% of variance, four statements are included in the second factor ‘Provision of Income Security’ (IS) which is explaining about 12.51% of variance and five statements are included in the third factor ‘Risk Coverage’ (RC) which is explaining about 8.525% of variance of the total variance. In total, three-factors solution is explaining about **72.964%** of the total variance. Two items (ESI scheme enhances commitment and involvement among workers; Rehabilitation services enable the disabled workers to return to productive employment) are removed from the measurement of sense of social security due to cross loading issues. The result of EFA shows that the selected factors under the dimension ‘**Sense of Social Security**’ (SSS) has good level of validity.

**Figure 4.6**

*Scree-Plot of Exploratory Factor Analysis – Sense of Social Security*



Source: Primary Data

According to the scree-test also, **three factors have eigen value greater than 1.**

**Reliability: -**

The *Cronbach's Alpha Reliability Co-efficient* values of all the variables coming under the constructs of the study namely, Health Protection (0.875), Provision of Income Security (0.821), and Risk Coverage (0.921) are above 0.70, hence strong internal consistency is assured in this case.

**4.17 Common Method Bias**

Harman's Single Factor test is applied for checking the Common Method Bias in the study. It is done on all items in the questionnaire. As per the result, the single factor accounted for 30.848% of the total variance. As it is below the recommended limit of 50%, there is no issue of Common Method Bias in the study.

**4.18 Conclusion**

This chapter outlines the research methodology used for conducting the study. Research design, research onion, sampling design, details regarding data collection and tools used for data analysis have been elaborately discussed in this chapter. The result of pilot study is also explained in this chapter. Further the normality, reliability and validity results included in this section shows that the instrument used for the current study is highly reliable and valid and data are normal. It is also reported that there is no issue of Common Method Bias in the study. The results of data analysis in detail are included in the coming chapters.

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## *Chapter 5*

# **ANALYSIS OF AWARENESS AND KNOWLEDGE ABOUT ESI SERVICES AND LEVEL OF ESI BENEFITS UTILISATION**

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## **5.1 Introduction**

This chapter has made an attempt to understand the awareness and knowledge level of ESI services and the level of ESI benefits utilized by the policyholders. The awareness level is measured by using 15 items and the knowledge level is measured by using 7 items. The level of ESI benefits utilized is examined by using a categorical question.

The current chapter is divided into two sections. The first section involves the analysis of awareness and knowledge level of ESI policyholders and its comparison according to the demographic profile and ESI details of the policyholders. The second section deals with the analysis of the level of ESI benefits utilization according to the demographic groups and ESI details of policyholders. In the second section, the level of ESI benefit utilization is also compared with the awareness and knowledge level regarding ESI scheme.

## **5.2 Objectives**

- To identify the awareness and knowledge level of ESI policyholders about various services of ESI Corporation.
- To examine the level of ESI benefits utilization among ESI policyholders.

## **5.3 Hypotheses**

- H1: ESI policyholders do not have average level of awareness regarding various services of ESI Corporation.
- H2: ESI policyholders do not have average level of knowledge regarding various services of ESI Corporation.

- H3: There is significant difference in the awareness level about various services of ESI Corporation among policyholders of different demographic groups and ESI details.
- H4: There is significant difference in the knowledge level about various services of ESI Corporation among policyholders of different demographic groups and ESI details.
- H5: There is significant association between the level of ESI benefit utilization and the demographic profile and ESI details of policyholders.
- H6: There is significant association between the level of ESI benefit utilization and the awareness and knowledge regarding various services of ESI Corporation.

#### **5.4 Methodology and Database**

In order to fulfill the objectives of the present chapter, primary data are collected from the policyholders of ESI Corporation by using pretested structured questionnaire. A total of 450 sample policyholders is selected. To describe the knowledge and awareness about ESI services, Descriptive Statistics (Mean and Standard Deviation) is applied.

For examining the significant difference in the ESI Awareness and Knowledge level among policyholders according to their demographic groups and ESI details, Independent Sample 't' test and One-way ANOVA/ Welch test are employed. Before that, homogeneity assumption of population variance is identified with the help of Levene's test of Equality of Variance. Moreover, post-hoc analysis (Scheffe's/ Tamhane's T2) is used to make the pair-wise comparison of the factor variables.

Additionally, to check the association between the level of ESI benefits utilization and demographic groups as well as ESI details, chi-square test for association is applied. Furthermore, the level of ESI benefit utilization is also compared with the

awareness and knowledge level regarding ESI services. The demographic groups and ESI details are presented by using frequency and percentage analysis.

### **5.5 Variables used for the analysis**

**Table 5.1**

*Variables used for the analysis*

| <b>Category</b>     | <b>Variables</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Type of questions</b>                         |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| Demographic Groups  | Gender, Age in years, Marital status, Educational Qualification, Gross Monthly Income, Area of residence and Nature of the organization                                                                                                                                                                                                                                                                                                                            | Categorical Questions (2 or more than 2 options) |
| ESI Details         | Duration of ESI Membership, Sources of Awareness, No. of dependents as per ESI policy and Level of ESI Benefits Utilization                                                                                                                                                                                                                                                                                                                                        | Categorical Questions (More than 2 options)      |
| ESI Awareness Level | Amount of Premium contribution, Wage/ Salary limit for ESI coverage, Medical Benefits, Sickness Benefit, Maternity Benefit, Dependent Benefit, Disablement Benefit, Payment of confinement Expenses, Payment of Funeral Expenses, Old age Medical Care, Unemployment Allowance under Rajiv Gandhi Shramik Kalyan Yojana (RGSKY), Availability of AYUSH facility, Ask An Appointment mobile app, ESI medical help line number, Benefits available to family members | 5 Point Likert Scale Questions                   |
| ESI Knowledge Level | Medical Services/ facilities available in ESI hospitals/ dispensaries, Procedure for claiming cash benefit, Procedure for reimbursement of medical bill, List of empaneled hospitals for super specialty services, Procedure for checking claim status of ESI Scheme online, Procedure for grievance redressal, Services of ESI court                                                                                                                              | 5 Point Likert Scale Questions                   |

Source: Conceptual Framework

## 5.6 Demographic Groups of ESI Policyholders

In this study, ESI policyholders are categorized according to their demographic groups of Gender, Age, Marital status, Educational Qualification, Gross Monthly Income, Area of residence and Nature of the organization. Here, frequency and percentage are used to describe the category of respondents. The results are presented below.

**Table 5.2**

*Demographic Groups of Policyholders*

|                                  | Frequency | Percent |
|----------------------------------|-----------|---------|
| <b>Gender</b>                    |           |         |
| Male                             | 238       | 52.9    |
| Female                           | 212       | 47.1    |
| <b>Age</b>                       |           |         |
| Up to 25 years                   | 40        | 8.9     |
| 26-35 years                      | 125       | 27.8    |
| 36-45 years                      | 141       | 31.3    |
| 46-55 years                      | 111       | 24.7    |
| Above 55 years                   | 33        | 7.3     |
| <b>Marital Status</b>            |           |         |
| Married                          | 369       | 82.0    |
| Unmarried                        | 81        | 18.0    |
| <b>Educational Qualification</b> |           |         |
| SSLC and Below                   | 109       | 24.2    |
| Plus-Two / Pre Degree            | 86        | 19.1    |
| Degree/ Diploma                  | 140       | 31.1    |
| Post-Graduation                  | 78        | 17.3    |
| Professional & Others            | 37        | 8.2     |
| <b>Gross Monthly Income</b>      |           |         |
| Up to Rs. 5000                   | 84        | 18.7    |
| Rs. 5001- 10000                  | 91        | 20.2    |
| Rs. 10001- 15000                 | 124       | 27.6    |
| Rs. 15001- 21000                 | 151       | 33.6    |

|                               | <b>Frequency</b> | <b>Percent</b> |
|-------------------------------|------------------|----------------|
| <b>Area of Residence</b>      |                  |                |
| Urban                         | 172              | 38.2           |
| Rural                         | 219              | 48.7           |
| Semi-urban                    | 59               | 13.1           |
| <b>Nature of Organization</b> |                  |                |
| Factory                       | 125              | 27.8           |
| Shop/ Establishment           | 325              | 72.2           |

Source: Primary Data

The demographic groups of the respondents are presented in Table 5.2. It shows that 52.9% of the respondents are male and the remaining 47.1% are female. Majority of the respondents belong to the age group of 36-45 years (31.3%) which is followed by the age group of 26-35 years (27.8%). Only a few respondents (7.3%) belong to the age group of above 55 years. Most of the respondents are married (82%).

Educational status of the respondents reveals that majority of them are having degree/ diploma qualification (31.1%) and some of the respondents are post graduates (17.3%). However, 24.2% of the respondents are having educational qualification only up to SSLC level.

Income distribution of the respondents shows that the monthly income of most of the respondents ranges in between Rs. 15001 and Rs. 21000 (33.6%) which is followed by the income group of respondents ranging from Rs. 10001 to Rs. 15000 (27.6%). The monthly income of 18.7% of the respondents falls below Rs. 5000.

Majority of the respondents are living in rural area (48.7%) and are employed in shop/ establishment (72.2%).

### **5.7 ESI related details of Policyholders**

In this section ESI related details are mentioned namely Duration of ESI Membership, Source of Awareness regarding ESI Scheme, Number of Dependents as per ESI Policy and Level of ESI Benefits Utilisation. Here, frequency and percentage analysis are used to describe the details.

**Table 5.3***ESI related details of Policyholders*

|                                                              | Frequency | Percent |
|--------------------------------------------------------------|-----------|---------|
| <b>Duration of ESI Membership</b>                            |           |         |
| Up to 5 years                                                | 165       | 36.7    |
| 6-10 years                                                   | 134       | 29.8    |
| 11-15 years                                                  | 86        | 19.1    |
| 16-20 years                                                  | 44        | 9.8     |
| Above 20 years                                               | 21        | 4.7     |
| <b>Sources of Awareness</b>                                  |           |         |
| Employer                                                     | 117       | 26.0    |
| ESI Website                                                  | 55        | 12.2    |
| E-mail/ SMS from ESI Corporation                             | 4         | .9      |
| Pamphlets, Posters/Banners, Brochures/<br>Circulars/ Notices | 29        | 6.4     |
| Trade Union Officials                                        | 9         | 2.0     |
| Co-workers/ Friends                                          | 193       | 42.9    |
| ESI Corporation Officials                                    | 43        | 9.6     |
| <b>No. of ESI Dependents</b>                                 |           |         |
| Up to 2                                                      | 126       | 28.0    |
| 3-4                                                          | 192       | 42.7    |
| 5-6                                                          | 104       | 23.1    |
| Above 6                                                      | 28        | 6.2     |
| <b>Level of ESI Benefits Utilisation</b>                     |           |         |
| Up to 3 times                                                | 187       | 41.6    |
| 4-6 times                                                    | 140       | 31.1    |
| 7-9 times                                                    | 55        | 12.2    |
| More than 9 times                                            | 68        | 15.1    |

Source: Primary Data

Table 5.3 provides ESI related details of the respondents. From the table, it can be inferred that the duration of membership under ESI scheme for most of the respondents is up to 5 years (36.7%) which is followed by 6 to 10 years of ESI

membership (29.8%). Only 4.7 % of the respondents have been remaining as ESI policyholders for more than 20 years.

For most of the respondents, the major source of awareness regarding ESI scheme is co-workers and friends (42.9%). 26 % of the respondents opined that employer is the major source of awareness. Another important source of awareness is ESI website (12.2%).

It can also be observed that majority of the respondents (42.7%) are having 3-4 ESI dependents in their family. 23.1% of the respondents have 5-6 ESI dependents and only 6.2% of the respondents are having more than 6 ESI dependents in their family.

Most of the respondents (41.6%) utilised ESI benefits only up to 3 times and 31.1% of the respondents utilised it for 4 to 6 times in a year. Only 15.1% of the respondents availed ESI benefits more than 9 times in a year.

## **Section 1**

### **5.8 Awareness and Knowledge Level of ESI Policyholders**

Social insurance participation is largely influenced by the awareness and knowledge of policyholders (Giles et al., 2021). ESI scheme is a major social insurance scheme in India. A comprehensive understanding of the scope, coverage, benefits, online services etc. of the ESI Corporation enables policyholders to make maximum utilization of ESI benefits and it also enhances their satisfaction level. On the other hand, lack of awareness and knowledge will lead to underutilization of ESI services and dissatisfaction.

In this section of analysis, the awareness and knowledge level of ESI services among policyholders is measured as a precursor for evaluating service quality. The awareness level is measured by using a five-point Likert Scale ranging from 5 to 1. More specifically, 5 for extremely aware, 4 for very much aware, 3 for moderately aware, 2 for slightly aware and 1 for unaware. Furthermore, knowledge level is also measured in a five-point Likert Scale ranging from 5 to 1 namely, 5 for Expert Knowledge, 4 for Good Knowledge, 3 for Moderate Knowledge, 2 for Limited Knowledge and 1 for No Knowledge.

Here, in order to describe the factors of awareness and knowledge, descriptive statistics like mean and standard deviation are used. Besides, to check the level of awareness and knowledge, ‘One Sample -t’ test is applied. Also, to check the significant mean difference in the continuous variable with factor variables of demographic groups and ESI details, ‘Independent Sample-t test’, and ‘One-way ANOVA/ Welch Test’ are applied according to the category of variables. Furthermore, post-hoc analysis (Scheffe/ Tamhane’s T2) is conducted to check the pair-wise comparison of the factor variables. These results are presented in detail as below

**Table 5.4**

*Descriptive Statistics of the Variables of ESI Awareness level*

| <b>Variables/ Items</b>                                                    | <b>N</b> | <b>Mean</b>  | <b>Std. Deviation</b> |
|----------------------------------------------------------------------------|----------|--------------|-----------------------|
| Amount of Premium contribution                                             | 450      | 2.780        | 1.187                 |
| Wage/ Salary limit for ESI coverage                                        | 450      | <b>3.520</b> | <b>1.175</b>          |
| Medical Benefits                                                           | 450      | 3.257        | 0.905                 |
| Sickness Benefit                                                           | 450      | 2.871        | 0.970                 |
| Maternity Benefit                                                          | 450      | 2.333        | 0.978                 |
| Dependent Benefit                                                          | 450      | 2.166        | 0.994                 |
| Disablement Benefit                                                        | 450      | 2.228        | 1.015                 |
| Payment of confinement Expenses                                            | 450      | 1.615        | 0.831                 |
| Payment of Funeral Expenses                                                | 450      | 1.548        | 0.827                 |
| Old age Medical Care                                                       | 450      | 1.571        | 0.844                 |
| Unemployment Allowance under Rajiv Gandhi Shramik Kalyan Yojana (RGSKY)    | 450      | 1.631        | 0.732                 |
| Availability of AYUSH (Ayurveda, Yoga, Unani, Siddha, Homeopathy) facility | 450      | 2.575        | 0.953                 |
| Ask an appointment mobile app                                              | 450      | 1.417        | 0.599                 |
| ESI medical help line number                                               | 450      | 2.197        | 1.009                 |
| Benefits available to family members                                       | 450      | 2.951        | 0.951                 |

Source: Primary Data

Table 5.4 depicts the descriptive statistics of awareness level regarding different factors of ESI services. From the table it is clear that, policyholders are very aware about the wage/ salary limit of ESI coverage with mean score of 3.520 (SD-1.175). Similarly, they are moderately aware about the amount of premium contribution, medical benefits, sickness benefits and benefits for family members with the mean score of 2.61- 3.40.

On the other hand, they are only slightly aware regarding the maternity benefits, dependent benefits, disablement benefits, availability of AYUSH facility and ESI medical helpline number with mean score of 1.81- 2.60. Most of the policyholders are almost unaware about payment of confinement expenses, payment of funeral expenses, old age medical care, unemployment allowance and Ask An Appointment mobile app. The lowest mean score is observed in the case of Ask An Appointment mobile app (Mean – 1.417, SD- 0.599)

**Table 5.5**

*Descriptive Statistics of the Variables of ESI Knowledge level*

| <b>Variables/ Items</b>                                               | <b>N</b> | <b>Mean</b>  | <b>Std. Deviation</b> |
|-----------------------------------------------------------------------|----------|--------------|-----------------------|
| Medical Services/ facilities available in ESI hospitals/ dispensaries | 450      | <b>3.037</b> | <b>0.781</b>          |
| Procedure for claiming cash benefit                                   | 450      | 2.375        | 1.098                 |
| Procedure for reimbursement of medical bill                           | 450      | <b>2.964</b> | <b>1.054</b>          |
| List of empaneled hospitals for super specialty services              | 450      | 2.113        | 0.881                 |
| Procedure for checking claim status of ESI Scheme online              | 450      | 1.962        | 0.865                 |
| Procedure for grievance redressal                                     | 450      | 1.553        | 0.717                 |
| Services of ESI court                                                 | 450      | 1.308        | 0.558                 |

Source: Primary Data

Table 5.5 discusses the descriptive statistics of knowledge level of ESI policyholders regarding the factors of ESI services. Here, it is evident that the policyholders have moderate level of knowledge about the medical services/ facilities of ESI hospitals

and procedure for the reimbursement of medical bill with the mean score of 3.037 and 2.964 respectively.

However, they have only limited knowledge regarding the procedure of claiming cash benefit, list of empaneled hospitals for super specialty services and the procedure for checking claim status of ESI scheme online with a mean score of 1.81- 2.60.

At the same time, they have almost no knowledge regarding the procedure for grievance redressal (Mean- 1.553, SD- 0.717) and the service of ESI court (Mean- 1.308, SD – 0.558) prevailing in the country with the mean score of less than 1.80.

### **5.8.1 Level of Awareness and Knowledge Regarding the Services of ESI Corporation**

Here, the level of awareness and knowledge of ESI services is measured with the help of One-Sample t test. The hypothesis related with the awareness level is as follows

*H<sub>01</sub>: ESI policyholders have average level of awareness regarding various services of ESI Corporation ( $\bar{X} = 3$ ).*

*H<sub>11</sub>: ESI policyholders do not have average level of awareness regarding various services of ESI Corporation ( $\bar{X} \neq 3$ ).*

The hypothesis related with the knowledge level is: -

*H<sub>02</sub>: ESI policyholders have average level of knowledge regarding various services of ESI Corporation ( $\bar{X} = 3$ ).*

*H<sub>12</sub>: ESI policyholders do not have average level of knowledge regarding various services of ESI Corporation ( $\bar{X} \neq 3$ ).*

**Table 5.6**

*One Sample t Statistics and Test Result of ESI Awareness and Knowledge Level*

| Factors   | One-Sample Statistics |       |                | One Sample t Test<br>(Test Value = 3) |       |                |
|-----------|-----------------------|-------|----------------|---------------------------------------|-------|----------------|
|           | N                     | Mean  | Std. Deviation | t                                     | D. f. | Sig. (p) value |
| Awareness | 450                   | 2.204 | 0.694          | -24.372**                             | 449   | 0.000          |
| Knowledge | 450                   | 2.187 | 0.696          | -24.742**                             | 449   | 0.000          |

Source: Primary Data

\*\*Significant at 1% level of significance

Table 5.6 clarifies the result of One-sample ‘t’ test for checking the level of awareness and knowledge of the ESI policyholders. Since the ‘p’ value is less than 0.01, the null hypothesis is rejected at 1% level of significance. Hence, the average level of awareness and knowledge of policyholders on ESI services is not ensured. In both cases, the mean score is less than 3.00, which denotes that the policyholders have only low level of awareness (Mean – 2.204, SD- 0.694) as well as limited knowledge (Mean – 2.187, SD- 0.696) regarding various benefits and services offered by ESI Corporation.

### **5.8.2 Comparison of ESI Awareness and Knowledge Level according to the demographic groups of the policyholders**

Here, ESI Awareness and Knowledge Level is considered as the dependent variable and demographic groups are considered as factor variables. Accordingly, Gender, Age, Marital status, Educational Qualification, Gross Monthly Income, Area of residence and Nature of the organization are taken as the factor variables to check the mean difference in the ESI Awareness and Knowledge Level of policyholders. The results are presented in the following pages.

### 5.8.2.1 Gender wise comparison of ESI Awareness and Knowledge Level

In order to check the significant difference in the ESI Awareness and Knowledge Level between male and female policyholders, 'Independent Sample- t test' is applied. Following hypotheses are formulated and tested accordingly.

The hypothesis related to awareness level of ESI service is,

*H0<sub>3</sub>: There is no significant difference in the awareness level about various services of ESI Corporation between male and female policyholders.*

*H1<sub>3</sub>: There is significant difference in the awareness level about various services of ESI Corporation between male and female policyholders.*

The hypothesis related to knowledge level of ESI service is,

*H0<sub>4</sub>: There is no significant difference in the knowledge level about various services of ESI Corporation between male and female policyholders.*

*H1<sub>4</sub>: There is significant difference in the knowledge level about various services of ESI Corporation between male and female policyholders.*

**Table 5.7**

*Gender wise comparison of ESI Awareness and Knowledge Level*

| Factors   | Gender | Mean  | SD    | Levene's Test for Equality of Variances |       | t-test result |       |
|-----------|--------|-------|-------|-----------------------------------------|-------|---------------|-------|
|           |        |       |       | F                                       | Sig.  | t             | Sig.  |
| Awareness | Male   | 2.145 | 0.715 | 1.566                                   | 0.211 | 1.914         | 0.056 |
|           | Female | 2.270 | 0.664 |                                         |       |               |       |
| Knowledge | Male   | 2.176 | 0.732 | 3.429                                   | 0.065 | 0.381         | 0.703 |
|           | Female | 2.201 | 0.647 |                                         |       |               |       |

Source: Primary Data

Table 5.7 evaluates the result of Independent Sample 't' test for checking the significant difference in the ESI Awareness and Knowledge Level of male and female policyholders. Before checking the difference, Levene's test for Equality of Variance is used to test the assumption of equality of population variance. Under both cases, equality of variance is assumed with the 'f' statistics of 1.566 and 3.429 and 'p' values of 0.211 and 0.065 respectively. Therefore, the 't' statistics and significance value of Independent Sample 't' test corresponding to equal variance assumed is selected for the mean comparison.

In the case of awareness, the 't' statistics of 1.914 and 'p' value of 0.056 denote that the null hypothesis ( $H_{03}$ ) is failed to reject at 5% level of significance. Hence, there is no significant difference between male and female policyholders regarding the awareness level of ESI services.

Similarly, with respect to knowledge, the 't' statistics of 0.381 and 'p' value of 0.703 represent that the null hypothesis ( $H_{04}$ ) is failed to reject at 5% level of significance. Therefore, there is no significant difference between male and female policyholders regarding the knowledge level of ESI services. In short, the male and female policyholders have same level of awareness and knowledge regarding ESI services.

### **5.8.2.2 Age wise comparison of ESI Awareness and Knowledge Level**

In order to check the significant difference in the ESI Awareness and Knowledge Level among policyholders of different age groups, One-way ANOVA/ Welch test is applied. Following hypotheses are formulated and tested accordingly. The hypothesis related to awareness level of ESI service is given below.

*H<sub>05</sub>: There is no significant difference in the awareness level about various services of ESI Corporation among policyholders of different age groups.*

*H<sub>15</sub>: There is significant difference in the awareness level about various services of ESI Corporation among policyholders of different age groups.*

The hypothesis related to knowledge level of ESI service is as follows.

*H0<sub>6</sub>: There is no significant difference in the knowledge level about various services of ESI Corporation among policyholders of different age groups.*

*H1<sub>6</sub>: There is significant difference in the knowledge level about various services of ESI Corporation among policyholders of different age groups.*

**Table 5.8**

*Age wise comparison of ESI Awareness and Knowledge Level*

| Factors          | Descriptive Statistics of Age wise comparison<br>(Mean and SD) |                 |                 |                 |                 | Levene's test of Equality of Variance |            | One- way ANOVA/ Welch test |            |
|------------------|----------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|---------------------------------------|------------|----------------------------|------------|
|                  | Up to 25 years                                                 | 26-35 years     | 36-45 years     | 46-55 years     | Above 55 years  | Test statistics                       | Sig. value | Test Statistics            | Sig. value |
| <b>Awareness</b> | 1.693<br>(.432)                                                | 1.949<br>(.642) | 2.212<br>(.600) | 2.466<br>(.683) | 2.848<br>(.707) | 5.174**                               | 0.000      | 25.129**                   | 0.000      |
| <b>Knowledge</b> | 1.642<br>(.440)                                                | 1.932<br>(.581) | 2.250<br>(.682) | 2.433<br>(.642) | 2.722<br>(.805) | 6.866**                               | 0.000      | 22.588**                   | 0.000      |

Source: Primary Data

\*\*Significant at 1% level of significance

Parentheses represent standard deviation

Table 5.8 discusses the result of One-way ANOVA/ Welch test for checking the ESI Awareness and Knowledge Level of policyholders of different age groups. From the descriptive statistics, it is clear that above 55 years of age group of policy holders have moderate level of awareness (Mean- 2.848, SD- .707) as well as knowledge (Mean- 2.722, SD- .805) regarding various benefits and services offered by ESI Corporation. On other hand, majority of the policyholders of up to 25 years of age group are almost unaware and they have no knowledge regarding various services of ESI Corporation. All other age group of policyholders have slight awareness and limited knowledge on ESI services. In order to prove the significant difference in the mean score, One-way ANOVA/ Welch test is conducted. Before that homogeneity of population variance is tested with the help of Levene's test of Equality of Variance. According to the test statistics (5.174 and 6.866) and significance value

(0.000 and 0.000), the homogeneity of population variance is not assumed and hence Welch test is employed for both cases.

From the test value of 25.129 and significance value of less than 0.01, it is clear that there exists significant difference in the awareness level of policyholders of different age groups. Similarly in the case of ESI knowledge, since the test value (22.588) is significant at 1% level of significance, there exists significant difference in the knowledge level of policyholders of different age groups. Hence, age group is considered as an influencing factor for determining the awareness as well as knowledge about various services offered by ESI Corporation.

**Table 5.9**

*Multiple Comparisons of ESI Awareness and Knowledge Level Based on Age of the Respondents – Tamhane’s T2 Post hoc Test*

| Age (I)        | Age (J)        | Awareness             |      | Knowledge             |      |
|----------------|----------------|-----------------------|------|-----------------------|------|
|                |                | Mean Difference (I-J) | Sig. | Mean Difference (I-J) | Sig. |
| Up to 25 years | 26-35 years    | -.25600               | .051 | -.28971*              | .013 |
|                | 36-45 years    | -.51896**             | .000 | -.60740**             | .000 |
|                | 46-55 years    | -.77273**             | .000 | -.79086**             | .000 |
|                | Above 55 years | -1.15515**            | .000 | -1.08009**            | .000 |
| 26-35 years    | 36-45 years    | -.26296**             | .007 | -.31768**             | .001 |
|                | 46-55 years    | -.51673**             | .000 | -.50115**             | .000 |
|                | Above 55 years | -.89915**             | .000 | -.79037**             | .000 |
| 36-45 years    | 46-55 years    | -.25377*              | .023 | -.18347               | .259 |
|                | Above 55 years | -.63619**             | .000 | -.47269*              | .032 |
| 46-55 years    | Above 55 years | -.38242               | .080 | -.28922               | .490 |

Source: Primary Data

\*Significant at 5% level of significance

\*\*Significant at 1% level of significance

Since the result of Welch test (table 5.8) is significant, it is required to make a pairwise comparison of different age groups of the policyholders regarding the awareness and knowledge level by applying Tamhane’s T2 test. From the table 5.9,

it is evident that there exists no significant difference between 'Up to 25 years' of age group and '26-35 years' of age group; and 46-55 years of age group and Above 55 years of age group of policyholders in their awareness regarding ESI services. The significance values in these two cases are above 0.05. Similarly, no significant difference is found between '36-45 years' of age group and '46-55 years' of age group; and '46-55' years of age group and 'Above 55 years' of age group of policyholders in their knowledge regarding ESI services, as the p values are more than 0.05 in these cases. Significant difference is found between all other age groups in their awareness and knowledge of various services of ESI Corporation (p values are less than 0.05). The mean difference in the awareness and knowledge level is the highest between 'Up to 25 years' age group and 'Above 55 years' age group. More precisely, the policyholders having above 55 years of age group have more awareness and knowledge regarding the services of ESI Corporation than other policyholders.

### **5.8.2.3 Marital status wise comparison of ESI Awareness and Knowledge Level**

In order to check the significant difference in the ESI Awareness and Knowledge Level among policyholders according to their marital status, Independent Sample 't' test is employed. As a result, following hypotheses are formulated and tested.

The hypothesis related to awareness level of ESI service is,

*H0<sub>7</sub>: There is no significant difference in the awareness level about various services of ESI Corporation between married and unmarried policyholders.*

*H1<sub>7</sub>: There is significant difference in the awareness level about various services of ESI Corporation between married and unmarried policyholders.*

The hypothesis related to knowledge level of ESI service is,

*H0<sub>8</sub>: There is no significant difference in the knowledge level about various services of ESI Corporation between married and unmarried policyholders.*

*H1<sub>8</sub>: There is significant difference in the knowledge level about various services of ESI Corporation between married and unmarried policyholders.*

**Table 5.10**

*Marital Status wise comparison of ESI Awareness and Knowledge Level*

| Factors   | Marital Status | Mean  | SD    | Levene's Test for Equality of Variances |       | t-test result |              |
|-----------|----------------|-------|-------|-----------------------------------------|-------|---------------|--------------|
|           |                |       |       | F                                       | Sig.  | t             | Sig.         |
| Awareness | Married        | 2.202 | 0.686 |                                         |       | 0.147         | 0.883        |
|           | Unmarried      | 2.214 | 0.551 | 6.17**                                  | 0.003 | <b>0.169</b>  | <b>0.866</b> |
| Knowledge | Married        | 2.192 | 0.691 |                                         |       | 0.305         | 0.761        |
|           | Unmarried      | 2.167 | 0.539 | 6.59**                                  | 0.001 | <b>0.357</b>  | <b>0.721</b> |

Source: Primary Data

\*\*Significant at 1% level of significance

Table 5.10 exhibits the result of Independent Sample ‘t’ test for checking the significant mean difference in the awareness and knowledge level of married and unmarried policyholders of ESI scheme. The Levene’s test for equality of variance provides the significant value of less than 0.01 and ‘f’ values of 6.17 and 6.59 respectively. Since the ‘p’ value is significant at 1% level of significance, equal variance is not assumed and hence the ‘t’ statistics and ‘p’ value corresponding to equal variance not assumed is selected to formulate the inference about mean difference.

Accordingly, in the case of awareness level, ‘t’ value of 0.169 and significance value of 0.866 demonstrates that there exists no significant difference in the awareness level of married and unmarried policyholders. Likewise, with respect to knowledge level, ‘t’ value of 0.357 and significance value of 0.721 also validates that there exists no significant difference in the knowledge level of married and unmarried policyholders. The null hypotheses (H0<sub>7</sub> and H0<sub>8</sub>) are failed to reject at 5% level of significance in these cases. In brief, married and unmarried policyholders have same level of awareness and knowledge regarding various services of ESI Corporation.

### 5.8.2.4 Education wise comparison of ESI Awareness and Knowledge Level

In order to check the significant difference in the ESI Awareness and Knowledge Level among policyholders of different educational background, One-way ANOVA/ Welch test is used.

The hypothesis related to awareness level of ESI service is,

*H<sub>09</sub>: There is no significant difference in the awareness level about various services of ESI Corporation among policyholders of different educational background.*

*H<sub>19</sub>: There is significant difference in the awareness level about various services of ESI Corporation among policyholders of different educational background.*

The hypothesis related to knowledge level of ESI service is,

*H<sub>010</sub>: There is no significant difference in the knowledge level about various services of ESI Corporation among policyholders of different educational background.*

*H<sub>110</sub>: There is significant difference in the knowledge level about various services of ESI Corporation among policyholders of different educational background.*

**Table 5.11**

*Education wise comparison of ESI Awareness and Knowledge Level*

| Factors          | Descriptive Statistics of Education wise comparison<br>(Mean and SD) |                       |                 |                  |                        | Levene's test of Equality of Variance |            | One-way ANOVA/ Welch test |            |
|------------------|----------------------------------------------------------------------|-----------------------|-----------------|------------------|------------------------|---------------------------------------|------------|---------------------------|------------|
|                  | SSLC and Below                                                       | Plus Two / Pre Degree | Degree/ Diploma | Post- Graduation | Professiona I & Others | Test statistics                       | Sig. value | Test Statistics           | Sig. value |
| <b>Awareness</b> | 1.851<br>(.574)                                                      | 2.251<br>(.692)       | 2.204<br>(.664) | 2.428<br>(.739)  | 2.061<br>(.537)        | 1.935                                 | 0.060      | 9.628**                   | 0.000      |
| <b>Knowledge</b> | 1.882<br>(.647)                                                      | 2.264<br>(.681)       | 2.153<br>(.623) | 2.429<br>(.768)  | 1.923<br>(.533)        | 1.570                                 | 0.074      | 7.882**                   | 0.000      |

Source: Primary Data

\*\*Significant at 1% level of significance

Parentheses represent standard deviation

Table 5.11 highlights the results of One-way ANOVA/ Welch test for testing the ESI Awareness and Knowledge level of policyholders having different educational qualifications. The descriptive statistics such as mean and standard deviation show that the policyholders having post-graduation have better level of awareness and knowledge regarding the services of ESI Corporation. Whereas the awareness and knowledge level of ESI policyholders having educational qualification up to SSLC are very low. For testing the significant difference in the mean score, One-way ANOVA/ Welch test is used. Before deciding the test criteria, the homogeneity of population variance is tested with the help of Leven’s test of Equality of Variance. According to the test statistic (1.935 and 1.570) and significance value (0.060 and 0.074), the equality of variance assumption is proved in the case of both awareness level and knowledge level. Since the p value of Leven’s test is more than 0.05, One-way ANOVA is applied in both cases.

In the case of awareness level, test statistic is 9.628 and significance value is below 0.01. Hence it can be inferred that there exists significant difference in the awareness level of policyholders having different educational qualifications. Similarly, there exists significant difference in the knowledge level of ESI policyholders based on their educational qualification as the test statistic (7.882) is significant at 1% level of significance. Therefore, educational qualification can be considered as an influencing factor for determining the awareness and knowledge level of ESI services.

**Table 5.12**

*Multiple Comparisons of ESI Awareness and Knowledge level based on Educational Qualification – Scheffe’s Post hoc Test*

| Educational Qualification (I) | Educational Qualification (J) | Awareness             |      | Knowledge             |      |
|-------------------------------|-------------------------------|-----------------------|------|-----------------------|------|
|                               |                               | Mean Difference (I-J) | Sig. | Mean Difference (I-J) | Sig. |
| SSLC and Below                | Plus-Two / Pre Degree         | .17697                | .599 | .16576                | .698 |
|                               | Degree/ Diploma               | .22326                | .111 | .27657*               | .020 |
|                               | Post Graduation               | .57685**              | .000 | .54710**              | .000 |
|                               | Professional & Others         | .36660                | .332 | .50681                | .063 |

| Educational Qualification (I) | Educational Qualification (J) | Awareness             |       | Knowledge             |       |
|-------------------------------|-------------------------------|-----------------------|-------|-----------------------|-------|
|                               |                               | Mean Difference (I-J) | Sig.  | Mean Difference (I-J) | Sig.  |
| Plus-Two / Pre Degree         | Degree/ Diploma               | .04628                | 1.000 | .11081                | .906  |
|                               | Post Graduation               | .39988**              | .001  | .38134**              | .003  |
|                               | Professional & Others         | .18962                | .957  | .34104                | .421  |
| Degree/ Diploma               | Post Graduation               | .35360**              | .000  | .27053*               | .025  |
|                               | Professional & Others         | .14334                | .991  | .23023                | .826  |
| Post Graduation               | Professional & Others         | -.21026               | .910  | -.04029               | 1.000 |

Source: Primary Data

\*Significant at 5% level of significance

\*\*Significant at 1% level of significance

The result of Scheffe's post hoc test is shown in Table 5.12. From the table it is evident that, the awareness and knowledge level of post graduate ESI policyholders are significantly different from other groups of policyholders except the policyholders having professional and other qualifications. In the case of knowledge level, significant difference is also observed between policyholders belonging to 'SSLC and below' qualification and 'Degree/ Diploma' qualification. No significant difference is found between other groups in both the cases. The highest mean difference in the case of awareness and knowledge level is found between the policyholders belonging to 'SSLC and Below' qualification and 'Post Graduated' policyholders.

#### 5.8.2.5 Income wise comparison of ESI Awareness and Knowledge Level

For checking the significant difference in the ESI awareness and knowledge level among policyholders according to their monthly income, One-way ANOVA/ Welch test is exercised. The hypothesis related to awareness level of ESI service is,

*H<sub>011</sub>: There is no significant difference in the awareness level about various services of ESI Corporation among policyholders according to their monthly income.*

*H1<sub>11</sub>: There is significant difference in the awareness level about various services of ESI Corporation among policyholders according to their monthly income.*

The hypothesis related to knowledge level of ESI service is,

*H0<sub>12</sub>: There is no significant difference in the knowledge level about various services of ESI Corporation among policyholders according to their monthly income.*

*H1<sub>12</sub>: There is significant difference in the knowledge level about various services of ESI Corporation among policyholders according to their monthly income.*

**Table 5.13**

*Income wise comparison of ESI awareness and knowledge level*

| Factors          | Descriptive Statistics of Income wise comparison (Mean and SD) |                  |                  |                  | Levene's test of Equality of Variance |            | One- way ANOVA/ Welch test |            |
|------------------|----------------------------------------------------------------|------------------|------------------|------------------|---------------------------------------|------------|----------------------------|------------|
|                  | Up to 5000                                                     | 5001- 10000      | 10001- 15000     | 15001- 21000     | Test statistics                       | Sig. value | Test Statistics            | Sig. value |
| <b>Awareness</b> | 2.281<br>(0.673)                                               | 2.237<br>(0.706) | 2.179<br>(0.610) | 2.166<br>(0.669) | 2.108                                 | 0.098      | 1.733                      | 0.159      |
| <b>Knowledge</b> | 2.238<br>(0.749)                                               | 2.220<br>(0.697) | 2.168<br>(0.580) | 2.157<br>(0.676) | 3.003*                                | 0.030      | 1.727                      | 0.161      |

Source: Primary Data

\*Significant at 5% level of significance

Parentheses represent standard deviation

Table 5.13 shows the result of One-way ANOVA or Welch test used for checking the significant difference in the awareness and knowledge level of policyholders according to their monthly income.

Regarding the awareness level, the Levene's statistics of 2.108 and 'p' value of 0.098 proves that, there exists equality of population variance. Thus, One-way ANOVA is applied to check the mean difference in the awareness level among policyholders of different income groups. Accordingly, the 'f' value of 1.733 and 'p' value of 0.159 of One-way ANOVA discloses that the null hypothesis is failed to

reject at 5% level of significance. Therefore, there exists no significant difference in the awareness level of policyholders according to their monthly income.

As regards knowledge level, the Levene's statistics of 3.003 and 'p' value of 0.030 discloses that, there is no equality of population variance. So, Welch test is applied to check the mean difference in the knowledge level among policyholders of different income groups. Accordingly, the test value of 1.727 and 'p' value 0.161 of Welch test reveals that the null hypothesis is failed to reject at 1% level of significance. Therefore, there exists no significant difference in the knowledge level of policyholders according to their monthly income. Hence, income is not a significant factor influencing the awareness and knowledge level of ESI policyholders.

#### **5.8.2.6 Comparison of ESI Awareness and Knowledge Level Based on the Area of Residence**

For the purpose of checking the significant difference in the ESI Awareness and Knowledge Level among policyholders according to their area of residence, One-way ANOVA/ Welch test is exercised. The hypothesis related to awareness level of ESI service is,

*H<sub>013</sub>: There is no significant difference in the awareness level about various services of ESI Corporation among policyholders according to their area of residence.*

*H<sub>113</sub>: There is significant difference in the awareness level about various services of ESI Corporation among policyholders according to their area of residence.*

The hypothesis related to knowledge level of ESI service is,

*H<sub>014</sub>: There is no significant difference in the knowledge level about various services of ESI Corporation among policyholders according to their area of residence.*

*H<sub>114</sub>: There is significant difference in the knowledge level about various services of ESI Corporation among policyholders according to their area of residence.*

**Table 5.14**

*Area of Residence wise comparison of ESI Awareness and Knowledge Level*

| Factors          | Descriptive Statistics of Area of Residence (Mean and SD) |                  |                  | Levene's test of Equality of Variance |            | One-way ANOVA/ Welch test |            |
|------------------|-----------------------------------------------------------|------------------|------------------|---------------------------------------|------------|---------------------------|------------|
|                  | Urban                                                     | Rural            | Semi-urban       | Test statistics                       | Sig. value | Test Statistics           | Sig. value |
| <b>Awareness</b> | 2.481<br>(0.737)                                          | 1.967<br>(0.535) | 2.259<br>(0.778) | 21.610**                              | 0.000      | 30.134**                  | 0.000      |
| <b>Knowledge</b> | 2.477<br>(0.769)                                          | 1.959<br>(0.539) | 2.191<br>(0.684) | 19.408**                              | 0.000      | 30.124**                  | 0.000      |

Source: Primary Data

\*\*Significant at 1% level of significance

Parentheses represent standard deviation

Table 5.14 reports the result of One-way ANOVA/ Welch test used for comparing the ESI Awareness and Knowledge level of policyholders according to the area of residence. The mean score suggests that the ESI policyholders residing in urban and semi-urban area have better level of awareness and knowledge about the services of ESI Corporation. But the policyholders residing in rural area have limited knowledge and awareness regarding the services of ESI Corporation. In order to test the significant difference in the mean score, One-way ANOVA/ Welch test is used. For selecting the appropriate test criteria, the homogeneity of population variance is tested with the help of Leven's test of equality of variance. Since the significance value of Leven's test is less than 0.01, the homogeneity of population variance is not assumed and hence Welch test is applied in both the cases.

In the case of awareness level, Welch test statistic is 30.134 and significance value is less than 0.01. Hence it can be understood that there exists significant difference in the awareness level of ESI services among policyholders residing in different areas. In the same manner, significant difference is found among policyholders residing in different areas in their knowledge level of ESI services as the test statistic (30.124) is significant at 1% level of significance. Hence, area of residence can be considered as a variable influencing the awareness and knowledge level of ESI services.

**Table 5.15**

*Multiple Comparisons of ESI Awareness and Knowledge Level Based on Area of Residence- Tamhane's T2 Post-hoc Test*

| Area of Residence (I) | Area of Residence (J) | Awareness             |      | Knowledge             |      |
|-----------------------|-----------------------|-----------------------|------|-----------------------|------|
|                       |                       | Mean Difference (I-J) | Sig. | Mean Difference (I-J) | Sig. |
| Urban                 | Rural                 | .51436**              | .000 | .51802**              | .000 |
|                       | Semi-urban            | .22190                | .165 | .28629*               | .025 |
| Rural                 | Semi-urban            | -.29246*              | .024 | -.23173               | .054 |

Source: Primary Data

\*Significant at 5% level of significance

\*\*Significant at 1% level of significance

As the result of Welch test is significant as per table 5.14, it is required to make the pair wise comparison of the awareness and knowledge level of ESI policyholders residing in different areas by applying Tamhane's T2 test. The test result pointed out that the awareness and knowledge level of ESI policyholders living in urban area are significantly different from the policyholders living in rural areas at 1% level of significance. In the case of awareness level, significant difference is also found between the policyholders living in rural and semi-urban areas whereas in the case of knowledge level significant difference also exists between the policyholders living in urban and semi urban areas. In the case of both awareness and knowledge level, the highest mean difference exists between rural and urban areas.

#### **5.8.2.7 Comparison of Awareness and Knowledge Level of ESI Services on the basis of Nature of organization**

In order to check the significant difference in the ESI Awareness and Knowledge Level among policyholders according to the nature of organization, Independent Sample 't' test is used. As a result, following hypotheses are formulated and tested.

The hypothesis related to awareness level of ESI service is,

*H0<sub>15</sub>: There is no significant difference in the awareness level about various services of ESI Corporation between the policyholders working in factory and shop/establishment.*

*H1<sub>15</sub>: There is significant difference in the awareness level about various services of ESI Corporation between the policyholders working in factory and shop/establishment.*

The hypothesis related to knowledge level of ESI service is,

*H0<sub>16</sub>: There is no significant difference in the knowledge level about various services of ESI Corporation between the policyholders working in factory and shop/establishment.*

*H1<sub>16</sub>: There is significant difference in the knowledge level about various services of ESI Corporation between the policyholders working in factory and shop/establishment.*

**Table 5.16**

*Comparison of ESI Awareness and Knowledge Level on the basis of Nature of Organization*

| Factors   | Nature of the Organization | Mean  | SD    | Levene's Test for Equality of Variances |       | t-test result |       |
|-----------|----------------------------|-------|-------|-----------------------------------------|-------|---------------|-------|
|           |                            |       |       | F                                       | Sig.  | t             | Sig.  |
| Awareness | Factory                    | 2.873 | 0.576 | 0.664                                   | 0.415 | 15.88**       | 0.000 |
|           | Shop/Establishment         | 1.944 | 0.547 |                                         |       |               |       |
| Knowledge | Factory                    | 2.832 | 0.637 | 5.872*                                  | 0.016 | 14.85**       | 0.000 |
|           | Shop/Establishment         | 1.940 | 0.542 |                                         |       |               |       |

Source: Primary Data

\*Significant at 5% level of significance

\*\*Significant at 1% level of significance

Table 5.16 presents the result of independent sample t test for identifying the mean difference in the awareness and knowledge level of ESI policyholders working in factory and shop/establishment. As per the descriptive statistic (mean and standard deviation), ESI policyholders working in factory have moderate level of awareness and knowledge about ESI services whereas ESI policyholders working in shops/establishments have slight awareness and limited knowledge in this regard.

In the case of awareness, Leven's test for equality of variance shows f statistics of 0.664 and significance value of 0.415. In this case equality of variance is assumed and hence the t statistic and significance value of independent sample t test corresponding to equal variance assumed is selected for examining the significant difference in the mean scores. Here t value is 15.88 and significance value is less than 0.01, which indicates that there exists significant difference between the policyholders working in factory and shop/establishment with regard to awareness level of ESI services.

In the case of knowledge, Leven's test for equality of variance shows f statistics of 5.872 and significance value of 0.016. Since the significance value is less than 0.05, equal variance is not assumed in this case and hence the t statistic and significance value of independent sample t test corresponding to equal variance not assumed is selected for checking the significant difference in the mean scores. As the significance value of independent sample t test is less than 0.01 (t value=13.83), null hypothesis is rejected and hence there is a significant difference between the policyholders working in factory and shop/establishment in respect of their knowledge level of ESI services.

In short, there exist significant difference between the ESI policyholders working in factory and shop/establishment with regard to ESI Awareness and Knowledge level.

### **5.8.3 Comparison of ESI Awareness and Knowledge Level according to the ESI details of the policyholders**

In this section of analysis, the ESI awareness and knowledge level of policyholders is compared across their ESI details. In order to do the same, One-way ANOVA/ Welch test is applied.

#### **5.8.3.1 Comparison of ESI Awareness and Knowledge Level based on the Duration of ESI Membership**

This section deals with the analysis of awareness and knowledge level of the policyholders on the basis of duration of ESI membership. So as to do the same, One-way ANOVA/ Welch test is applied according to the homogeneity assumption of Variance. Moreover, post-hoc analysis is conducted for the significant results for mean comparison.

The hypothesis related to awareness level of ESI service is,

*H0<sub>17</sub>: There is no significant difference in the awareness level about various services of ESI Corporation among policyholders based on the duration of ESI membership.*

*H1<sub>17</sub>: There is significant difference in the awareness level about various services of ESI Corporation among policyholders based on the duration of ESI membership.*

The hypothesis related to knowledge level of ESI services is,

*H0<sub>18</sub>: There is no significant difference in the knowledge level about various services of ESI Corporation among policyholders based on the duration of ESI membership.*

*H1<sub>18</sub>: There is significant difference in the knowledge level about various services of ESI Corporation among policyholders based on the duration of ESI membership.*

**Table 5.17**

*Comparison of ESI Awareness and Knowledge Level Based on the Duration of ESI Membership*

| Factors   | Descriptive Statistics of Duration of ESI Membership wise comparison (Mean and SD) |                 |                 |                 |                 | Levene's test of Equality of Variance |            | One- way ANOVA/ Welch test |            |
|-----------|------------------------------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|---------------------------------------|------------|----------------------------|------------|
|           | Up to 5 years                                                                      | 6-10 years      | 11-15 years     | 16-20 years     | Above 20 years  | Test statistics                       | Sig. value | Test Statistics            | Sig. value |
| Awareness | 1.803<br>(.549)                                                                    | 2.103<br>(.512) | 2.506<br>(.597) | 2.912<br>(.535) | 3.253<br>(.676) | 1.913                                 | 0.107      | 65.661**                   | 0.000      |
| Knowledge | 1.753<br>(.485)                                                                    | 2.178<br>(.547) | 2.513<br>(.654) | 2.850<br>(.630) | 2.950<br>(.846) | 5.608**                               | 0.000      | 50.255**                   | 0.000      |

Source: Primary Data

\*\*Significant at 1% level of significance

Parentheses represent standard deviation

Table 5.17 presents the result of one-way ANOVA or Welch test used for checking the significant difference in the awareness and knowledge level of ESI services among ESI policyholders according to the duration of membership under ESI scheme. From the descriptive statistic such as mean and standard deviation, it is clear that the policyholders having more than 15 years of ESI membership have more awareness and knowledge regarding ESI services than other groups of policyholders.

For the purpose of deciding the test criteria, homogeneity assumption of population variance is tested by applying Leven's test of equality of variance. In the case of awareness level, Leven's statistic of 1.913 and significance value of 0.107 shows that there is equality of population variance. Hence One-way ANOVA is applied to test the mean difference in the awareness level among policyholders according to the duration of membership under ESI scheme. As the p value of One-way ANOVA is less than 0.01 (test statistic-65.661), null hypothesis is rejected at 1% level of

significance. So, there exists significant difference in the awareness level of policyholders according to the duration of membership under ESI scheme.

In the case of knowledge of ESI services, Leven’s statistic of 5.608 and p value of 0.000 reveals that population variances are not equal. So, Welch test is applied to check the significant difference in the mean score. As the p value of Welch test is less than 0.01 (test statistic-50.255), null hypothesis is rejected at 1% level of significance. Hence there exists significant difference in the knowledge level of ESI services among policyholders according to the duration of membership under ESI scheme.

In short, there is significant difference in the awareness and knowledge level of ESI services among policyholders according to the duration of membership under ESI scheme.

**Table 5.18**

*Multiple Comparisons of ESI Awareness and Knowledge Level Based on the Duration of ESI Membership – Scheffe/ Tamhane’s T2 Post Hoc Test*

| Duration of ESI Membership (I) | Duration of ESI Membership (J) | Awareness<br>(Scheffe’s Post Hoc Test) |      | Knowledge<br>(Tamhane’s T2 Post Hoc Test) |       |
|--------------------------------|--------------------------------|----------------------------------------|------|-------------------------------------------|-------|
|                                |                                | Mean Difference (I-J)                  | Sig. | Mean Difference (I-J)                     | Sig.  |
| Up to 5 years                  | 6-10 years                     | -.30025**                              | .000 | -.42479**                                 | .000  |
|                                | 11-15 years                    | -.70297**                              | .000 | -.76004**                                 | 0.000 |
|                                | 16-20 years                    | -1.10936**                             | .000 | -1.09755**                                | .000  |
|                                | Above 20 years                 | -1.45010**                             | .000 | -1.19675**                                | .000  |
| 6-10 years                     | 11-15 years                    | -.40272**                              | .000 | -.33525**                                 | .001  |
|                                | 16-20 years                    | -.80911**                              | .000 | -.67276**                                 | .000  |
|                                | Above 20 years                 | -1.14985**                             | .000 | -.77196**                                 | .007  |
| 11-15 years                    | 16-20 years                    | -.40639**                              | .001 | -.33750*                                  | .049  |
|                                | Above 20 years                 | -.74713**                              | .000 | -.43671*                                  | .039  |
| 16-20 years                    | Above 20 years                 | -.34074                                | .149 | -.09921                                   | 1.000 |

Source: Primary Data

\*Significant at 5% level of significance

\*\*Significant at 1% level of significance

Table 5.18 describes the result of Scheffe's post-hoc test and Tamhane's T2 post hoc test respectively for the multiple comparisons of awareness level and knowledge level of policyholders according to the duration of membership under ESI scheme. As per the p values, significant difference is observed in the awareness and knowledge level of ESI services between different groups according to the duration of membership under ESI scheme except between the policyholders having 16-20 years of ESI membership and Above 20 years of ESI membership. Highest mean difference is found between the policyholders having 'Up to 5 years' of ESI membership and 'Above 20 years' of ESI membership.

Hence, duration of ESI membership can be considered as a significant factor influencing the awareness and knowledge level of ESI services. It further reveals that the awareness and knowledge of ESI services among policyholders increase as a result of increase in the duration of ESI membership.

### **5.8.3.2 Comparison of ESI Awareness and Knowledge according to the Source of Awareness**

This section deals with the analysis of awareness and knowledge level of the policyholders based on the sources of awareness. So as to do the same, One-way ANOVA/ Welch test is applied according to the homogeneity assumption of Equality of Variance. Moreover, post-hoc analysis is conducted for the significant results of mean comparison.

The hypothesis related to awareness level of ESI service is,

*H0<sub>19</sub>: There is no significant difference in the awareness level about various services of ESI Corporation among policyholders according to different sources of awareness.*

*H1<sub>19</sub>: There is significant difference in the awareness level about various services of ESI Corporation among policyholders according to different sources of awareness.*

The hypothesis related to knowledge level of ESI service is,

*H0<sub>20</sub>: There is no significant difference in the knowledge level about various services of ESI Corporation among policyholders according to different sources of awareness.*

H1<sub>20</sub>: There is significant difference in the knowledge level about various services of ESI Corporation among policyholders according to different sources of awareness.

**Table 5.19**

Comparison of ESI Awareness and Knowledge according to the Source of Awareness

| Factors   | Descriptive Statistics of Source of Awareness wise comparison<br>(Mean and SD) |             |             |                           |                       |                     |                           | Levene's test of Equality of Variance |            | One- way ANOVA/ Welch test |            |
|-----------|--------------------------------------------------------------------------------|-------------|-------------|---------------------------|-----------------------|---------------------|---------------------------|---------------------------------------|------------|----------------------------|------------|
|           | Employer                                                                       | ESI Website | E-mail/ SMS | Pamphlets, Brochures etc. | Trade Union Officials | Co-workers/ Friends | ESI Corporation Officials | Test statistics                       | Sig. value | Test Statistics            | Sig. value |
| Awareness | 3.000 (.30)                                                                    | 2.486 (.71) | 1.953 (.53) | 2.312 (.48)               | 1.753 (.49)           | 2.900 (.73)         | 2.006 (.25)               | 6.37**                                | 0.000      | 31.81**                    | 0.000      |
| Knowledge | 2.780 (.76)                                                                    | 2.226 (.52) | 1.938(.55)  | 2.035 (.55)               | 1.763 (.49)           | 3.031 (.67)         | 2.511 (.68)               | 3.87**                                | 0.001      | 20.83**                    | 0.000      |

Source: Primary Data

\*\*Significant at 1% level of significance

Parentheses represent standard deviation

Table 5.19 shows the result of mean difference in ESI Awareness and Knowledge level according to the sources of awareness. From the descriptive statistics, it is clear that the policyholders who are gathering information from employers and co-workers/friends have moderate awareness and knowledge about ESI services. On the other hand, the policyholders who are collecting details from ESI website, pamphlets/ brochures, E-mail/SMS and ESI Corporation Officials, have comparatively low level of awareness and limited level of knowledge relating to ESI services. Further, the policyholders who are getting data from trade union officials are almost unaware and have no knowledge about ESI services.

In this case Leven's test of equality of variance shows that homogeneity assumption of population variance does not exist in the case of both awareness level (Leven's statistic = 6.37, 'p' = 0.000) and knowledge level (Leven's statistic = 3.87, 'p' = 0.001). Hence Welch test is applied in both the cases to test the significant difference in the mean score.

Since the p value of Welch test is less than 0.01, the null hypothesis is rejected in both the cases at 1% level of significance. Hence, there exists significant difference in the awareness and knowledge level of ESI policyholders according to different sources of awareness.

**Table 5.20**

*Multiple Comparisons of ESI Awareness and Knowledge Level based on the Source of Awareness – Tamhane's T2 Post Hoc Test*

| Source of Awareness (I) | Source of Awareness (J)                                   | Awareness             |      | Knowledge             |       |
|-------------------------|-----------------------------------------------------------|-----------------------|------|-----------------------|-------|
|                         |                                                           | Mean Difference (I-J) | Sig. | Mean Difference (I-J) | Sig.  |
| Employer                | ESI Website                                               | .73267**              | .000 | .74796**              | .000  |
|                         | E-mail/ SMS from ESI Corporation                          | .51994                | .280 | .47589                | .985  |
|                         | Pamphlets, Posters/Banners, Brochures/ Circulars/ Notices | .17397                | .937 | .28500                | .305  |
|                         | Trade Union Officials                                     | -.51339*              | .011 | -.52015               | .671  |
|                         | Co-workers/ Friends                                       | .53324**              | .000 | .57304**              | .000  |
|                         | ESI Corporation Officials                                 | -.41417*              | .041 | -.26913               | .628  |
| ESI Website             | E-mail/ SMS from ESI Corporation                          | -.21273               | .990 | -.27208               | 1.000 |
|                         | Pamphlets, Posters/Banners, Brochures/ Circulars/ Notices | -.55870**             | .000 | -.46296**             | .005  |
|                         | Trade Union Officials                                     | -1.24606**            | .000 | -1.26811**            | .007  |
|                         | Co-workers/ Friends                                       | -.19943               | .219 | -.17493               | .413  |
|                         | ESI Corporation Officials                                 | -1.14684**            | .000 | -1.01709**            | .000  |

| Source of Awareness (I)                                  | Source of Awareness (J)                                   | Awareness             |       | Knowledge             |       |
|----------------------------------------------------------|-----------------------------------------------------------|-----------------------|-------|-----------------------|-------|
|                                                          |                                                           | Mean Difference (I-J) | Sig.  | Mean Difference (I-J) | Sig.  |
| E-mail/ SMS from ESI Corporation                         | Pamphlets, Posters/Banners, Brochures/ Circulars/ Notices | -.34598               | .744  | -.19089               | 1.000 |
|                                                          | Trade Union Officials                                     | -1.03333**            | .008  | -.99603               | .426  |
|                                                          | Co-workers/ Friends                                       | .01330                | 1.000 | .09715                | 1.000 |
|                                                          | ESI Corporation Officials                                 | -.93411**             | .007  | -.74502               | .758  |
| Pamphlets, Posters/Banners, Brochures/ Circulars/Notices | Trade Union Officials                                     | -.68736*              | .001  | -.80515               | .138  |
|                                                          | Co-workers/ Friends                                       | .35928*               | .015  | .28804                | .178  |
|                                                          | ESI Corporation Officials                                 | -.58813**             | .002  | -.55413*              | .010  |
| Trade Union Officials                                    | Co-workers/ Friends                                       | 1.04663**             | .000  | 1.09318*              | .024  |
|                                                          | ESI Corporation Officials                                 | .09922                | 1.000 | .25102                | 1.000 |
| Co-workers/ Friends                                      | ESI Corporation Officials                                 | -.94741**             | .000  | -.84217**             | .000  |

Source: Primary Data

\*Significant at 5% level of significance

\*\*Significant at 1% level of significance

Table 5.20 describes the result of Tamhane's post-hoc test for the multiple comparisons of ESI Awareness and Knowledge level across different sources of awareness. As per the result, the policyholders gathering information from Employer are not statistically different from the policyholders who gather details from E-mail/SMS from ESI Corporation/Pamphlets/Posters/Banners/Brochures/Circulars/ Notices in respect of their awareness level. Similarly, there is no significant difference between the sources of awareness such as ESI Website and E-mail/ SMS from ESI Corporation/ Co-workers/ Friends. Significant difference does not exist between E-mail/ SMS from ESI Corporation and Pamphlets/ Posters/ Banners/ Brochures/ Circulars/ Notices/ Co-workers/ Friends. In the same manner, the policyholders who get information from Trade Union Officials are not significantly different from the policyholders getting details from ESI Corporation officials with regard to their awareness level. Significant difference in the awareness level exists between all other groups.

In the case of knowledge level, significant difference exists between the policyholders gathering details from employer and ESI Website/ Co-workers/ Friends; ESI Website and Pamphlets/ Posters/ Banners/ Brochures/ Circulars/ Notices/ Trade Union Officials/ ESI Corporation Officials; Pamphlets/ Posters/ Banners/ Brochures/ Circulars/ Notices and ESI Corporation Officials; Trade Union Officials and Co-workers/ Friends; Co-workers/ Friends and ESI Corporation Officials. No significant difference is observed between other groups in their knowledge level. In short, source of awareness is a significant factor affecting the awareness and knowledge level of ESI services

## Section II

### 5.9 Level of ESI Benefit Utilisation

In this section of analysis, the level of ESI benefits availed and utilized by the policyholders is identified and compared across their demographic groups and ESI details. In general, the level of benefits utilized is classified as 'Up to 3 times', '4-6 times', '7-9 times', and 'More than 9 times'. In order to compare the level of ESI benefits utilization across the demographic groups and ESI details, the following variables like Gender, Age in years, Marital status, Educational Qualification, Gross Monthly Income, Area of residence, Nature of the organization, Duration of Membership under ESI scheme and No. of ESI dependents are selected. Further the association between the awareness/ knowledge level and the level of ESI benefits utilization is also reported in this section. To examine the association between the variables, Chi-Square test is applied. The results are presented below.

#### 5.9.1 Association between gender and Level of ESI benefits utilization

In order to check the association between gender and level of ESI benefits utilisation, following hypothesis is formulated and tested.

*H<sub>021</sub>: There is no significant association between the gender of ESI policyholders and the level of ESI benefits utilization.*

*H<sub>121</sub>: There is significant association between the gender of ESI policyholders and the level of ESI benefits utilization.*

**Table 5.21**

*Association between gender and level of ESI benefits utilization*

| Level of ESI benefits utilised | Gender         |                | Total | $\chi^2$ value | Sig. value |
|--------------------------------|----------------|----------------|-------|----------------|------------|
|                                | Male           | Female         |       |                |            |
| Up to 3 times                  | 90<br>(37.82%) | 79<br>(37.26%) | 169   | 1.296          | 0.730      |
| 4-6 times                      | 69<br>(28.99%) | 71<br>(33.49%) | 140   |                |            |
| 7-9 times                      | 41<br>(15.96%) | 32<br>(15.09%) | 73    |                |            |
| More than 9 times              | 38<br>(17.23%) | 30<br>(14.15%) | 68    |                |            |
| <b>Total</b>                   | 238<br>(100%)  | 212<br>(100%)  | 450   |                |            |

Source: Primary Data

Table 5.21 shows the result of cross tabulation and Chi-Square test used to check the association between gender and the level of ESI benefits utilization. The Chi-Square test denotes the significance value of 0.730 and test statistics of 1.296 for result comparison. Since the 'p' value is more than 0.05, the null hypothesis is failed to reject at 5% level of significance and hence, there is no significant association between gender and level of ESI benefits utilization.

### **5.9.2 Association between age and Level of ESI benefits utilization**

In this case, the level of ESI benefits utilization across different age group of policyholders are examined and compared. In order to check the association between the age and level of ESI benefits utilization, the following hypothesis is formulated and tested.

*H0<sub>22</sub>: There is no significant association between the age of ESI policyholders and the level of ESI benefits utilization.*

*H1<sub>22</sub>: There is significant association between the age of ESI policyholders and the level of ESI benefits utilization.*

**Table 5.22***Association between age and level of ESI benefits utilization*

| Age            | Level of ESI benefits utilised |                |                |                   | Total         | $\chi^2$ value | Sig. value |
|----------------|--------------------------------|----------------|----------------|-------------------|---------------|----------------|------------|
|                | Up to 3 times                  | 4-6 times      | 7-9 times      | More than 9 times |               |                |            |
| Up to 25 years | 15<br>(37.5%)                  | 9<br>(22.5%)   | 8<br>(20%)     | 8<br>(20%)        | 40<br>(100%)  | 53.443**       | 0.000      |
| 26-35 years    | 70<br>(56%)                    | 37<br>(29.6%)  | 10<br>(8%)     | 8<br>(6.4%)       | 125<br>(100%) |                |            |
| 36-45 years    | 52<br>(36.88%)                 | 50<br>(35.46%) | 25<br>(17.73%) | 14<br>(9.93%)     | 141<br>(100%) |                |            |
| 46-55 years    | 24<br>(21.62%)                 | 37<br>(33.33%) | 22<br>(19.82%) | 28<br>(25.23%)    | 111<br>(100%) |                |            |
| Above 55 years | 8<br>(24.24%)                  | 7<br>(21.21%)  | 8<br>(24.24%)  | 10<br>(30.30%)    | 33<br>(100%)  |                |            |
| <b>Total</b>   | 169                            | 140            | 73             | 68                | 450           |                |            |

Source: Primary Data

\*\*Significant at 1% level of significance

Table 5.22 shows the result of cross tabulation and chi-square test to check the association between age and level of ESI benefits utilization. The cross-tabulation result shows that most of the policyholders belonging to the age group of below 25 years (37.5%) and 26-35 years (56%) are availing ESI benefits up to 3 times in a year. Only 20% of the policyholders of the age category of up to 25 years and 6.4% of the policyholders of the age category of 26-35 years are utilizing ESI benefits more than 9 times in a year. In the age category of 36-45 years and 46-55 years, 35.46% and 33.33% of the policyholders respectively are availing ESI benefits 4-6 times in a year. 25.23% of the policyholders of the age group of 46-55 years are availing ESI benefits more than 9 times in a year. On the other hand, in the age group of above 55 years, most of the policyholders (30.30%) are availing ESI benefits more than 9 times in a year. Only 24.24% of the policyholders in this age group are utilizing ESI benefits up to 3 times in a year.

The Chi-square result shows that the test statistic is 53.433 and the significance value is 0.000. Since the 'p' value is less than 0.01, the null hypothesis is rejected at

1% level of significance and hence there is significant association between age and the level of ESI benefit utilization. It shows that policyholders of different age groups are availing ESI benefits in different manners. In other words, the level of ESI benefit utilization is influenced by the age group of policyholders. It further shows that when age increases, the level of ESI benefit utilization also increases along with the increase in awareness and knowledge level.

### **5.9.3 Association between marital status and level of ESI benefits utilization**

Here the level of ESI benefits utilization is compared between married and unmarried policyholders. In order to assess the association between the marital status and level of ESI benefits utilization, the following hypothesis is formulated and tested.

*H0<sub>23</sub>: There is no significant association between the marital status of ESI policyholders and the level of ESI benefits utilization.*

*H1<sub>23</sub>: There is significant association between the marital status of ESI policyholders and the level of ESI benefits utilization.*

**Table 5.23**

*Association between marital status and level of ESI benefits utilization*

| Level of ESI benefits utilised | Marital Status  |                | Total | $\chi^2$ value | Sig. value |
|--------------------------------|-----------------|----------------|-------|----------------|------------|
|                                | Married         | Unmarried      |       |                |            |
| Up to 3 times                  | 122<br>(33.06%) | 47<br>(58.02%) | 169   |                |            |
| 4-6 times                      | 129<br>(34.96%) | 11<br>(13.58%) | 140   |                |            |
| 7-9 times                      | 58<br>(15.72%)  | 15<br>(18.52%) | 73    | 22.891**       | 0.000      |
| More than 9 times              | 60<br>(16.26%)  | 8<br>(9.88%)   | 68    |                |            |
| <b>Total</b>                   | 369<br>(100%)   | 81<br>(100%)   | 450   |                |            |

Source: Primary Data

\*\*Significant at 1% level of significance

Table 5.23 shows the result of cross tabulation and Chi-square test to assess the association between marital status and level of ESI benefit utilization. The cross tabulation reveals that majority of married ESI policyholders (34.96%) are availing ESI benefits 4-6 times in a year whereas most of the unmarried policyholders (58.02%) are utilizing ESI benefits only up to 3 times in a year. It is also found that 16.26% of the married policyholders are making use of ESI benefits more than 9 times in a year whereas it is only 9.88% among the unmarried policyholders. Hence there is difference between married and unmarried policyholders in respect of the utilization of ESI benefits.

Here Chi-square test statistic is 22.891 and the 'p' value is less than 0.01. So, the null hypothesis is rejected at 1% level of significance and hence, there is significant association between marital status and level of ESI benefit utilization. It reveals that married and unmarried policyholders are utilizing ESI benefits in different manners.

#### **5.9.4 Association between educational qualification and level of ESI benefits utilization**

For checking the association between the educational qualification and level of ESI benefits utilization, the following hypothesis is formulated and tested.

*H<sub>024</sub>: There is no significant association between the educational qualification of ESI policyholders and the level of ESI benefits utilization.*

*H<sub>124</sub>: There is significant association between the educational qualification of ESI policyholders and the level of ESI benefits utilization.*

**Table 5.24**

*Association between educational qualification and level of ESI benefits utilization*

| Educational Qualification | Level of ESI benefits utilised |                |                |                   | Total         | $\chi^2$ value | Sig. value |
|---------------------------|--------------------------------|----------------|----------------|-------------------|---------------|----------------|------------|
|                           | Up to 3 times                  | 4-6 times      | 7-9 times      | More than 9 times |               |                |            |
| SSLC and Below            | 48<br>(44.04%)                 | 35<br>(32.11%) | 14<br>(12.84%) | 12<br>(11.01%)    | 109<br>(100%) | 8.61           | 0.735      |
| Plus -Two / Pre Degree    | 35<br>(40.69%)                 | 26<br>(30.23%) | 13<br>(15.12%) | 12<br>(13.95%)    | 86<br>(100%)  |                |            |
| Degree/ Diploma           | 45<br>(32.14%)                 | 44<br>(31.43%) | 26<br>(18.57%) | 25<br>(17.86%)    | 140<br>(100%) |                |            |
| Post-Graduation           | 29<br>(37.18%)                 | 26<br>(33.33%) | 12<br>(15.38%) | 11<br>(14.10%)    | 78<br>(100%)  |                |            |
| Professional & Others     | 12<br>(32.43%)                 | 9<br>(24.32%)  | 8<br>(21.62%)  | 8<br>(21.62%)     | 37<br>(100%)  |                |            |
| <b>Total</b>              | 169                            | 140            | 73             | 68                | 450           |                |            |

Source: Primary Data

Table 5.24 shows the result of cross tabulation and chi-square test to check the association between educational qualification and level of ESI benefits utilization. The Chi-square result shows that the test statistic is 8.61 and the significance value is 0.735. Since the ‘p’ value is more than 0.05, the null hypothesis is failed to reject at 5% level of significance and hence there is no significant association between the educational qualification and the level of ESI benefit utilization.

### **5.9.5 Association between monthly income and level of ESI benefits utilization**

Here the level of ESI benefits utilization is compared among ESI policyholders having different monthly income. In order to test the association between the income level and level of ESI benefits utilization, the following hypothesis is formulated and tested.

*H<sub>025</sub>: There is no significant association between the income level of ESI policyholders and the level of ESI benefits utilization.*

*H1<sub>25</sub>: There is significant association between the income level of ESI policyholders and the level of ESI benefits utilization.*

**Table 5.25**

*Association between monthly income and level of ESI benefits utilization*

| Monthly Income  | Level of ESI benefits utilised |                |                |                   | Total         | $\chi^2$ value | Sig. value |
|-----------------|--------------------------------|----------------|----------------|-------------------|---------------|----------------|------------|
|                 | Up to 3 times                  | 4-6 times      | 7-9 times      | More than 9 times |               |                |            |
| Up to Rs. 5000  | 10<br>(11.91%)                 | 40<br>(47.62%) | 9<br>(10.71%)  | 25<br>(29.76%)    | 84<br>(100%)  |                |            |
| Rs. 5001-10000  | 22<br>(24.18%)                 | 27<br>(29.67%) | 18<br>(19.78%) | 24<br>(26.37%)    | 91<br>(100%)  |                |            |
| Rs. 10001-15000 | 46<br>(37.10%)                 | 49<br>(39.52%) | 19<br>(15.32%) | 10<br>(8.06%)     | 124<br>(100%) | 95.881**       | 0.000      |
| Rs. 15001-21000 | 91<br>(60.27%)                 | 24<br>(15.89%) | 27<br>(17.88%) | 9<br>(5.96%)      | 151<br>(100%) |                |            |
| <b>Total</b>    | 169                            | 140            | 73             | 68                | 450           |                |            |

Source: Primary Data

\*\*Significant at 1% level of significance

Table 5.25 shows the result of cross tabulation and chi-square test to study the association between monthly income and level of ESI benefits utilization. The cross-tabulation result shows that most of the policyholders having monthly income up to Rs 5000 (47.62%), Rs. 5001-10000 (29.67%) and Rs. 10001-15000 (39.52%) are utilizing ESI benefits 4-6 times in a year. But a large proportion of ESI policyholders having monthly income Rs.15001 – 21000 (60.27%) are using ESI benefits only up to 3 times in a year. 29.76% of the ESI policyholders having monthly income up to Rs. 5000 and 26.37% of the policyholders belonging to the income group of Rs. 5001-10000 are using ESI benefits more than 9 times in a year. Whereas, it is only 8.06% and 5.96% respectively for the policyholders belonging to the income category of Rs. 10001- 15000 and Rs. 15001-21000. It reveals that the level of ESI benefit utilization is comparatively low among higher income group of policyholders.

The Chi-square test result shows that the test statistic is 95.881 and the significance value is 0.000. Since the 'p' value is less than 0.01, the null hypothesis is rejected at 1% level of significance and hence there exists significant association between the income level and the level of ESI benefit utilization. It further indicates that the policyholders having different level of monthly income are availing ESI benefits in different manners. Hence, it can be inferred that the level of ESI benefit utilization is influenced by the monthly income of the policyholders.

#### **5.9.6 Association between area of residence and level of ESI benefits utilization**

In this case, the level of ESI benefits utilization is examined on the basis of area of residence. For checking the association between the area of residence and the level of ESI benefits utilization, the following hypothesis is formulated and tested.

*H0<sub>26</sub>: There is no significant association between the area of residence of ESI policyholders and the level of ESI benefits utilization.*

*H1<sub>26</sub>: There is significant association between the area of residence of ESI policyholders and the level of ESI benefits utilization.*

**Table 5.26**

*Association between area of residence and level of ESI benefits utilization*

| Level of ESI benefits utilised | Area of Residence |                 |                | Total | $\chi^2$ value | Sig. value |
|--------------------------------|-------------------|-----------------|----------------|-------|----------------|------------|
|                                | Urban             | Rural           | Semi-urban     |       |                |            |
| Up to 3 times                  | 46<br>(26.74%)    | 105<br>(47.95%) | 18<br>(30.51%) | 169   |                |            |
| 4-6 times                      | 54<br>(31.40%)    | 70<br>(31.96%)  | 16<br>(27.12%) | 140   |                |            |
| 7-9 times                      | 30<br>(17.44%)    | 33<br>(15.07%)  | 10<br>(16.95%) | 73    | 41.905**       | 0.000      |
| More than 9 times              | 42<br>(24.42%)    | 11<br>(5.02%)   | 15<br>(25.42%) | 68    |                |            |
| <b>Total</b>                   | 172<br>(100%)     | 219<br>(100%)   | 59<br>(100%)   | 450   |                |            |

Source: Primary Data

\*\*Significant at 1% level of significance

Table 5.26 gives the result of cross tabulation and Chi-square test used to examine the association between the area of residence and the level of ESI benefit utilization. It is understood from the cross tabulation that most of the policyholders in Urban area (31.40%) are using ESI benefits 4-6 times in a year. On the other hand, majority of the policyholders belonging to rural area (47.95%) and semi-urban area (30.51%) are using ESI benefits only up to 3 times in a year. Only 5.02% of the rural policyholders are availing ESI benefits more than 9 times in a year whereas 24.42% of the urban policyholders and 25.42% of the semi urban policyholders are availing ESI benefits more than 9 times in a year. Hence there is significant difference in the utilization of ESI benefits based on the area of residence.

The result of Chi-square test shows that test statistic is 41.905 and the 'p' value is less than 0.01. So, the null hypothesis is rejected at 1% level of significance and hence, there exists significant association between the area of residence and the level of ESI benefit utilization. It also reveals that policyholders living in urban and semi-urban areas are making more use of ESI benefits than policyholders in rural area.

### **5.9.7 Association between nature of organization and level of ESI benefits utilization**

Here a comparison is made in respect of the level of ESI benefits utilization between the policyholders working in factory and shops/establishment. In order to identify the association between the nature of organization and the level of ESI benefits utilization, the following hypothesis is formulated and tested.

*H<sub>027</sub>: There is no significant association between the nature of organization and the level of ESI benefits utilization.*

*H<sub>127</sub>: There is significant association between the nature of organization and the level of ESI benefits utilization.*

**Table 5.27**

*Association between nature of organization and level of ESI benefits utilization*

| Level of benefits utilised | Nature of the Organization |                     | Total | $\chi^2$ value | Sig. value |
|----------------------------|----------------------------|---------------------|-------|----------------|------------|
|                            | Factory                    | Shop/ Establishment |       |                |            |
| Up to 3 times              | 14<br>(11.20%)             | 155<br>(47.69%)     | 169   |                |            |
| 4-6 times                  | 31<br>(24.8%)              | 109<br>(33.54%)     | 140   |                |            |
| 7-9 times                  | 36<br>(28.8%)              | 37<br>(11.39%)      | 73    | 97.329**       | 0.000      |
| More than 9 times          | 44<br>(35.20%)             | 24<br>(7.38%)       | 68    |                |            |
| <b>Total</b>               | 125<br>(100%)              | 325<br>(100%)       | 450   |                |            |

Source: Primary Data

\*\*Significant at 1% level of significance

Table 5.27 shows the result of cross tabulation and Chi-square test to examine the association between the nature of organization and the level of ESI benefit utilization. It is clear from the cross tabulation that majority of the policyholders working in factory (35.20%) are using ESI benefits more than 9 times in a year whereas only 11.20% of the policyholders in factory is availing ESI benefits up to 3 times. On the other hand, most of the policyholders working in shop/establishment (47.69%) are using ESI benefits only up to 3 times and a few policyholders working in shop/ establishment (7.38%) is using the same for more than 9 times in a year. Hence there is statistically significant difference between the policyholders working in factory and shop/establishment in respect of the utilization of ESI benefits.

In this case, Chi-square test statistic is 97.329 and the 'p' value is less than 0.01. So, the null hypothesis is rejected at 1% level of significance and hence, there exists significant association between the nature of organization and the level of ESI benefit utilization. It further indicates that policyholders working in factory are making more use of ESI benefits than policyholders in shop/ establishment.

### 5.9.8 Association between duration of ESI membership and level of ESI benefits utilization

Here, the association between duration of ESI membership and level of ESI benefits utilization is carried out by using Chi-square test. Following hypothesis is formulated and tested for checking the association between the variables.

*H<sub>028</sub>: There is no significant association between the duration of ESI membership and the level of ESI benefits utilization.*

*H<sub>128</sub>: There is significant association between the duration of ESI membership and the level of ESI benefits utilization.*

**Table 5.28**

*Association between duration of ESI membership and level of ESI benefits utilization*

| Duration of ESI membership | Level of ESI benefits utilised |                |                |                   | Total         | $\chi^2$ value | Sig. value |
|----------------------------|--------------------------------|----------------|----------------|-------------------|---------------|----------------|------------|
|                            | Up to 3 times                  | 4-6 times      | 7-9 times      | More than 9 times |               |                |            |
| Up to 5 years              | 72<br>(43.64%)                 | 52<br>(31.51%) | 25<br>(15.15%) | 16<br>(9.70%)     | 165<br>(100%) | 40.150**       | 0.000      |
| 6-10 years                 | 56<br>(41.79%)                 | 51<br>(38.06%) | 17<br>(12.69%) | 10<br>(7.46%)     | 134<br>(100%) |                |            |
| 11-15 years                | 26<br>(30.23%)                 | 22<br>(25.58%) | 15<br>(17.44%) | 23<br>(26.74%)    | 86<br>(100%)  |                |            |
| 16-20 years                | 10<br>(22.73%)                 | 10<br>(22.73%) | 11<br>(25%)    | 13<br>(29.54%)    | 44<br>(100%)  |                |            |
| Above 20 years             | 5<br>(23.81%)                  | 5<br>(23.81%)  | 5<br>(23.81%)  | 6<br>(28.57%)     | 21<br>(100%)  |                |            |
| <b>Total</b>               | 169                            | 140            | 73             | 68                | 450           |                |            |

Source: Primary Data

\*\*Significant at 1% level of significance

Table 5.28 shows the result of cross tabulation and chi-square test to analyze the association between duration of ESI membership and level of ESI benefits

utilization. The cross-tabulation result shows that most of the policyholders having lesser than 10 years of membership under ESI scheme are utilizing ESI benefits only up to 3 times in a year. Only a small percentage of policyholders in this category are using ESI benefits more than 9 times in a year. It is 9.70 % and 7.46% respectively for the policyholders having up to 5 years and 6-10 years of membership under ESI scheme. Whereas 26.74% of the policyholders having 11-15 years of ESI membership are using benefits more than 9 times in a year. Similarly, majority of the policyholders of 16-20 years of ESI membership (29.54%) and above 20 years of ESI membership (28.57%) are using ESI benefits more than 9 times in a year. It shows that when the duration of ESI membership increases, the policyholders make more use of ESI benefits along with the increase in the awareness and knowledge level.

As per the chi-square test result, the p value is less than 0.01 and test statistic is 40.150. Hence, the null hypothesis is rejected at 1% level of significance and there is significant association between the duration of membership under ESI scheme and the level of ESI benefit utilization. It reveals that the level of ESI benefit utilization is influenced by the duration of membership under ESI scheme.

#### **5.9.9 Association between No. of ESI dependents and level of ESI benefits utilization**

Here, the association between no. of ESI dependents and level of ESI benefits utilization is checked by applying Chi-square test. Following hypothesis is formulated and tested for checking the association between these variables.

*H<sub>0</sub>29: There is no significant association between the no. of ESI dependents and the level of ESI benefits utilization.*

*H<sub>1</sub>29: There is significant association between the no. of ESI dependents and the level of ESI benefits utilization.*

**Table 5.29***Association between No. of ESI dependents and level of ESI benefits utilization*

| No. of ESI dependents | Level of ESI benefits utilised |                |                |                   | Total         | $\chi^2$ value | Sig. value |
|-----------------------|--------------------------------|----------------|----------------|-------------------|---------------|----------------|------------|
|                       | Up to 3 times                  | 4-6 times      | 7-9 times      | More than 9 times |               |                |            |
| Up to 2               | 65<br>(51.59%)                 | 26<br>(20.63%) | 23<br>(18.25%) | 12<br>(9.52%)     | 126<br>(100%) |                |            |
| 3 – 4                 | 79<br>(41.15%)                 | 55<br>(28.65%) | 35<br>(18.23%) | 23<br>(11.98%)    | 192<br>(100%) |                |            |
| 5 – 6                 | 20<br>(19.23%)                 | 50<br>(48.08%) | 10<br>(9.62%)  | 24<br>(23.08%)    | 104<br>(100%) | 51.142**       | 0.000      |
| Above 6               | 5<br>(17.86%)                  | 9<br>(32.14%)  | 5<br>(17.86%)  | 9<br>(32.14%)     | 28<br>(100%)  |                |            |
| <b>Total</b>          | 169                            | 140            | 73             | 68                | 450           |                |            |

Source: Primary Data

\*\*Significant at 1% level of significance

Table 5.29 shows the result of cross tabulation and chi-square test to check the association between number of ESI dependents and level of ESI benefits utilization. The cross-tabulation result shows that most of the policyholders having the number of ESI dependents up to 2 (51.59%) and 3-4 (41.15%) are using ESI benefits only up to 3 times. Whereas most of the policyholders having number of ESI dependents 5-6 (48.08%) are utilizing ESI benefits 4-6 times in a year. It is also observed that among the policyholders having more than 6 ESI dependents, 32.14% are using ESI benefits more than 9 times in a year and only 17.86% policyholders in this category are using the benefits up to 3 times in a year. It indicates that when the number of ESI dependents increases, the level of ESI benefit utilization also increases.

As per the Chi-square result, p value is less than 0.01 and test statistic is 51.142. Hence the null hypothesis is rejected at 1% level of significance and it can be inferred that there is a significant association between the number of ESI dependents and the level of ESI benefit utilization. In other words, the level of ESI benefit utilization is influenced by the number of ESI dependents.

### 5.9.10 Association between ESI awareness level and level of ESI benefits utilization

In this case, the association between ESI awareness level and level of ESI benefits utilization is studied with the help of Chi-square test. Accordingly, the awareness level is categorized as slightly aware, moderately aware and highly aware. Following hypothesis is formulated and tested for checking the association between the variables.

*H0<sub>30</sub>: There is no significant association between ESI awareness level and level of ESI benefits utilization*

*H1<sub>30</sub>: There is significant association between ESI awareness level and level of ESI benefits utilization*

**Table 5.30**

*Association between ESI awareness level and level of ESI benefits utilization*

| Level of ESI benefits utilised | Category of ESI Awareness |                  |                | Total | $\chi^2$ value | Sig. value |
|--------------------------------|---------------------------|------------------|----------------|-------|----------------|------------|
|                                | Slightly aware            | Moderately aware | Highly aware   |       |                |            |
| Up to 3 times                  | 93<br>(61.59%)            | 65<br>(35.71%)   | 11<br>(9.40%)  | 169   | 148.497**      | 0.000      |
| 4-6 times                      | 36<br>(23.84%)            | 81<br>(44.51%)   | 23<br>(19.66%) | 140   |                |            |
| 7-9 times                      | 12<br>(7.95%)             | 22<br>(12.09%)   | 39<br>(33.33%) | 73    |                |            |
| More than 9 times              | 10<br>(6.62%)             | 14<br>(7.69%)    | 44<br>(37.61%) | 68    |                |            |
| <b>Total</b>                   | 151<br>(100%)             | 182<br>(100%)    | 117<br>(100%)  | 450   |                |            |

Source: Primary Data

\*\*Significant at 1% level of significance

Table 5.30 describes the result of cross tabulation and Chi-square test used to examine the association between ESI awareness level and the level of ESI benefit utilization. It is clear from the cross-tabulation result that most of the policyholders

who are slightly aware about ESI scheme (61.59%) are using ESI benefits up to 3 times in a year and only 6.62% in this category is using the same more than 9 times in a year. Most of the moderately aware policyholders (44.51%) are using ESI benefits 4-6 times in a year and 7.69% of this category is using the same more than 9 times in a year. 37.61% of the highly aware policyholders are using ESI benefits more than 9 times in a year and a small percentage in this category (9.40%) is using the benefits up to 3 times in a year. Therefore, it is understood from the cross tabulation that there is difference in the utilization of ESI benefits based on the level of ESI awareness.

The result of Chi-square test shows that test statistic is 148.497 and the 'p' value is less than 0.01. So, the null hypothesis is rejected at 1% level of significance and hence, there exists significant association between ESI awareness level and the level of ESI benefit utilization. It further reveals that the policyholders having high level of awareness are making more use of ESI benefits than policyholders having low level of awareness. These results support the findings of the study conducted by Sekar & Jeyakodi (2012). According to them, the utilization of ESI benefits to a great extent depends upon the awareness of ESI policyholders about ESI services.

#### **5.9.11 Association between ESI knowledge level and level of ESI benefits utilization**

In this section of analysis, the association between ESI knowledge level and level of ESI benefits utilization is measured by using Chi-square test. Consequently, the knowledge level about ESI services is categorized as limited knowledge, moderate knowledge and good knowledge. Following hypothesis is formulated and tested for checking the association between these variables.

*H<sub>031</sub>: There is no significant association between ESI knowledge level and level of ESI benefits utilization*

*H1<sub>31</sub>: There is significant association between ESI knowledge level and level of ESI benefits utilization*

**Table 5.31**

*Association between ESI knowledge level and level of ESI benefits utilization*

| Level of ESI benefits utilised | Category of Knowledge |                    |                | Total | $\chi^2$ value | Sig. value |
|--------------------------------|-----------------------|--------------------|----------------|-------|----------------|------------|
|                                | Limited Knowledge     | Moderate Knowledge | Good Knowledge |       |                |            |
| Up to 3 times                  | 98<br>(61.25%)        | 60<br>(32.61%)     | 11<br>(10.38%) | 169   | 123.59**       | 0.000      |
| 4-6 times                      | 30<br>(18.75%)        | 84<br>(45.65%)     | 26<br>(24.53%) | 140   |                |            |
| 7-9 times                      | 20<br>(12.50%)        | 23<br>(12.5%)      | 30<br>(28.30%) | 73    |                |            |
| More than 9 times              | 12<br>(7.50%)         | 17<br>(9.24%)      | 39<br>(36.79%) | 68    |                |            |
| <b>Total</b>                   | 160<br>(100%)         | 184<br>(100%)      | 106<br>(100%)  | 450   |                |            |

Source: Primary Data

\*\*Significant at 1% level of significance

Table 5.31 depicts the result of cross tabulation and Chi-square test employed to find the association between the knowledge level on ESI services and the level of ESI benefit utilization. The cross-tabulation result shows that most of the policyholders having limited knowledge about ESI services (61.25%) are using ESI benefits only up to 3 times in a year and only 7.50% in this category is using the same for more than 9 times in a year. Most of the policyholders having moderate level of ESI knowledge (45.65%) are using ESI benefits 4-6 times in a year and 9.24% of this category is using the same more than 9 times in a year. 36.79% of the policyholders having good ESI knowledge are using ESI benefits more than 9 times in a year and only 10.38% in this category is using the benefits up to 3 times in a year. Therefore, the cross-tabulation result indicates that there is significant difference in the utilization of ESI benefits based on the level of knowledge regarding it.

The result of Chi-square test shows that test statistic is 123.586 and the 'p' value is less than 0.01. Hence, the null hypothesis is rejected at 1% level of significance. So, there exists significant association between ESI knowledge level and the level of ESI benefit utilization. It further reveals that the policyholders having good knowledge regarding ESI services are making more use of ESI services than the policyholders having limited knowledge.

### **5.10 Conclusion**

This chapter discussed the results of the first and second objectives of the study. It describes the demographic profile of the respondents, ESI details, awareness and knowledge about ESI services and the level of utilization of ESI benefits by the respondents. It also reports the result of the comparison of awareness and knowledge level across various demographic profile and ESI details. Further it shows the association between level of ESI benefits utilisation and demographic profile/ ESI details of the respondents. Level of ESI benefit utilization is also compared with the awareness and knowledge level of the respondents. Statistical tools like percentage, mean, standard deviation, one sample t test, independent sample t test, Leven's test of homogeneity of variances, ANOVA/ Welch's test, Scheffe/Tamhane's T2 Post Hoc test and Chi-square test were used for analysis purpose.

The result of one sample t test showed that ESI policyholders do not have average level of awareness and knowledge regarding ESI services. The result of ANOVA/ Welch's test revealed that significant difference exists in the awareness and knowledge level of ESI services across various demographic groups and ESI details except gender, marital status and income. It is observed from the chi-square test result that significant association exists between various demographic profile/ ESI details and the level of ESI benefit utilization. However, gender and education are not associated with the level of ESI benefit utilization. Significant association is also found between the awareness / knowledge level about ESI services and the level of ESI benefit utilization. ESI Corporation can make use of these results to identify the

areas of informational deficiency. It will help the Corporation to plan their awareness campaign and communication strategies to improve the awareness and knowledge level of policyholders. Other objectives of this study are explained in the ensuing chapters.

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## *Chapter 6*

# **ANALYSIS OF SERVICE QUALITY OF ESI CORPORATION**

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## **6.1 Introduction**

This chapter of analysis studies the Service Quality of ESI Corporation and compares it across various demographic groups and ESI details. The service quality is measured on a five-point Likert scale in which 5 stands for strongly agree, 4 for agree, 3 for neutral, 2 for disagree and 1 for strongly disagree. To assess the Service Quality, various dimensions are considered such as Reliability, Tangibility, Assurance, Accessibility, Communication, Understanding of Policyholders, Responsiveness, and E-governance.

## **6.2 Objectives**

- To analyze the service quality offered by ESI Corporation during the post reform period.

## **6.3 Hypotheses**

- H1<sub>7</sub>: ESI Corporation does not offer average level of service quality to its policyholders.
- H1<sub>8</sub>: There is significant difference among ESI policyholders of different demographic groups and ESI details in respect of their perception regarding various factors of service quality.

## **6.4 Methodology and Database**

In order to fulfill the objectives of the present chapter, primary data are collected from the policyholders of ESI Corporation by using a pretested structured questionnaire. A total of 450 sample policyholders is selected.

To evaluate the service quality, the study employs descriptive statistics and one-sample t-test. Further, a comparative analysis of service quality among demographic groups and ESI details is conducted using Independent Sample t-test and One-way ANOVA or Welch test, as appropriate based on homogeneity of variance. Levene's test of Equality of Variance is used to examine the homogeneity assumption of population variance. Additionally, Scheffe/ Tamhane's T2 post-hoc test is used for multiple comparisons of independent variables on significant difference in service quality. The results are presented in the following pages in the order of descriptive statistics, one-sample t-test, test of mean difference and its post-hoc analysis.

### 6.5 Variables used for the analysis

**Table 6.1**

*Variables used for the analysis*

| Constructs      | Dimensions                                                                                                                          | Type of questions              |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Service Quality | Reliability, Tangibility, Assurance, Accessibility, Communication, Understanding of policyholders, Responsiveness and E-governance. | 5 Point Likert Scale Questions |

Source: Conceptual Framework

### 6.6 Service Quality of ESI Corporation

Service quality indicates the customers' perception of the relative superiority or inferiority of a service provider and its offerings (Bitner & Hubbert, 1994). Service quality of ESI Corporation shows the overall attitude of policyholders towards its various services. ESI Corporation being the major social security organization in India is serving the largest section of the society working in private sector. As a part of its reforms 'ESIC 2.0' in 2015, the Corporation has undertaken numerous quality initiatives to boost policyholders' satisfaction. During the post reform period also, ESI Corporation is investing heavily in service quality to improve trust and stability in its various service offerings. Hence it is essential to analyse various aspects of its service quality to identify the areas which require improvement in order to ensure the satisfaction of policyholders.

In this study, service quality is measured by assessing the perception of policyholders regarding various dimensions of the services offered by ESI Corporation. SERVPERF scale developed by Cronin & Taylor (1992) is modified and used in this study for analysing the service quality. Eight dimensions such as Reliability, Tangibility, Assurance, Accessibility, Communication, Understanding of Policyholders, Responsiveness and E-governance were considered for examining the service quality.

**Table 6.2**

*Descriptive Statistics of factors of Service Quality*

| Statements/ factors                                                             | N          | Mean          | Std.<br>Deviation |
|---------------------------------------------------------------------------------|------------|---------------|-------------------|
| ESI Corporation fulfills promises in a timely manner                            | 450        | 3.7333        | .67405            |
| Staff of ESI Corporation is dependable in handling customers' problems          | 450        | 4.1689        | .64908            |
| ESI Corporation provides hassle free claim settlement process                   | 450        | 1.8356        | .69332            |
| ESI hospitals/ Dispensaries ensure correctness of medical reports and documents | 450        | 4.2667        | .65051            |
| ESI premises are corruption free                                                | 450        | 3.9267        | .77629            |
| <b>Reliability</b>                                                              | <b>450</b> | <b>3.5862</b> | <b>.55124</b>     |
| ESI healthcare facilities have technically graded and up to date equipment      | 450        | 2.0356        | .81663            |
| ESI Corporation has adequate number of branch offices for customer service      | 450        | 3.6200        | .71575            |
| There are sufficient staffs in ESI premises                                     | 450        | 3.5089        | .69112            |
| The staff of ESI Corporation has neat and professional appearance               | 450        | 3.7778        | .63977            |
| Sanitation and cleanliness in ESI Healthcare facilities are good                | 450        | 3.9956        | .67404            |
| Adequate bed facilities are available in ESI Healthcare institutions            | 450        | 3.6378        | .68707            |
| Medical accessories are sufficiently provided in ESI Healthcare institutions    | 450        | 2.1089        | .72448            |
| Standard medicines are provided in ESI Healthcare facilities.                   | 450        | 3.4533        | .66661            |

| Statements/ factors                                                                           | N          | Mean          | Std. Deviation |
|-----------------------------------------------------------------------------------------------|------------|---------------|----------------|
| <b>Tangibility</b>                                                                            | <b>450</b> | <b>3.2672</b> | <b>.52933</b>  |
| The staff of ESI Corporation has the knowledge and expertise to answer policyholders' queries | 450        | 4.5400        | .65355         |
| The behavior of ESI staffs creates confidence in policyholders                                | 450        | 2.7844        | .70961         |
| ESI staff always treat customers with courtesy                                                | 450        | 2.1244        | .44529         |
| ESI staffs are competent in redressing customers' grievances                                  | 450        | 3.5444        | .60733         |
| ESI Corporation maintains confidentiality of policyholders' information                       | 450        | 4.3933        | .51994         |
| ESI doctors and nurses are professionally prepared to treat the patients                      | 450        | 3.1978        | .47051         |
| It is safe to enter the ESI hospital/ dispensary premises to access healthcare                | 450        | 4.5778        | .57756         |
| <b>Assurance</b>                                                                              | <b>450</b> | <b>3.5946</b> | <b>.37508</b>  |
| It is easy to access ESI Healthcare facilities                                                | 450        | 3.2822        | .84310         |
| Branch offices are conveniently located                                                       | 450        | 3.4378        | .86860         |
| Branch offices have operating hours convenient to all policyholders                           | 450        | 3.0244        | .86600         |
| Timing of ESI dispensaries are convenient                                                     | 450        | 2.5956        | .92285         |
| Specialists' services are available in ESI Healthcare institutions                            | 450        | 1.6156        | .63753         |
| ESI scheme offers emergency health care services                                              | 450        | 3.1333        | .82284         |
| <b>Accessibility</b>                                                                          | <b>450</b> | <b>2.8481</b> | <b>.70027</b>  |
| ESI Corporation provides accurate and updated information about its benefits and services     | 450        | 1.6689        | .63608         |
| ESI Corporation provides information in a language understandable to policyholders            | 450        | 3.9289        | .65004         |
| ESI Corporation regularly organizes awareness campaign                                        | 450        | 1.3222        | .50450         |
| ESI doctors listen to the patients and keep them informed about their health conditions       | 450        | 2.3644        | .79843         |

| Statements/ factors                                                                                 | N          | Mean          | Std.<br>Deviation |
|-----------------------------------------------------------------------------------------------------|------------|---------------|-------------------|
| <b>Communication</b>                                                                                | <b>450</b> | <b>2.3211</b> | <b>.51123</b>     |
| ESI officials give me personal attention                                                            | 450        | 2.0844        | .52719            |
| Service providers at ESI Healthcare facilities are caring and understand patient concern.           | 450        | 2.1644        | .59289            |
| ESI Corporation has the policyholders' best interest at heart                                       | 450        | 2.1000        | .96081            |
| ESI Corporation offers reimbursement facility for medicines which are not available in ESI pharmacy | 450        | 4.0378        | .71627            |
| <b>Understanding of policyholders</b>                                                               | <b>450</b> | <b>2.5967</b> | <b>.55548</b>     |
| ESI Corporation keeps customers informed about when services will be performed                      | 450        | 2.2556        | .53312            |
| I receive prompt services from ESI Healthcare institutions                                          | 450        | 2.1578        | .52509            |
| ESI Corporation welcomes feedback from policyholders                                                | 450        | 1.8289        | .57379            |
| ESI officials guide the policyholders regarding benefits and services                               | 450        | 2.8467        | .51788            |
| ESI staffs are always willing to help policyholders.                                                | 450        | 2.7044        | .56571            |
| <b>Responsiveness</b>                                                                               | <b>450</b> | <b>2.3587</b> | <b>.41592</b>     |
| ESI Corporation provides proactive information through SMS/e-mail                                   | 450        | 2.0200        | .40272            |
| The procedure for submitting online leave claim is simple                                           | 450        | 3.1978        | .46094            |
| It is possible to check claim status under ESI Scheme online                                        | 450        | 3.9356        | .41981            |
| Cash benefits are directly transferred to the bank account of ESI beneficiaries.                    | 450        | 4.3756        | .50285            |
| ESI Corporation has a well - structured informative website                                         | 450        | 3.7133        | .80369            |
| ESI Corporation offers an effective online public grievance redressal mechanism                     | 450        | 2.1778        | .65013            |
| <b>E-governance</b>                                                                                 | <b>450</b> | <b>3.2367</b> | <b>.37206</b>     |

Source: Primary Data

Table 6.2 shows the mean and standard deviation of the various statements and dimensions used to measure the service quality of ESI Corporation. The result reveals that the statement 'It is safe to enter the ESI hospital/ dispensary premises to access healthcare' (Mean – 4.58, SD - .58) has the highest mean score followed by the statements 'The staff of ESI Corporation has the knowledge and expertise to answer policyholders' queries' (Mean – 4.54, SD - .65) and 'ESI Corporation maintains confidentiality of policyholders' information' (Mean – 4.39, SD- .52). The statement 'ESI Corporation regularly organizes awareness campaign' (Mean- 1.32, SD- .50) has the lowest mean score followed by the statement 'Specialists' services are available in ESI healthcare institutions' (Mean- 1.62, SD- .64) and 'ESI Corporation provides accurate and updated information about its benefits and services' (Mean – 1.67, SD- .64). An analysis of various dimensions of Service quality shows that the dimension 'Communication' has the lowest mean score (Mean – 2.32, SD - .51) followed by 'Responsiveness' (2.36 and SD - .42) and 'Understanding of policyholders' (Mean – 2.59 and SD - .56). Whereas the dimension 'Assurance' has the highest mean score (Mean – 3.59, SD- .38) followed by 'Reliability' (Mean – 3.58, SD - .55) and 'Tangibility' (Mean – 3.27, SD- .53).

### 6.6.1 The level of Service Quality of ESI Corporation

In this section, the level of service quality offered by ESI Corporation is examined by using one sample t test. Since the service quality is measured on a 5-point Likert scale, the average mean score is considered as three. The following hypothesis is formulated in this regard.

$H0_1$ : ESI Corporation offers average level of service quality to its policyholders.

$(\bar{X} = 3)$ .

$H1_1$ : ESI Corporation does not offer average level of service quality to its policyholders.

$(\bar{X} \neq 3)$ .

**Table 6.3**

*One Sample t Statistics and Test Result of Service Quality of ESI Corporation*

| Dimensions of Service Quality  | One-Sample Statistics |        |                | One Sample t Test (Test Value = 3) |       |                |
|--------------------------------|-----------------------|--------|----------------|------------------------------------|-------|----------------|
|                                | N                     | Mean   | Std. Deviation | t                                  | D. f. | Sig. (p) value |
| Reliability                    | 450                   | 3.5862 | .5512          | 22.560**                           | 449   | .000           |
| Tangibility                    | 450                   | 3.2672 | .5293          | 10.709**                           | 449   | .000           |
| Assurance                      | 450                   | 3.5946 | .3751          | 33.629**                           | 449   | .000           |
| Accessibility                  | 450                   | 2.8481 | .7003          | 4.600**                            | 449   | .000           |
| Communication                  | 450                   | 2.3211 | .5112          | 28.170**                           | 449   | .000           |
| Understanding of Policyholders | 450                   | 2.5967 | .5555          | 15.403**                           | 449   | .000           |
| Responsiveness                 | 450                   | 2.3587 | .4159          | 32.710**                           | 449   | .000           |
| E-governance                   | 450                   | 3.2367 | .3721          | 13.493**                           | 449   | .000           |
| Overall Service Quality        | 450                   | 2.9762 | .3233          | 1.564                              | 449   | .118           |

Source: Primary Data

\*\*Significant at 1% level of significance

Table 6.3 shows the result of One sample t test used to assess the level of service quality offered by ESI Corporation. The table also shows the dimension wise analysis of the level of service quality. Since the p value is less than 0.01, the null hypothesis is rejected at 1% level of significance for the factors of service quality such as Reliability, Tangibility, Assurance, Accessibility, Communication, Understanding of policyholders, Responsiveness and E-governance. It indicates that the service quality offered by ESI Corporation in respect of these 8 dimensions is either below or above average level. In order to assess this, the mean scores of the respective dimensions are examined. It is found that the mean score of Reliability, Tangibility, Assurance and E-Governance are above three whereas it is below three in respect of the dimensions such as Accessibility, Communication, Understanding of policyholders and Responsiveness. It denotes that the Corporation is offering

above average level of service quality in respect of the dimensions such as Reliability, Tangibility, Assurance and E-Governance, but below average level of service quality regarding other dimensions.

As the 'p value' of the 'Overall service quality' is above 0.05, it is failed to reject the null hypothesis in this respect. Hence it can be inferred that the overall service quality of ESI Corporation is on an average level.

### **6.6.2 Comparison of Service Quality according to the demographic groups of the policyholders**

In this section, the service quality of ESI Corporation is compared across various demographic groups of respondents. For this purpose, service quality is considered as the dependent variable and demographic groups are considered as the factor variables. Demographic details such as Gender, Age, Marital status, Education, Income, Area of residence and Nature of organization are taken as the factor variables for comparison purpose.

#### **6.6.2.1 Gender wise comparison of Service Quality**

In this case, gender is considered as the factor variable for checking the significant difference in the service quality of ESI Corporation between male and female policyholders. The following hypothesis is formulated and independent sample t test is applied for the purpose of analysis.

*H0<sub>2</sub>: There is no significant difference in the perception of male and female policyholders regarding Service Quality of ESI Corporation.*

*H1<sub>2</sub>: There is significant difference in the perception of male and female policyholders regarding Service Quality of ESI Corporation.*

**Table 6.4**

*Gender wise comparison of Service Quality*

| Dimensions                     | Gender | Mean  | SD    | Levene's Test for Equality of Variances |        | t-test result |                           |       |
|--------------------------------|--------|-------|-------|-----------------------------------------|--------|---------------|---------------------------|-------|
|                                |        |       |       | F                                       | Sig.   | t             | Sig.                      |       |
| Reliability                    | Male   | 3.570 | 0.552 | Equal variances assumed                 | 0.016  | .901          | <b>0.652</b> <b>0.515</b> |       |
|                                | Female | 3.604 | 0.551 | Equal variances not assumed             |        |               |                           | 0.653 |
| Tangibility                    | Male   | 3.271 | 0.514 | Equal variances assumed                 | 0.088  | .767          | <b>0.101</b> <b>0.920</b> |       |
|                                | Female | 3.263 | 0.540 | Equal variances not assumed             |        |               |                           | 0.100 |
| Assurance                      | Male   | 3.589 | 0.335 | Equal variances assumed                 | 4.315* | .038          | 0.313                     | 0.754 |
|                                | Female | 3.600 | 0.408 | Equal variances not assumed             |        |               | <b>0.310</b> <b>0.757</b> |       |
| Accessibility                  | Male   | 2.834 | 0.704 | Equal variances assumed                 | 0.757  | .385          | <b>0.476</b> <b>0.634</b> |       |
|                                | Female | 2.865 | 0.671 | Equal variances not assumed             |        |               | 0.477                     | 0.634 |
| Communication                  | Male   | 2.304 | 0.470 | Equal variances assumed                 | 6.325* | .012          | 0.777                     | 0.438 |
|                                | Female | 2.341 | 0.539 | Equal variances not assumed             |        |               | <b>0.771</b> <b>0.441</b> |       |
| Understanding of Policyholders | Male   | 2.588 | 0.537 | Equal variances assumed                 | 3.142  | .077          | <b>0.343</b> <b>0.732</b> |       |
|                                | Female | 2.606 | 0.576 | Equal variances not assumed             |        |               | 0.341                     | 0.733 |
| Responsiveness                 | Male   | 2.351 | 0.381 | Equal variances assumed                 | 0.941  | .332          | <b>0.439</b> <b>0.661</b> |       |
|                                | Female | 2.368 | 0.439 | Equal variances not assumed             |        |               | 0.436                     | 0.663 |

| Dimensions              | Gender | Mean  | SD    | Levene's Test for Equality of Variances |       | t-test result |              |              |
|-------------------------|--------|-------|-------|-----------------------------------------|-------|---------------|--------------|--------------|
|                         |        |       |       | F                                       | Sig.  | t             | Sig.         |              |
| E-governance            | Male   | 3.244 | 0.372 | Equal variances assumed                 | 0.337 | .562          | <b>0.430</b> | <b>0.667</b> |
|                         | Female | 3.229 | 0.365 | Equal variances not assumed             |       |               |              |              |
| Overall Service Quality | Male   | 2.969 | 0.320 | Equal variances assumed                 | 1.231 | .268          | <b>0.500</b> | <b>0.617</b> |
|                         | Female | 2.984 | 0.315 | Equal variances not assumed             |       |               |              |              |

Source: Primary Data

\*Significant at 5% level of significance

Table 6.4 shows the result of independent sample t test used for the gender wise comparison of service quality of ESI Corporation. The Levene's test is used to test the assumption of equality of the population variance. The equality of variance is assumed in respect of 6 service quality dimensions such as Reliability, Tangibility, Accessibility, Understanding of Policyholders, Responsiveness, E-Governance and Overall Service Quality. In respect of these dimensions, p value of Levene's test is more than 0.05. Hence, t statistics and significance value of t test corresponding to equal variance assumed is selected for comparing mean scores. Whereas in the case of other dimensions such as Assurance and Communication, the equality of variance is not assumed and hence t statistics and significance value corresponding to the equal variance not assumed is selected for comparison purpose.

The result of independent sample t test shows that the null hypothesis is failed to reject at 5% level of significance in respect of all dimensions of service quality as well as overall service quality. The p values of all dimensions of service quality are above 0.05. Hence, it can be inferred that there is no significant difference between male and female policyholders in their perception regarding various factors of service quality as well as overall service quality.

### 6.6.2.2 Age wise comparison of Service Quality

For comparing service quality across various age group, One-way ANOVA/ Welch test is used. The following hypothesis is formulated and tested in this case.

*H0<sub>3</sub>: There is no significant difference in the perception of different age group of policyholders regarding the Service Quality of ESI Corporation.*

*H1<sub>3</sub>: There is significant difference in the perception of different age group of policyholders regarding the Service Quality of ESI Corporation.*

**Table 6.5**

*Age wise comparison of Service Quality*

| Dimensions                            | Descriptive Statistics of Age wise comparison (Mean and SD) |                 |                 |                 |                 | Levene's test of Equality of Variance |            | One- way ANOVA/ Welch test |            |
|---------------------------------------|-------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|---------------------------------------|------------|----------------------------|------------|
|                                       | Up to 25 years                                              | 26-35 years     | 36-45 years     | 46-55 years     | Above 55 years  | Test statistics                       | Sig. value | Test Statistics            | Sig. value |
| <b>Reliability</b>                    | 3.255<br>(.378)                                             | 3.414<br>(.501) | 3.604<br>(.530) | 3.778<br>(.556) | 3.915<br>(.570) | 3.322*                                | .011       | 16.524**                   | .000       |
| <b>Tangibility</b>                    | 2.896<br>(.405)                                             | 3.092<br>(.482) | 3.288<br>(.469) | 3.420<br>(.554) | 3.776<br>(.407) | 1.885                                 | .112       | 21.705**                   | .000       |
| <b>Assurance</b>                      | 3.361<br>(.205)                                             | 3.536<br>(.309) | 3.577<br>(.362) | 3.705<br>(.426) | 3.805<br>(.429) | 5.333**                               | .000       | 15.134**                   | .000       |
| <b>Accessibility</b>                  | 2.458<br>(.588)                                             | 2.570<br>(.613) | 2.875<br>(.668) | 3.118<br>(.693) | 3.343<br>(.623) | 1.267                                 | .282       | 18.936**                   | .000       |
| <b>Communication</b>                  | 2.044<br>(.399)                                             | 2.240<br>(.460) | 2.328<br>(.516) | 2.426<br>(.543) | 2.583<br>(.486) | 2.457*                                | .045       | 8.889**                    | .000       |
| <b>Understanding of Policyholders</b> | 2.312<br>(.334)                                             | 2.542<br>(.581) | 2.647<br>(.549) | 2.633<br>(.526) | 2.811<br>(.664) | 6.709**                               | .000       | 8.002**                    | .000       |
| <b>Responsiveness</b>                 | 2.240<br>(.298)                                             | 2.301<br>(.415) | 2.373<br>(.380) | 2.398<br>(.462) | 2.527<br>(.468) | 2.045                                 | .087       | 3.126*                     | .015       |
| <b>E-governance</b>                   | 3.088<br>(.385)                                             | 3.133<br>(.323) | 3.253<br>(.370) | 3.348<br>(.371) | 3.363<br>(.392) | 1.915                                 | .107       | 8.018**                    | .000       |
| <b>Over all Service Quality</b>       | 2.707<br>(.232)                                             | 2.854<br>(.270) | 2.993<br>(.296) | 3.103<br>(.313) | 3.266<br>(.322) | 1.229                                 | .298       | 27.808**                   | .000       |

Source: Primary Data

\*Significant at 5% level of significance

\*\*Significant at 1% level of significance

Parentheses represent standard deviation

Table 6.5 shows the result of One-way ANOVA/ Welch test used for analyzing the service quality perception of policyholders of different age groups. Levene's test of equality of population variance reveals that homogeneity assumption is not satisfied in the case of Reliability (p value-.011), Assurance (p value - .000), Communication (p value - .045) and Understanding of Policyholders (p value - .000) as the p values in all these cases are less than 0.05. Hence Welch test is applied in these cases. In the case of other factors such as Tangibility, Accessibility, Responsiveness, E-governance and Over all Service Quality, One-way ANOVA is applied for comparing the service quality across various age groups.

The result of Welch test reveals that there is significant difference in the perception regarding Reliability, Assurance, Communication and Understanding of Policyholders across various age groups. Because the p values in all these cases are below 0.01. Similarly, the result of One-way ANOVA shows significant difference in the perception regarding Tangibility, Accessibility, Responsiveness, E-governance and Over all Service Quality across various age groups as the p value in all these cases are also less than 0.05. Hence  $H_0$  is rejected in respect of all the factors of service quality including overall service quality. In short there exists significant difference in the perception regarding service quality of ESI Corporation across various age groups.

From the descriptive statistics, it is clear that aged policyholders belonging to the age group of above 55 years and 46-55 years have better perception regarding various factors of service quality including overall service quality when compared to the younger age groups. Hence age of the policyholders significantly influences the perception regarding the service quality of ESI Corporation.

**Table 6.6**

*Multiple Comparisons of Service Quality Based on Age Groups – Scheffe’s post hoc test*

| Age (I)        | Age (J)        | Tangibility                  | Accessibility                | Responsive-ness              | E-governance                 | Overall service Quality      |
|----------------|----------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
|                |                | Mean Difference (I-J) (Sig.) | Mean Difference (I-J) (Sig.) | Mean Difference (I-J) (Sig.) | Mean Difference (I-J) (Sig.) | Mean Difference (I-J) (Sig.) |
| Up to 25 years | 26-35 years    | -.19513 (.178)               | -.11233 (.877)               | -.06080 (.927)               | -.04583 (.957)               | -.14682* (.044)              |
|                | 36-45 years    | -.39125** (.000)             | -.41755** (.003)             | -.13305 (.373)               | -.16546 (.080)               | -.28641** (.000)             |
|                | 46-55 years    | -.52317** (.000)             | -.66029** (.000)             | -.15820 (.230)               | -.26085** (.001)             | -.39659** (.000)             |
|                | Above 55 years | -.87964** (.000)             | -.88510** (.000)             | -.28727* (.026)              | -.27614* (.011)              | -.55881** (.000)             |
| 26-35 years    | 36-45 years    | -.19612* (.010)              | -.30522** (.001)             | -.07225 (.610)               | -.11962 (.056)               | -.13959** (.001)             |
|                | 46-55 years    | -.32805** (.000)             | -.54795** (.000)             | -.09740 (.368)               | -.21502** (.000)             | -.24978** (.000)             |
|                | Above 55 years | -.68452** (.000)             | -.77277** (.000)             | -.22647* (.041)              | -.23030* (.010)              | -.41199** (.000)             |
| 36-45 years    | 46-55 years    | -.13192 (.206)               | -.24273* (.028)              | -.02515 (.989)               | -.09539 (.229)               | -.11019* (.024)              |
|                | Above 55 years | -.48839** (.000)             | -.46755** (.002)             | -.15422 (.300)               | -.11068 (.507)               | -.27240** (.000)             |
| 46-55 years    | Above 55 years | -.35647** (.002)             | -.22482 (.408)               | -.12907 (.511)               | -.01529 (1.00)               | -.16222* (.040)              |

Source: Primary Data

\*Significant at 5% level of significance

\*\*Significant at 1% level of significance

Parentheses represent significance value

Since the result of ANOVA is significant, it is essential to make a pair wise comparison of different age groups of policyholders regarding their perception of service quality dimensions. Table 6.6 shows the result of Scheffe’s Post hoc test for

One-way ANOVA in respect of the service quality factors such as Tangibility, Accessibility, Responsiveness, E-governance and Overall service quality.

In the case of Tangibility factor, no significant difference is found between policyholders of Up to 25 years of age and 26-35 years of age; and 36-45 years of age and 46-55 years of age. In the case of Accessibility, no significant difference is found between Up to 25 years age and 26-35 years age; and 46-55 years age and Above 55 years age groups. But significant difference exists between all other groups in the case of Tangibility and Accessibility.

In the case of Responsiveness and E-governance factor, the policyholders of Above 55 years of age are significantly different from Up to 25 years of age and 26-35 years of age group. The policyholders of 46-55 years of age group are significantly different from Up to 25 years of age and 26-35 years of age in the case of E-governance. No significant difference is found in respect of other groups in the case of Responsiveness and E-governance.

In the case of Overall Service Quality, significant difference is seen between all age groups. Highest mean difference in respect of these service quality factors is found between Up to 25 years of age group and Above 55 years of age group. It shows that the aged policyholders have better perception regarding Tangibility, Accessibility, Responsiveness, E-governance and Overall Service Quality than the young policyholders. Hence age is a significant factor influencing service quality perception.

**Table 6.7**

*Multiple Comparisons of Service Quality Based on Age Groups – Tamhane’s T2 post hoc test*

| Age (I)        | Age (J)        | Reliability                  | Assurance                    | Communication                | Understanding of Policyholders |
|----------------|----------------|------------------------------|------------------------------|------------------------------|--------------------------------|
|                |                | Mean Difference (I-J) (Sig.) | Mean Difference (I-J) (Sig.) | Mean Difference (I-J) (Sig.) | Mean Difference (I-J) (Sig.)   |
| Up to 25 years | 26-35 years    | -.15940 (.307)               | -.17529** (.001)             | -.19625 (.107)               | -.22950* (.024)                |
|                | 36-45 years    | -.34926** (.000)             | -.21578** (.000)             | -.28426** (.004)             | -.33466** (.000)               |
|                | 46-55 years    | -.52338** (.000)             | -.34456** (.000)             | -.38193** (.000)             | -.32038** (.000)               |
|                | Above 55 years | -.66015** (.000)             | -.44448** (.000)             | -.53958** (.000)             | -.49811** (.003)               |
| 26-35 years    | 36-45 years    | -.18986* (.029)              | -.04049 (.981)               | -.08801 (.787)               | -.10516 (.756)                 |
|                | 46-55 years    | -.36398** (.000)             | -.16928* (.007)              | -.18568 (.052)               | -.09088 (.904)                 |
|                | Above 55 years | -.50075** (.000)             | -.26919* (.016)              | -.34333** (.007)             | -.26861 (.332)                 |
| 36-45 years    | 46-55 years    | -.17412 (.119)               | -.12878 (.111)               | -.09766 (.801)               | .01428 (1.000)                 |
|                | Above 55 years | -.31090 (.062)               | -.22870 (.068)               | -.25532 (.095)               | -.16344 (.888)                 |
| 46-55 years    | Above 55 years | -.13677 (.926)               | -.09992 (.940)               | -.15766 (.713)               | -.17772 (.836)                 |

Source: Primary Data

\*Significant at 5% level of significance

\*\*Significant at 1% level of significance

Parentheses represent significance value

As the result of Welch test is significant, it is required to make a pair wise comparison of different age groups of policyholders regarding their perception of

service quality dimensions. Table 6.7 shows the result of Tamhane's T2 Post hoc test in respect of the service quality dimensions such as Reliability, Assurance, Communication and Understanding of Policyholders. As per the result, in the case of Reliability dimension, no significant difference exists between Up to 25 years age and 26-35 years age; and 46-55 years age and above 55 years age. Similarly, 36-45 years of age group is not statistically different from 46-55 years age and Above 55 years age. Significant difference exists between all other age groups.

In the case of Assurance factor, no significant difference exists between 46-55 years of age and Above 55 years of age. In the same manner 36-45 years of age group is not statistically different from 26-35 years age, 46-55 years age and Above 55 years age group. Significant difference is observed between all other groups in this regard.

Under Communication factor, 'Up to 25 years' of age group is statistically different from 36-45 years, 46-55 years and Above 55 years of age groups. Further, significant difference is observed between 26-35 years age group and Above 55 years age group. No significant difference exists between other age groups in the case of Communication factor.

In respect of Understanding of Policyholders, 'Up to 25 years' of age group is significantly different from all other age groups. But no significant difference is found between other age groups.

The highest significant mean difference is obtained between 'Up to 25 years' of age group and 'Above 55 years' of age group in respect of Reliability, Assurance, Communication and Understanding of Policyholders. It indicates that the mean scores of the perception regarding these service quality factors of 'Above 55 years' age group of policyholders are much higher than that of the policyholders of 'Up to 25 years' age group.

### **6.6.2.3 Marital Status wise comparison of Service Quality**

In this case, independent sample t test is used to examine the significant difference in the perception regarding the service quality of ESI Corporation based on the

marital status of ESI policyholders. Accordingly, the following hypothesis is formulated and tested.

*H0<sub>4</sub>: There is no significant difference in the perception of Married and Unmarried policyholders regarding Service Quality of ESI Corporation.*

*H1<sub>4</sub>: There is significant difference in the perception of Married and Unmarried policyholders regarding Service Quality of ESI Corporation.*

**Table 6.8**

*Marital Status wise comparison of Service Quality*

| Dimensions                     | Gender     | Mean  | SD    | Levene's Test for Equality of Variances |       | t-test result |       |
|--------------------------------|------------|-------|-------|-----------------------------------------|-------|---------------|-------|
|                                |            |       |       | F                                       | Sig.  | t             | Sig.  |
| Reliability                    | Married    | 3.644 | 0.543 | 1.915                                   | 0.167 | 4.903**       | 0.000 |
|                                | Un-married | 3.321 | 0.510 |                                         |       |               |       |
| Tangibility                    | Married    | 3.333 | 0.514 | 0.004                                   | 0.952 | 5.829**       | 0.000 |
|                                | Un-married | 2.967 | 0.494 |                                         |       |               |       |
| Assurance                      | Married    | 3.638 | 0.368 | 0.608                                   | 0.436 | 5.454**       | 0.000 |
|                                | Un-married | 3.395 | 0.344 |                                         |       |               |       |
| Accessibility                  | Married    | 2.921 | 0.686 | 0.531                                   | 0.467 | 4.854**       | 0.000 |
|                                | Un-married | 2.514 | 0.671 |                                         |       |               |       |
| Communication                  | Married    | 2.384 | 0.508 | 9.933**                                 | 0.002 | 5.714**       | 0.000 |
|                                | Un-married | 2.037 | 0.422 |                                         |       |               |       |
| Understanding of Policyholders | Married    | 2.642 | 0.549 | 0.503                                   | 0.478 | 3.772**       | 0.000 |
|                                | Un-married | 2.389 | 0.541 |                                         |       |               |       |

| Dimensions              | Gender     | Mean  | SD    | Levene's Test for Equality of Variances |       | t-test result |                |              |
|-------------------------|------------|-------|-------|-----------------------------------------|-------|---------------|----------------|--------------|
|                         |            |       |       | F                                       | Sig.  | t             | Sig.           |              |
| Responsiveness          | Married    | 2.389 | 0.411 | Equal variances assumed                 | 0.014 | 0.905         | <b>3.418**</b> | <b>0.001</b> |
|                         | Un-married | 2.217 | 0.413 | Equal variances not assumed             |       |               | 3.409**        | 0.001        |
| E-governance            | Married    | 3.269 | 0.366 | Equal variances assumed                 | 1.249 | 0.264         | <b>3.967**</b> | <b>0.000</b> |
|                         | Un-married | 3.091 | 0.368 | Equal variances not assumed             |       |               | 3.951**        | 0.000        |
| Overall Service Quality | Married    | 3.028 | 0.305 | Equal variances assumed                 | 0.386 | 0.535         | <b>7.666**</b> | <b>0.000</b> |
|                         | Un-married | 2.742 | 0.301 | Equal variances not assumed             |       |               | 7.727**        | 0.000        |

Source: Primary Data

\*\*Significant at 1% level of significance

Table 6.8 shows the result of the comparison of the service quality of ESI Corporation on the basis of the marital status of ESI policyholders. The result of Levene's test indicates that equality of variance can be assumed in respect of all the dimensions of service quality except communication. The 'p' values of Levene's test for equality of variance of these dimensions are more than 0.05. But in the case of communication, p value is only 0.002. Hence equality of population variance is not assumed in respect of the dimension 'communication'. Based on the result of Levene's test, t value and 'p' value of t test corresponding to equal variance assumed is referred for comparing the mean scores between married and unmarried in respect of all the dimensions of service quality except communication.

The result of independent sample t test reveals that the null hypothesis is rejected for all the factors of service quality as the p value in all cases are less than 0.01. Hence it can be inferred that there exists significant difference between married and unmarried in respect of their perception regarding all the dimensions of service quality. The null hypothesis is rejected in the case of overall service quality also, as the p value is less than 0.01. Comparison of the mean score further reveals that the mean score of married policyholders is more than that of unmarried policyholders.

Hence married policyholders have better perception regarding the service quality of ESI Corporation.

#### **6.6.2.4 Education wise comparison of Service Quality**

In this case, the service quality perception is compared across the policyholders of different educational background. Here education qualification is considered as a factor variable. In order to test the significant difference among the policyholders having different educational qualification, One-way ANOVA/ Welch test is used. The following hypotheses are formulated and tested for this purpose.

*H0<sub>5</sub>: There is no significant difference in the perception of policyholders having different Educational Qualification regarding the Service Quality of ESI Corporation.*

*H1<sub>5</sub>: There is significant difference in the perception of policyholders having different Educational Qualification regarding the Service Quality of ESI Corporation.*

**Table 6.9**

*Education wise comparison of Service Quality*

| Dimensions         | Descriptive Statistics of Educational Qualification wise comparison (Mean and SD) |                       |                 |                  |                       | Levene's test of Equality of Variance |            | One-way ANOVA/ Welch test |            |
|--------------------|-----------------------------------------------------------------------------------|-----------------------|-----------------|------------------|-----------------------|---------------------------------------|------------|---------------------------|------------|
|                    | SSLC and Below                                                                    | Plus Two / Pre Degree | Degree/ Diploma | Post- Graduation | Professional & Others | Test statistics                       | Sig. value | Test Statistics           | Sig. value |
| <b>Reliability</b> | 3.578<br>(.562)                                                                   | 3.598<br>(.589)       | 3.585<br>(.499) | 3.583<br>(.450)  | 3.596<br>(.541)       | 4.12**                                | .003       | 2.071                     | .084       |
| <b>Tangibility</b> | 3.307<br>(.526)                                                                   | 3.214<br>(.479)       | 3.310<br>(.512) | 3.202<br>(.468)  | 3.254<br>(.386)       | .634                                  | .638       | 2.003                     | .093       |
| <b>Assurance</b>   | 3.603<br>(.369)                                                                   | 3.589<br>(.402)       | 3.596<br>(.362) | 3.586<br>(.326)  | 3.585<br>(.227)       | 1.312                                 | .265       | 1.855                     | .117       |

| Dimensions                             | Descriptive Statistics of Educational Qualification wise comparison (Mean and SD) |                       |                 |                  |                       | Levene's test of Equality of Variance |            | One-way ANOVA/ Welch test |            |
|----------------------------------------|-----------------------------------------------------------------------------------|-----------------------|-----------------|------------------|-----------------------|---------------------------------------|------------|---------------------------|------------|
|                                        | SSLC and Below                                                                    | Plus Two / Pre Degree | Degree/ Diploma | Post- Graduation | Professional & Others | Test statistics                       | Sig. value | Test Statistics           | Sig. value |
| <b>Accessibility</b>                   | 2.794<br>(.626)                                                                   | 2.916<br>(.620)       | 2.858<br>(.713) | 2.798<br>(.579)  | 2.843<br>(.529)       | 2.081                                 | .082       | 2.215                     | .067       |
| <b>Communication</b>                   | 2.302<br>(.484)                                                                   | 2.336<br>(.507)       | 2.318<br>(.511) | 2.344<br>(.479)  | 2.311<br>(.491)       | .710                                  | .585       | 1.831                     | .122       |
| <b>Understanding of Policy holders</b> | 2.552<br>(.566)                                                                   | 2.595<br>(.483)       | 2.613<br>(.575) | 2.632<br>(.527)  | 2.594<br>(.419)       | 2.248                                 | .063       | 1.058                     | .377       |
| <b>Responsiveness</b>                  | 2.347<br>(.414)                                                                   | 2.356<br>(.324)       | 2.362<br>(.442) | 2.376<br>(.387)  | 2.359<br>(.360)       | 1.479                                 | .207       | 1.705                     | .148       |
| <b>E-governance</b>                    | 3.196<br>(.346)                                                                   | 3.170<br>(.349)       | 3.264<br>(.391) | 3.308<br>(.343)  | 3.227<br>(.357)       | 1.516                                 | .196       | 2.111                     | .078       |
| <b>Overall Service Quality</b>         | 2.960<br>(.274)                                                                   | 2.972<br>(.269)       | 2.988<br>(.328) | 2.854<br>(.265)  | 2.971<br>(.287)       | 1.598                                 | .174       | 2.004                     | .093       |

Source: Primary Data

\*\*Significant at 1% level of significance

Parentheses represent standard deviation

Table 6.9 describes the result of One-way ANOVA/ Welch test used to compare the service quality perception of policyholders having different educational qualification. As per the result of Levene's test, equality of population variance cannot be assumed in the case of Reliability (p value - .003) at 1% level of significance. Hence, Welch test is applied in this case. In the case of other factors such as Tangibility, Assurance, Accessibility, Communication, Understanding of Policyholders, Responsiveness, E-governance and Overall Service Quality, p value is greater than 0.05. Hence One-way ANOVA is applied for comparison purpose.

As per the result of One-way ANOVA, it is failed to reject the null hypothesis at 5% level of significance in respect of Tangibility (.093), Assurance (.117), Accessibility (.067), Communication (.122), Understanding of Policyholders (.377),

Responsiveness (.148), E-governance (.078) and Overall service quality (.093), as the p values in all these cases are more than 0.05. Hence there exists no significant difference in the perception regarding Tangibility, Assurance, Accessibility, Communication, Understanding of Policyholders, Responsiveness, E-governance and Overall service quality among ESI policyholders having different educational background.

As per the result of Welch test, the null hypothesis is failed to reject in the case of Reliability at 5% level of significance. The p value in this case is .084, which is also more than 0.05. In short there is no significant difference in the service quality perception regarding all factors among policyholders having different educational qualifications.

Hence it can be inferred that educational qualification is not a significant factor which influences the perception regarding the service quality of ESI Corporation.

#### **6.6.2.5 Income wise comparison of Service Quality**

Here the service quality perception of the policyholders of different income levels is compared by using One-way ANOVA/ Welch test. For deciding the appropriate test criteria, Levene's test of equality of variance is used. The following hypothesis is framed and tested in this respect.

*H0<sub>6</sub>: There is no significant difference in the perception of policyholders from different income category regarding Service Quality of ESI Corporation.*

*H1<sub>6</sub>: There is significant difference in the perception of policyholders from different income category regarding Service Quality of ESI Corporation.*

**Table 6.10***Income wise comparison of Service Quality*

| Dimensions                                | Descriptive Statistics of<br>Income wise comparison<br>(Mean and SD) |                 |                 |                 | Levene's test of<br>Equality of<br>Variance |               | One- way<br>ANOVA/ Welch<br>test |               |
|-------------------------------------------|----------------------------------------------------------------------|-----------------|-----------------|-----------------|---------------------------------------------|---------------|----------------------------------|---------------|
|                                           | Up to<br>5000                                                        | 5001-<br>10000  | 10001-<br>15000 | 15001-<br>21000 | Test<br>statistics                          | Sig.<br>value | Test<br>Statistics               | Sig.<br>value |
| <b>Reliability</b>                        | 3.974<br>(.536)                                                      | 3.728<br>(.536) | 3.529<br>(.470) | 3.332<br>(.482) | 2.112                                       | 0.098         | 32.644**                         | .000          |
| <b>Tangibility</b>                        | 3.439<br>(.557)                                                      | 3.576<br>(.496) | 3.236<br>(.464) | 3.009<br>(.447) | 1.270                                       | 0.284         | 30.329**                         | .000          |
| <b>Assurance</b>                          | 3.709<br>(.368)                                                      | 3.725<br>(.404) | 3.572<br>(.374) | 3.470<br>(.316) | 1.280                                       | 0.281         | 12.929**                         | .000          |
| <b>Accessibility</b>                      | 3.101<br>(.653)                                                      | 2.957<br>(.669) | 2.917<br>(.652) | 2.585<br>(.705) | 0.413                                       | 0.744         | 12.847**                         | .000          |
| <b>Communication</b>                      | 2.443<br>(.469)                                                      | 2.418<br>(.541) | 2.308<br>(.479) | 2.205<br>(.518) | 0.744                                       | 0.526         | 5.449**                          | .001          |
| <b>Understanding<br/>of Policyholders</b> | 2.646<br>(.556)                                                      | 2.571<br>(.538) | 2.653<br>(.575) | 2.538<br>(.547) | 0.198                                       | 0.898         | 1.273                            | .283          |
| <b>Responsiveness</b>                     | 2.398<br>(.306)                                                      | 2.415<br>(.456) | 2.358<br>(.435) | 2.303<br>(.424) | 2.369                                       | 0.070         | 1.709                            | .164          |
| <b>E-governance</b>                       | 3.327<br>(.344)                                                      | 3.344<br>(.393) | 3.245<br>(.329) | 3.115<br>(.375) | 1.475                                       | 0.221         | 10.216**                         | .000          |
| <b>Overall Service<br/>Quality</b>        | 3.129<br>(.264)                                                      | 3.092<br>(.317) | 2.977<br>(.272) | 2.819<br>(.327) | 2.274                                       | 0.079         | 25.590**                         | .000          |

Source: Primary Data

\*\*Significant at 1% level of significance

Parentheses represent standard deviation

Table 6.10 shows the result of One-way ANOVA/ Welch test applied to analyse the service quality perception of policyholders of various income category. As per the result of Levene's test, the assumption of equality of variance can be assumed in the case of all factors of service quality such as Reliability (p value – 0.098), Tangibility (p value -0.284), Assurance (p value - .281), Accessibility (p value – 0.744), Communication (p value – 0.526), Understanding of Policyholders (p Value- 0.898), Responsiveness (p value – 0.070), E-governance (p value – 0.221) and Overall

Service Quality (p value – 0.079), as the p values in all these cases are above 0.05. Hence One-way ANOVA is applied in these cases.

As per the result of One-way ANOVA, null hypothesis is rejected at 1% level of significance in the case of perception regarding Reliability, Tangibility, Assurance, Accessibility, Communication, E-governance and Overall Service Quality. The p values in all these cases are less than 0.01. However, it is failed to reject the null hypothesis at 5% level of significance in the case of Understanding of the Policyholders (p value – 0.283) and Responsiveness (p value – 0.164). The p values in these two cases are more than 0.05. Hence, it can be inferred that there exists significant difference in the perception regarding service quality factors such as Reliability, Tangibility, Assurance, Accessibility, Communication, E-governance and Overall Service Quality among policyholders of various income groups. Whereas, no significant difference is observed in the case of perception regarding ‘Understanding of Policyholders’ and ‘Responsiveness’ among various income groups of policyholders.

Comparison of the mean scores among various income groups reveals that the lower income groups such as the policyholders having monthly income below Rs. 5000 and Rs. 5001-10000 have better perception regarding service quality when compared to the higher income category of policyholders such as those having monthly income Rs. 10001-15000 and Rs. 15001-21000. Hence income is an important factor variable which influences the service quality perception of ESI policyholders.

**Table 6.11***Multiple Comparisons of Service Quality Based on Income – Scheffe's post hoc test*

| Monthly Income (I)     | Monthly Income (J)  | Reliability                 | Tangibility                 | Assurance                   | Accessibility               | Communi-<br>-cation         | E-<br>governance            | Overall<br>Service<br>Quality |
|------------------------|---------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------------|
|                        |                     | Mean<br>Difference<br>(I-J) | Mean<br>Difference<br>(I-J) | Mean<br>Difference<br>(I-J) | Mean<br>Difference<br>(I-J) | Mean<br>Difference<br>(I-J) | Mean<br>Difference<br>(I-J) | Mean<br>Difference<br>(I-J)   |
|                        |                     | (Sig.)                      | (Sig.)                      | (Sig.)                      | (Sig.)                      | (Sig.)                      | (Sig.)                      | (Sig.)                        |
|                        | Rs. 5001-<br>10000  | .24634**<br>(.007)          | -.13793<br>(.237)           | -.01609<br>(.991)           | .14332<br>(.497)            | .02587<br>(.987)            | -.01694<br>(.990)           | .03765<br>(.840)              |
| Up to Rs.<br>5000      | Rs. 10001-<br>15000 | .44478**<br>(.000)          | .20209*<br>(.017)           | .13660*<br>(.038)           | .18452<br>(.214)            | .13498<br>(.231)            | .08276<br>(.367)            | .15224**<br>(.002)            |
|                        | Rs. 15001-<br>21000 | .64136**<br>(.000)          | .42905**<br>(.000)          | .23898**<br>(.000)          | .51620**<br>(.000)          | .23815**<br>(.003)          | .21259**<br>(.000)          | .30980**<br>(.000)            |
| Rs. 5001-<br>10000     | Rs. 10001-<br>15000 | .19844*<br>(.022)           | .34003**<br>(.000)          | .15269*<br>(.012)           | .04121<br>(.971)            | .10911<br>(.397)            | .09970<br>(.189)            | .11459*<br>(.030)             |
|                        | Rs. 15001-<br>21000 | .39502**<br>(.000)          | .56699**<br>(.000)          | .25508**<br>(.000)          | .37289**<br>(.000)          | .21228**<br>(.009)          | .22953**<br>(.000)          | .27215**<br>(.000)            |
| Rs.<br>10001-<br>15000 | Rs. 15001-<br>21000 | .19658**<br>(.007)          | .22696**<br>(.001)          | .10238<br>(.091)            | .33168**<br>(.000)          | .10317<br>(.330)            | .12983*<br>(.017)           | .15756**<br>(.000)            |

Source: Primary Data

\*Significant at 5% level of significance

\*\*Significant at 1% level of significance

Parentheses represent significance value

Since the result of ANOVA is significant in the case of Reliability, Tangibility, Assurance, Accessibility, Communication, E-governance and Overall Service Quality, it is essential to make a pair wise comparison of the policyholders of different income category regarding their perception of these service quality factors. Table 6.11 shows the result of Scheffe's Post hoc test for One-way ANOVA in respect of these service quality factors.

As per the result, in the case of Reliability, significant difference is found between all income groups. In the case of tangibility, significant difference exists between all income groups except between the policyholders of Up to Rs. 5000 group and Rs. 5001-10000 group. Under Assurance factor, no significant difference is found

between the policyholders of Up to Rs. 5000 income group and Rs. 5001-10000; and between the policyholders of Rs. 10001-15000 group and Rs. 15001-21000 income group. Significant difference exists between all other groups in the case of Assurance factor.

In respect of Accessibility and E-governance, the policyholders of Rs. 15001-21000 income category are significantly different from all other income groups. But no significant difference exists between other income groups in respect of these two factors. Under Communication factor, the policyholders having the monthly income of Rs. 15001-21000 are significantly different from the policyholders of up to Rs. 5000 income group and Rs. 5001-10000 income group. Whereas no significant difference exists between other income groups in this respect.

In the case of Overall Service Quality, significant difference is observed between all income groups except between the policyholders of Up to Rs. 5000 income and Rs. 5001-10000 income. Highest significant mean difference is found between the policyholders of Up to Rs 5000 income group and Rs. 15001-21000 in the case of Reliability, Accessibility, Communication and Overall Service quality. Whereas the highest significant mean difference in the case of Tangibility, Assurance and E-governance is seen between the policyholders of Rs. 5001-10000 income group and Rs. 15001-21000 income group. It indicates that the mean score of the perception of lower income policyholders (Up to Rs. 5000 and Rs. 5001-10000) are better than the higher income group (Rs 15001-21000)

#### **6.6.2.6 Comparison of Service Quality based on Area of Residence**

Here the service quality perception among policyholders residing in rural, urban and semi urban areas are compared and analysed with the help of ANOVA/ Welch test. The following hypothesis is formulated in this case.

*H0<sub>7</sub>: There is no significant difference in the perception of policyholders residing in different areas regarding Service Quality of ESI Corporation.*

*H1<sub>7</sub>: There is significant difference in the perception of policyholders residing in different areas regarding Service Quality of ESI Corporation.*

**Table 6.12***Comparison of Service Quality based on Area of Residence*

| Dimensions                            | Descriptive Statistics of Area of Residence (Mean and SD) |                 |                 | Levene's test of Equality of Variance |            | One- way ANOVA/ Welch test |            |
|---------------------------------------|-----------------------------------------------------------|-----------------|-----------------|---------------------------------------|------------|----------------------------|------------|
|                                       | Rural                                                     | Urban           | Semi-urban      | Test statistics                       | Sig. value | Test Statistics            | Sig. value |
| <b>Reliability</b>                    | 3.577<br>(.540)                                           | 3.601<br>(.518) | 3.581<br>(.548) | 0.841                                 | 0.432      | 2.073                      | .127       |
| <b>Tangibility</b>                    | 3.261<br>(.472)                                           | 3.274<br>(.489) | 3.269<br>(.483) | 0.895                                 | 0.409      | 2.007                      | .136       |
| <b>Assurance</b>                      | 3.574<br>(.467)                                           | 3.619<br>(.473) | 3.587<br>(.449) | 1.134                                 | 0.323      | 2.514                      | .082       |
| <b>Accessibility</b>                  | 2.845<br>(.669)                                           | 2.851<br>(.616) | 2.857<br>(.696) | 2.544                                 | 0.080      | 1.853                      | .158       |
| <b>Communication</b>                  | 2.313<br>(.473)                                           | 2.326<br>(.461) | 2.332<br>(.601) | 6.900**                               | 0.001      | 1.833                      | .161       |
| <b>Understanding of Policyholders</b> | 2.631<br>(.609)                                           | 2.564<br>(.620) | 2.557<br>(.708) | 2.496                                 | 0.084      | 1.051                      | .350       |
| <b>Responsiveness</b>                 | 2.344<br>(.601)                                           | 2.359<br>(.544) | 2.409<br>(.704) | 6.622**                               | 0.001      | 1.715                      | .181       |
| <b>E-governance</b>                   | 3.213<br>(.568)                                           | 3.263<br>(.529) | 3.244<br>(.479) | 1.005                                 | 0.367      | 2.401                      | .092       |
| <b>Overall Service Quality</b>        | 2.969<br>(.332)                                           | 2.982<br>(.336) | 2.980<br>(.384) | 0.496                                 | 0.610      | 2.001                      | .136       |

Source: Primary Data

\*\*Significant at 1% level of significance

Parentheses represent standard deviation

Table 6.12 shows the result of One-way ANOVA/Welch test used to analyse the service quality perception of ESI policyholders residing in Rural, Urban and Semi-urban areas. As per the result of Levene's test of equality of population variance, homogeneity of variance cannot be assumed in the case of Communication (p value – 0.001) and Responsiveness (p value- 0.001) at 1 % level of significance. In both cases p value is less than 0.01, hence Welch test is applied. In the case of all other factors of service quality, p value of Leven's test is more than 0.05. Hence ANOVA is used for comparing means in the case of Reliability, Tangibility, Assurance,

Accessibility, Understanding of Policyholders, E-governance and Over all Service Quality.

The result of One-way ANOVA shows that the p values of Reliability (0.127), Tangibility (0.136), Assurance (0.082), Accessibility (0.158), Understanding of Policyholders (0.350), E-governance (0.092) and Over all Service Quality (0.136) are above 0.05. Hence, the researcher failed to reject null hypothesis in these cases at 5% level of significance. Similarly, the result of Welch test shows that the p values of Communication (0.161) and Responsiveness (0.181) are also above 0.05. Hence, the null hypothesis is failed to reject in these cases also. Therefore, it can be inferred that there is no significant difference among the policyholders residing in different areas in respect of their perception regarding various factors of service quality. In other words, area of residence does not influence the policyholders' perception regarding the service quality of ESI Corporation.

#### **6.6.2.7 Comparison of Service Quality based on the Nature of Organization**

In order to check the significant difference in the service quality of ESI Corporation between the policyholders working in factory and shop/ establishment, independent sample t test is used. Levene's test is used for checking the assumption of equality of population variance. In this respect, the following hypothesis is formulated and tested.

*H0<sub>s</sub>: There is no significant difference in the perception of policyholders working in Factory and Shop/ Establishment regarding Service Quality of ESI Corporation.*

*H1<sub>s</sub>: There is significant difference in the perception of policyholders working in Factory and Shop/ Establishment regarding Service Quality of ESI Corporation.*

**Table 6.13***Comparison of Service Quality based on Nature of Organization*

| Dimensions                      | Nature of the Organization | Mean   | SD     | Levene's Test for Equality of Variances |         | t-test result |                |              |
|---------------------------------|----------------------------|--------|--------|-----------------------------------------|---------|---------------|----------------|--------------|
|                                 |                            |        |        | F                                       | Sig.    | t             | Sig.           |              |
| Reliability                     | Factory                    | 3.9664 | .46955 | Equal variances assumed                 | 0.038   | 0.846         | <b>10.03**</b> | <b>0.000</b> |
|                                 | Shop/ Establishment        | 3.4400 | .50942 | Equal variances not assumed             |         |               | 10.39**        | 0.000        |
| Tangibility                     | Factory                    | 3.7730 | .40950 | Equal variances assumed                 | 0.994   | 0.319         | <b>15.59**</b> | <b>0.000</b> |
|                                 | Shop/ Establishment        | 3.0727 | .43296 | Equal variances not assumed             |         |               | 15.99**        | 0.000        |
| Assurance                       | Factory                    | 3.7451 | .40430 | Equal variances assumed                 | 0.514   | 0.474         | <b>5.45**</b>  | <b>0.000</b> |
|                                 | Shop/ Establishment        | 3.5367 | .34684 | Equal variances not assumed             |         |               | 5.09**         | 0.000        |
| Accessibility                   | Factory                    | 3.3880 | .57610 | Equal variances assumed                 | 0.941   | 0.333         | <b>11.54**</b> | <b>0.000</b> |
|                                 | Shop/ Establishment        | 2.6405 | .62997 | Equal variances not assumed             |         |               | 12.01**        | 0.000        |
| Communication                   | Factory                    | 2.6100 | .45503 | Equal variances assumed                 | 0.613   | 0.434         | <b>7.93**</b>  | <b>0.000</b> |
|                                 | Shop/ Establishment        | 2.2100 | .48823 | Equal variances not assumed             |         |               | 8.18**         | 0.000        |
| Understanding of Policy holders | Factory                    | 2.6860 | .58965 | Equal variances assumed                 | 0.064   | 0.800         | <b>2.124*</b>  | <b>0.034</b> |
|                                 | Shop/ Establishment        | 2.5623 | .53878 | Equal variances not assumed             |         |               | 2.040*         | 0.043        |
| Responsiveness                  | Factory                    | 2.4112 | .52812 | Equal variances assumed                 | 31.70** | 0.000         | 1.67           | 0.097        |
|                                 | Shop/ Establishment        | 2.3385 | .36264 | Equal variances not assumed             |         |               | <b>1.42</b>    | <b>0.158</b> |
| E-governance                    | Factory                    | 3.4667 | .38041 | Equal variances assumed                 | 2.819   | 0.094         | <b>8.79**</b>  | <b>0.000</b> |
|                                 | Shop/ Establishment        | 3.1482 | .32893 | Equal variances not assumed             |         |               | 8.25**         | 0.000        |
| Over all Service Quality        | Factory                    | 3.2558 | .27029 | Equal variances assumed                 | 0.264   | 0.608         | <b>13.48**</b> | <b>0.000</b> |
|                                 | Shop/ Establishment        | 2.8686 | .27399 | Equal variances not assumed             |         |               | 13.56**        | 0.000        |

Source: Primary Data

\*Significant at 5% level of significance

\*\*Significant at 1% level of significance

Table 6.13 shows the result of independent sample t test used to examine the significant difference between the policyholders working in factory and shop/ establishment with regard to their perception about various aspects of service quality. The result of Levene's test indicates that equal variance can be assumed in

respect of all dimensions of service quality except 'Responsiveness' dimension. The p values of Levene's test of all the dimensions of service quality except 'Responsiveness' are more than 0.05, whereas the p value is 0.000 in the case of 'Responsiveness'. As it is less than 0.01, the equality of population variance is not assumed in this case at 1% level of significance. Hence, t value and significance value of t test corresponding to equal variance assumed is used for comparing the mean scores between the policyholders working in factory and shop/establishment in respect of all the dimensions of service quality except 'Responsiveness'.

As per the result of independent sample t test, the p values of Reliability, Tangibility, Assurance, Accessibility, Communication, E-governance and Overall service quality are less than 0.01. So, the null hypothesis is rejected for all these factors of service quality including overall service quality at 1% level of significance. In the case of Understanding of Policyholders (p value - .034), the null hypothesis is rejected at 5% level of significance. Hence it can be understood that there is significant difference between the policyholders working in factory and shop/ establishment in respect of their perception regarding Reliability, Tangibility, Assurance, Accessibility, Communication, Understanding of Policyholders, E-governance and Overall service quality. Comparison of the mean score further shows that the mean score of the service quality perception of policyholders working in factory is more than the policyholders working in shop/ establishment. Hence the policyholders working in factory have better perception regarding the service quality of ESI Corporation.

However, no significant difference is observed between the policyholders working in factory and shop/ establishment in their perception towards 'Responsiveness' dimension.

### **6.6.3 Comparison of Service Quality according to the ESI details of the policyholders**

In this section, the service quality of ESI Corporation is analysed based on the ESI profile of the respondents. Two factor variables are considered for analysis in this part such as Duration of Membership under ESI Scheme and the Level of ESI

Benefits Utilized. For the purpose of the comparison of mean scores, One-way ANOVA/ Welch test is used based on the homogeneity assumption. Levene's test is used for the purpose of checking the equality of population variance. In addition to that, Post hoc analysis is conducted for the pair wise comparison of the mean scores for the significant result. The results are as follows.

### 6.6.3.1 Comparison of Service Quality based on the Duration of ESI Membership

This section describes the analysis of the service quality perception of the policyholders on the basis of the duration of ESI membership. For this purpose, One-way ANOVA/ Welch test is applied according to the homogeneity assumption of Equality of Variance. Following hypothesis is formulated and tested accordingly.

*H0<sub>9</sub>: There is no significant difference in the perception regarding Service Quality among policyholders according to Duration of ESI Membership.*

*H1<sub>9</sub>: There is significant difference in the perception regarding Service Quality among policyholders according to Duration of ESI Membership*

**Table 6.14**

*Comparison of Service Quality based on Duration of ESI Membership*

| Dimensions           | Descriptive Statistics of Duration of Membership wise comparison<br>(Mean and SD) |                 |                 |                 |                 | Levene's test of Equality of Variance |            | One-way ANOVA/ Welch test |            |
|----------------------|-----------------------------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|---------------------------------------|------------|---------------------------|------------|
|                      | Up to 5 years                                                                     | 6-10 years      | 11-15 years     | 16-20 years     | Above 20 years  | Test statistics                       | Sig. value | Test Statistics           | Sig. value |
| <b>Reliability</b>   | 3.321<br>(.457)                                                                   | 3.564<br>(.504) | 3.716<br>(.492) | 4.160<br>(.468) | 4.070<br>(.528) | 1.352                                 | 0.250      | 34.933**                  | .000       |
| <b>Tangibility</b>   | 2.984<br>(.416)                                                                   | 3.210<br>(.414) | 3.491<br>(.521) | 3.819<br>(.516) | 3.768<br>(.399) | 1.194                                 | 0.312      | 45.739**                  | .000       |
| <b>Assurance</b>     | 3.473<br>(.297)                                                                   | 3.563<br>(.326) | 3.701<br>(.420) | 3.867<br>(.442) | 3.736<br>(.440) | 4.056**                               | 0.003      | 11.878**                  | .000       |
| <b>Accessibility</b> | 2.505<br>(.639)                                                                   | 2.843<br>(.605) | 3.139<br>(.676) | 3.289<br>(.635) | 3.467<br>(.497) | 1.322                                 | 0.261      | 27.094**                  | .000       |
| <b>Communication</b> | 2.159<br>(.445)                                                                   | 2.309<br>(.500) | 2.424<br>(.544) | 2.600<br>(.480) | 2.662<br>(.521) | 1.523                                 | 0.194      | 11.620**                  | .000       |

| Dimensions                             | Descriptive Statistics of Duration of Membership wise comparison<br>(Mean and SD) |                 |                 |                 |                 | Levene's test of Equality of Variance |            | One-way ANOVA/ Welch test |            |
|----------------------------------------|-----------------------------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|---------------------------------------|------------|---------------------------|------------|
|                                        | Up to 5 years                                                                     | 6-10 years      | 11-15 years     | 16-20 years     | Above 20 years  | Test statistics                       | Sig. value | Test Statistics           | Sig. value |
| <b>Understanding of Policy holders</b> | 2.523<br>(.541)                                                                   | 2.621<br>(.557) | 2.639<br>(.540) | 2.611<br>(.560) | 2.825<br>(.669) | 1.066                                 | 0.373      | 1.790                     | .130       |
| <b>Responsiveness</b>                  | 2.301<br>(.345)                                                                   | 2.351<br>(.392) | 2.418<br>(.425) | 2.413<br>(.616) | 2.510<br>(.474) | 6.643**                               | 0.000      | 2.037                     | .095       |
| <b>E-governance</b>                    | 3.096<br>(.344)                                                                   | 3.235<br>(.309) | 3.331<br>(.399) | 3.478<br>(.415) | 3.458<br>(.259) | 4.415**                               | 0.002      | 15.261**                  | .000       |
| <b>Overall Service Quality</b>         | 2.795<br>(.273)                                                                   | 2.962<br>(.257) | 3.108<br>(.289) | 3.279<br>(.306) | 3.312<br>(.269) | 0.337                                 | 0.853      | 44.060**                  | .000       |

Source: Primary Data

\*\*Significant at 1% level of significance

Parentheses represent standard deviation

Table 6.14 describes the result of One-way ANOVA/ Welch test used to compare the service quality perception of policyholders based on their duration of membership under ESI scheme. The Levene's test result reveals that p values are greater than 0.05 in the case of Reliability, Tangibility, Accessibility, Communication, Understanding of Policyholders and Overall Service Quality. Hence, equality of population variance can be assumed in these cases and One-way ANOVA can be used for the purpose of mean comparison. Whereas the p value under Levene's test in the case of Assurance (p value - .003), Responsiveness (p value - .000) and E-governance (p value-0.002) are less than 0.05, hence homogeneity assumption is not satisfied and Welch test is applied for comparing mean scores.

As per the result of One-way ANOVA, the null hypothesis is rejected at 1% level of significance for the service quality factors such as Reliability, Tangibility, Accessibility, Communication and Overall Service Quality. Because the p values in all these cases are less than 0.01. In the same manner, the null hypothesis is rejected at 1% level of significance under Welch test for the E-governance and Assurance factor as the p values in these two cases are also less than 0.01. Hence it can be interpreted that there is a significant difference in the service quality perception

regarding Reliability, Tangibility, Assurance, Accessibility, Communication, E-governance and Overall Service Quality among the policyholders based on the duration of ESI membership.

Further, descriptive statistics reveals that the mean score of the policyholders having more than 15 years of membership under ESI scheme is greater than the mean score of the policyholders with lesser duration of ESI membership. It reveals that the policyholder who remains as a member under ESI scheme for a longer period has better perception regarding the service quality of ESI Corporation. Therefore, it can be inferred that duration of membership under ESI scheme significantly affects the perception of policyholders regarding service quality factors such as Reliability, Tangibility, Accessibility, Communication, E-governance, Assurance and Overall Service Quality

However, it is failed to reject the null hypothesis in the case of 'Responsiveness' as per Welch test and 'Understanding of Policyholders' as per ANOVA, as the p values are more than 0.05. Hence it can be further interpreted that there is no significant difference in the perception regarding 'Responsiveness' and 'Understanding of Policyholders' among the policyholders based on the period of membership under ESI scheme.

**Table 6.15**

*Multiple Comparisons of Service Quality Based on Duration of ESI Membership – Scheffe's post hoc test*

| Duration of ESI Membership (I) | Duration of ESI Membership (J) | Mean Difference (I-J) |                     |                     |                     |                     | Overall Service Quality |
|--------------------------------|--------------------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|-------------------------|
|                                |                                | Reliability           | Tangibility         | Accessibil-ity      | Communi-cation      | (Sig.)              |                         |
| Up to 5 years                  | 6-10 years                     | -.24297**<br>(.000)   | -.22597**<br>(.000) | -.33823**<br>(.000) | -.15061<br>(.063)   | -.16686**<br>(.000) |                         |
|                                | 11-15 years                    | -.39507**<br>(.000)   | -.50643**<br>(.000) | -.63448**<br>(.000) | -.26533**<br>(.001) | -.31237**<br>(.000) |                         |
|                                | 16-20 years                    | -.83879**<br>(.000)   | -.83460**<br>(.000) | -.78384**<br>(.000) | -.44091**<br>(.000) | -.48427**<br>(.000) |                         |
|                                | Above 20 years                 | -.74879**<br>(.000)   | -.78390**<br>(.000) | -.96162**<br>(.000) | -.50341**<br>(.000) | -.51673**<br>(.000) |                         |

| Duration of ESI Membership (I) | Duration of ESI Membership (J) | Mean Difference (I-J) |                     |                     |                     |                     | Overall Service Quality |
|--------------------------------|--------------------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|-------------------------|
|                                |                                | Reliability           | Tangibility         | Accessibil-ity      | Communi-cation      | (Sig.)              |                         |
| 6-10 years                     | 11-15 years                    | -.15210<br>.154       | -.28046**<br>(.000) | -.29625**<br>(.007) | -.11472<br>(.435)   | -.14551**<br>(.001) |                         |
|                                | 16-20 years                    | -.59582**<br>(.000)   | -.60862**<br>(.000) | -.44561**<br>(.000) | -.29030**<br>(.006) | -.31741**<br>(.000) |                         |
|                                | Above 20 years                 | -.50582**<br>(.000)   | -.55793**<br>(.000) | -.62338**<br>(.000) | -.35280*<br>(.023)  | -.34987**<br>(.000) |                         |
| 11-15 years                    | 16-20 years                    | -.44372**<br>(.000)   | -.32817**<br>(.001) | -.14935<br>(.699)   | -.17558<br>(.291)   | -.17190**<br>(.007) |                         |
|                                | Above 20 years                 | -.35372*<br>(.028)    | -.27747<br>(.093)   | -.32713<br>(.227)   | -.23808<br>(.286)   | -.20437*<br>(.024)  |                         |
| 16-20 years                    | Above 20 years                 | .09000<br>(.958)      | .05069<br>(.993)    | -.17778<br>(.832)   | -.06250<br>(.989)   | -.03247<br>(.992)   |                         |

Source: Primary Data

\*Significant at 5% level of significance

\*\*Significant at 1% level of significance

Parentheses represent significance value

Table 6.15 explains the result of Scheffe's Post hoc test for One-way ANOVA for the service quality dimensions such as Reliability, Tangibility, Accessibility, Communication and Overall Service Quality. According to the results, in the case of Reliability factor, significant difference in the perception exists between all groups of policyholders except between the policyholders having ESI membership of 6-10 years and 11-15 years; and between the policyholders of 16-20 years and Above 20 years of ESI membership.

In respect of Tangibility, the policyholders of Above 20 years of ESI membership do not differ significantly from the policyholders of 11-15 years group and 16-20 years group. Significant difference is observed between all other groups in this regard.

In the case of Accessibility, no significant difference is observed between the policyholders of ESI membership of 11-15 years and 16-20 years. Similarly, the policyholders having Above 20 years of ESI membership do not differ significantly from the policyholders having 11-15 years of ESI membership and 16-20 years of ESI membership. Significant difference exists between all other groups.

In the case of Communication factor, no significant difference is found between the policyholders of Up to 5 years of ESI membership and 6-10 years of ESI membership; and between 16-20 years of ESI membership and Above 20 years of ESI membership. In the same manner, the policyholders having 11-15 years of ESI membership do not differ significantly from the policyholders having ESI membership of 6-10 years, 16-20 years and Above 20 years. Significant difference is observed between all other groups in this respect.

In the case of Overall Service Quality, significant difference is observed between all groups of policyholders except between the policyholders of ESI membership of 16-20 years and Above 20 years. The highest significant mean difference in perception score in the case of Reliability and Tangibility is found between the policyholders of ESI membership of Up to 5 years and 16-20 years. Whereas it is between Up to 5 years and Above 20 years in respect of the factors such as Accessibility, Communication and Overall Service Quality. It indicates that the policyholders of above 15 years of ESI membership better perceive the service quality factors such as Reliability, Tangibility, Accessibility, Communication and Overall Service Quality than the policyholders having lesser duration of membership under ESI scheme.

**Table 6.16**

*Multiple Comparisons of Service Quality based on Duration of ESI Membership – Tamhane's T2 post hoc test*

| Duration of ESI Membership (I) | Duration of ESI Membership (J) | Assurance             |      | E-Governance          |      |
|--------------------------------|--------------------------------|-----------------------|------|-----------------------|------|
|                                |                                | Mean Difference (I-J) | Sig. | Mean Difference (I-J) | Sig. |
| Up to 5 years                  | 6-10 years                     | -.08931               | .140 | -.13912**             | .003 |
|                                | 11-15 years                    | -.22740**             | .000 | -.23544**             | .000 |
|                                | 16-20 years                    | -.39307**             | .000 | -.38182**             | .000 |
|                                | Above 20 years                 | -.26212               | .157 | -.36237**             | .000 |
| 6-10 years                     | 11-15 years                    | -.13810               | .101 | -.09632               | .456 |
|                                | 16-20 years                    | -.30377**             | .001 | -.24270**             | .006 |
|                                | Above 20 years                 | -.17281               | .672 | -.22326*              | .016 |

| Duration of ESI Membership (I) | Duration of ESI Membership (J) | Assurance             |       | E-Governance          |       |
|--------------------------------|--------------------------------|-----------------------|-------|-----------------------|-------|
|                                |                                | Mean Difference (I-J) | Sig.  | Mean Difference (I-J) | Sig.  |
| 11-15 years                    | 16-20 years                    | -.16567               | .344  | -.14638               | .435  |
|                                | Above 20 years                 | -.03472               | 1.000 | -.12694               | .590  |
| 16-20 years                    | Above 20 years                 | .13095                | .961  | .01944                | 1.000 |

Source: Primary Data

\*Significant at 5% level of significance

\*\*Significant at 1% level of significance

Table 6.16 shows the result of Tamhane's T2 Post hoc test in respect of the service quality factors such as Assurance and E-governance. In this case, a pair wise comparison of the policyholders with different duration of ESI membership is made. The result points out that in the case of Assurance factor, the policyholders of Up to 5 years of ESI membership differ significantly from the policyholders of 11-15 years of ESI membership and 16-20 years of ESI membership. Similarly, significant difference exists between the policyholders of 6-10 years of ESI membership and 16-20 years of ESI membership. Whereas no significant difference is found between other groups in the case of Assurance.

In the case of E-governance, policyholders of Up to 5 years of ESI membership differ significantly from all other groups of policyholders. Similarly, the policyholders of 6-10 years of ESI membership differ significantly from the policyholders having ESI membership of 16-20 years and Above 20 years.

Highest significant mean difference is observed between the policyholders of ESI membership of Up to 5 years and 16-20 years. It points out that the perception score of Assurance and E-governance of the policyholders who remain as a member under ESI scheme for 16-20 years is much higher than the policyholders of Up to 5 years of ESI membership.

### 6.6.3.2 Comparison of Service quality according to the level of utilization of ESI benefits

This section describes the analysis of the service quality perception of the policyholders on the basis of the level of ESI benefits utilization. For this purpose, One-way ANOVA/ Welch test is applied according to the homogeneity assumption of Equality of Variance. Following hypothesis is formulated and tested accordingly.

*H<sub>010</sub>: There is no significant difference in the perception regarding Service Quality among policyholders according to level of ESI benefits utilization.*

*H<sub>110</sub>: There is significant difference in the perception regarding Service Quality among policyholders according to level of ESI benefits utilization.*

**Table 6.17**

*Comparison of Service Quality based on level of ESI benefits utilization*

| Dimensions                            | Descriptive Statistics of level of ESI benefits utilization (Mean and SD) |                 |                 |                   | Levene's test of Equality of Variance |            | One-way ANOVA/ Welch test |            |
|---------------------------------------|---------------------------------------------------------------------------|-----------------|-----------------|-------------------|---------------------------------------|------------|---------------------------|------------|
|                                       | Up to 3 times                                                             | 4 – 6 times     | 7 – 9 times     | More than 9 times | Test statistics                       | Sig. value | Test Statistics           | Sig. value |
| <b>Reliability</b>                    | 3.383<br>(.479)                                                           | 3.656<br>(.480) | 3.553<br>(.558) | 4.029<br>(.585)   | 2.558                                 | .055       | 28.311**                  | .000       |
| <b>Tangibility</b>                    | 3.049<br>(.449)                                                           | 3.269<br>(.392) | 3.321<br>(.629) | 3.819<br>(.484)   | 7.431**                               | .000       | 43.787**                  | .000       |
| <b>Assurance</b>                      | 3.502<br>(.340)                                                           | 3.647<br>(.328) | 3.556<br>(.367) | 3.773<br>(.475)   | 4.393**                               | .005       | 8.966**                   | .000       |
| <b>Accessibility</b>                  | 2.581<br>(.625)                                                           | 2.856<br>(.616) | 2.948<br>(.814) | 3.485<br>(.510)   | 6.847**                               | .000       | 45.960**                  | .000       |
| <b>Communication</b>                  | 2.155<br>(.445)                                                           | 2.332<br>(.481) | 2.350<br>(.570) | 2.732<br>(.458)   | 2.231                                 | .084       | 24.627**                  | .000       |
| <b>Understanding of Policyholders</b> | 2.529<br>(.559)                                                           | 2.596<br>(.542) | 2.550<br>(.558) | 2.819<br>(.525)   | 0.943                                 | .420       | 4.822**                   | .003       |
| <b>Responsiveness</b>                 | 2.283<br>(.334)                                                           | 2.409<br>(.411) | 2.331<br>(.439) | 2.485<br>(.552)   | 9.215**                               | .000       | 4.613**                   | .004       |

| Dimensions                     | Descriptive Statistics of level of ESI benefits utilization (Mean and SD) |                 |                 |                   | Levene's test of Equality of Variance |            | One-way ANOVA/ Welch test |            |
|--------------------------------|---------------------------------------------------------------------------|-----------------|-----------------|-------------------|---------------------------------------|------------|---------------------------|------------|
|                                | Up to 3 times                                                             | 4 – 6 times     | 7 – 9 times     | More than 9 times | Test statistics                       | Sig. value | Test Statistics           | Sig. value |
| <b>E-governance</b>            | 3.126<br>(.332)                                                           | 3.213<br>(.308) | 3.376<br>(.427) | 3.478<br>(.410)   | 5.426**                               | .001       | 16.296**                  | .000       |
| <b>Overall Service Quality</b> | 2.826<br>(.275)                                                           | 2.997<br>(.219) | 2.998<br>(.375) | 3.328<br>(.297)   | 7.072**                               | .000       | 50.385**                  | .000       |

Source: Primary Data

\*\*Significant at 1% level of significance

Parentheses represent standard deviation

Table 6.17 depicts the result of One-way ANOVA/ Welch test used to analyse the service quality perception of ESI policyholders according to the level of utilization of ESI benefits. As per the result of Levene's test, homogeneity assumption can be assumed in the case of Reliability (p value- .055), Understanding of Policyholders (p value - .420) and Communication (p value- 0.084), where the p values are more than 0.05. Hence One-way ANOVA is used for comparing the mean score of Reliability, Communication and Understanding of Policyholders. However, in respect of other service quality factors such as Tangibility, Assurance, Accessibility, Responsiveness, E-governance and Overall Service Quality, homogeneity assumption cannot be assumed. Because the p values of Levene's test in these cases are less than 0.05. Hence Welch test is used for mean comparison in these cases.

As per the result of One-way ANOVA, the p value of Reliability, Communication and Understanding of Policyholders are less than 0.01. Hence null hypothesis is rejected in these three cases. So, there exists significant difference in the service quality perception regarding Reliability, Communication and Understanding of Policyholders among ESI policyholders according to the level of utilization of ESI benefits. Further, the result of Welch test shows that the p values of Tangibility, Assurance, Accessibility, Responsiveness, E-governance and Overall Service Quality are less than 0.01. Hence null hypothesis is rejected for these service quality

factors also. In short significant difference is observed in the service quality perception among ESI policyholders based on the level of utilization of ESI benefits.

From the descriptive statistics, it is evident that, the policyholders who are using ESI benefits for a greater number of times have better perception regarding various dimensions of service quality. The mean score of the perception of policyholders who are utilizing ESI benefits only up to three times in a year is very low when compared to other groups. Hence, it can be inferred that the level of utilization of ESI benefits significantly influence the service quality perception of policyholders.

**Table 6.18**

*Multiple Comparisons of Service Quality Based on the level of ESI Benefits Utilization– Scheffe's post hoc test*

| Level of ESI Benefits Utilised (I) | Level of ESI Benefits Utilised (J) | Mean Difference (I-J) (Sig.) |                     |                                |
|------------------------------------|------------------------------------|------------------------------|---------------------|--------------------------------|
|                                    |                                    | Reliability                  | Communication       | Understanding of Policyholders |
| Up to 3 times                      | 4-6 times                          | -.27283<br>(.060)            | -.17706<br>(.065)   | -.06702<br>(.694)              |
|                                    | 7-9 times                          | -.16984<br>(.129)            | -.19492*<br>(.039)  | -.02059<br>(.995)              |
|                                    | More than 9 times                  | -.64652**<br>(.000)          | -.57654**<br>(.000) | -.29044**<br>(.001)            |
| 4-6 times                          | 7-9 times                          | .10299<br>(.578)             | -.01786<br>(.995)   | .04643<br>(.951)               |
|                                    | More than 9 times                  | -.37370**<br>(.000)          | -.39947**<br>(.000) | -.22342*<br>(.031)             |
| 7-9 times                          | More than 9 times                  | -.47668**<br>(.000)          | -.38162**<br>(.000) | -.26985*<br>(.035)             |

Source: Primary Data

\*Significant at 5% level of significance

\*\*Significant at 1% level of significance

Parentheses represent significance value

As the result of One-way ANOVA is significant, a pair wise comparison of the service quality perception of the policyholders according to the level of utilization of ESI benefits is made in Table 6.18. As per the result of Scheffe's Post hoc test, the policyholders who are utilizing ESI benefits for more than 9 times are significantly different from all other groups of policyholders in the case of their perception regarding Reliability, Communication and Understanding of Policyholders. Further in the case of Communication, significant difference is also observed between the policyholders who are using ESI benefits Up to 3 times and the policyholders using ESI benefits 7-9 times in a year. The result points out that the policyholders who are using ESI benefits greater number of times (More than 9 times in a year) better perceive service quality factors such as Reliability, Understanding of Policyholders and Communication than the policyholders using ESI benefits lesser number of times.

**Table 6.19**

*Multiple Comparisons of Service Quality Based on the Level of ESI Benefits Utilization– Tamhane's T2 Post hoc test*

| Level of ESI Benefits Utilised (I) | Level of ESI Benefits Utilised (J) | Mean Difference (I-J) (Sig.) |                     |                     |                    |                     | Overall Service Quality |
|------------------------------------|------------------------------------|------------------------------|---------------------|---------------------|--------------------|---------------------|-------------------------|
|                                    |                                    | Tangi-bility                 | Assurance           | Accessibi-lity      | Respon-siveness    | E-gover-nance       |                         |
| Up to 3 times                      | 4-6 times                          | -.21928**<br>(.000)          | -.14503<br>(.061)   | -.27485**<br>(.001) | -.12515<br>(.062)  | -.08743<br>(.084)   | -.17108**<br>(.000)     |
|                                    | 7-9 times                          | -.27099*<br>(.023)           | -.05393<br>(.912)   | -.36738*<br>(.017)  | -.04749<br>(.975)  | -.25009**<br>(.001) | -.17190*<br>(.014)      |
|                                    | More than 9 times                  | -.77039**<br>(.000)          | -.27120**<br>(.000) | -.90419**<br>(.000) | -.20187*<br>(.034) | -.35227**<br>(.000) | -.50168**<br>(.000)     |
| 4-6 times                          | 7-9 times                          | -.05170<br>(.994)            | .09109<br>(.511)    | -.09253<br>(.972)   | .07766<br>(.837)   | -.16266<br>(.070)   | -.00082<br>(1.000)      |
|                                    | More than 9 times                  | -.55110**<br>(.000)          | -.12617*<br>(.048)  | -.62934**<br>(.000) | -.07672<br>(.893)  | -.26485**<br>(.000) | -.33060**<br>(.000)     |
| 7-9 times                          | More than 9 times                  | -.49940**<br>(.000)          | -.21727*<br>(.030)  | -.53681**<br>(.000) | -.15439<br>(.420)  | -.10218<br>(.700)   | -.32977**<br>(.000)     |

Source: Primary Data

\*Significant at 5% level of significance

\*\*Significant at 1% level of significance

Parentheses represent significance value

Table 6.19 shows the result of Tamhane's T2 Post hoc test in respect of the service quality factors such as Tangibility, Assurance, Accessibility, Responsiveness, E-governance and Overall Service Quality. From the result, it is evident that the policyholders utilizing ESI benefits for more than nine times in a year are significantly different from other groups of policyholders in their perception regarding Tangibility, Assurance, Accessibility and Overall Service Quality. Similarly, the policyholders using ESI benefits Up to 3 times in a year are significantly different from all other groups in respect of Tangibility, Accessibility and Overall Service Quality. In the case of Responsiveness, significant difference is found only between the policyholders using ESI benefits 'Up to 3 times' and 'More than 9 times' in a year. Under E-governance, the policyholders utilizing ESI benefits Up to 3 times in a year are significantly different from the policyholders utilizing ESI benefits for 7-9 times in a year. Likewise, the policyholders using ESI benefits More than 9 times in a year are significantly different from the policyholders who are using ESI benefits for Up to 3 times and for 4-6 times in a year.

The highest significant mean difference in respect of Tangibility, Assurance, Accessibility, Responsiveness, E-governance and Overall Service Quality is found between the policyholders utilizing ESI benefits 'Up to 3 times' in a year and 'More than 9 times' in a year. It indicates that the perception score of the policyholders who are utilizing ESI benefits for a greater number of times (More than 9 times in a year) is much better than the perception score of policyholders utilizing ESI benefits only lesser number of times (Up to 3 times in a year).

## **6.7 Conclusion**

This chapter focused on analysing the service quality of ESI Corporation. Assessing and improving service quality is essential for enhancing policyholders' satisfaction and increasing the level of utilization of ESI benefits. Forty-five statements grouped under 8 dimensions such as Reliability, Tangibility, Assurance, Accessibility, Communication, Understanding of Policyholders, Responsiveness and E-governance are used for measuring the service quality of ESI Corporation. Various statistical tools such as Mean, Standard Deviation, One Sample t test, One-way ANOVA/

Welch test and Scheffe/ Tamhane's T2 Post hoc test are used for the purpose of analysis.

This chapter starts with the descriptive statistics of the factors of service quality. As per the descriptive statistics, 'Assurance' dimension has the highest mean score and 'Communication' dimension has the lowest mean score. The results of One sample t test pointed out that ESI Corporation offers average level of service quality to its policyholders. Further, the service quality of ESI Corporation is compared across the policyholders of different demographic groups and ESI details. From the results, it is evident that there is significant difference in the service quality perception among policyholders according to age, marital status, income, nature of the organization, duration of membership under ESI scheme and the level of ESI benefits utilization. The results obtained from this chapter can be used to identify areas where managerial attention and action are required for improving the service performance of ESI Corporation.

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## *Chapter 7*

# **ANALYSIS OF SATISFACTION LEVEL AND SENSE OF SOCIAL SECURITY OF ESI POLICYHOLDERS**

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## 7.1 Introduction

In the previous chapter, the Service Quality of ESI Corporation is analyzed in detail. Since service quality act as a precursor to customer satisfaction and positive behavioural intention (Agyapong et al., 2017), it is quite relevant to understand the level of satisfaction and sense of social security of ESI policyholders. Hence, this chapter aims to explore and compare the same by considering the demographic groups and ESI details of the policyholders as factor variables. First of all, satisfaction level is measured with the help of 10 statements by using a five-point Likert scale in which 5 stands for Highly Satisfied, 4 for Satisfied, 3 for Neutral, 2 for Dissatisfied, and 1 for Highly Dissatisfied. Similarly, Sense of Social Security is identified by considering 3 dimensions such as Health protection, Provision of income security and Risk Coverage. Sense of Social Security is also measured on a five-point Likert scale in which 5 stands for strongly agree, 4 for agree, 3 for neutral, 2 for disagree and 1 for strongly disagree.

## 7.2 Objectives

- To study the **satisfaction level** of ESI policyholders and the influence of awareness and knowledge on their satisfaction level.
- To evaluate the **Sense of Social Security** experienced by ESI policyholders from the services of ESI Corporation.

## 7.3 Hypotheses

This chapter analyses the satisfaction level and sense of social security of ESI policyholders. **The influence of awareness and knowledge on the satisfaction**

**level of ESI policyholders is discussed in the 8<sup>th</sup> Chapter.** The hypotheses tested in this chapter are given below.

- H<sub>9</sub>: ESI Corporation does not offer average level of satisfaction to its policyholders ( $\bar{X} \neq 3$ ).
- H<sub>10</sub>: There is significant difference in the satisfaction level towards services of ESI Corporation among policyholders of different demographic groups and ESI details.
- H<sub>11</sub>: ESI Corporation does not offer average level of sense of social security to its policyholders ( $\bar{X} \neq 3$ ).
- H<sub>12</sub>: There is significant difference in the sense of social security among ESI policyholders of different demographic groups and ESI details.

#### **7.4 Methodology and Database**

In order to discuss the objective of the present chapter, primary data are collected from the policyholders of ESI Corporation by using a pretested structured questionnaire. A total of 450 sample policyholders is selected.

To assess the level of satisfaction and sense of social security, the study used descriptive statistics and one-sample t-test. Further, a comparative analysis of satisfaction as well as sense of social security among policyholders according to their demographic groups and ESI details is conducted by using Independent Sample t-test and One-way ANOVA or Welch test, as appropriate based on the homogeneity of variance. Levene's test of Equality of Variance is used to identify the homogeneity assumption of population variance. Additionally, Scheffe's/ Tamhane's T2 post-hoc test is used to conduct the multiple comparisons of independent variables on significant difference in satisfaction as well as sense of social security.

This chapter is divided in to two sections. The first section deals with the analysis of satisfaction level and second section exhibits the result of sense of social security of ESI policyholders. The results are presented in the following pages in the order of

descriptive statistics, one-sample t-test, test of mean difference and its post-hoc analysis.

### **7.5 Variables used for the analysis**

**Table 7.1**

*Variables used for the analysis*

| <b>Constructs</b>        | <b>Dimensions/ Variables</b>                                                                                                                                                                                                                                                                                     | <b>Type of questions</b>       |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Satisfaction             | Communication of Information by ESI Corporation, Infrastructure and diagnostic facilities, Procedural formalities, Behavior of ESI staffs, Accessibility of the services, Medical services, Adequacy of cash benefits, Online services of ESI Corporation, Grievance handling mechanism and Premium contribution | 5 Point Likert Scale Questions |
| Sense of Social Security | Health protection (4 Statements), Provision of income security (4 Statements) and Risk Coverage (5 statements)                                                                                                                                                                                                   | 5 Point Likert Scale Questions |

Source: Conceptual Framework

## **Section I**

### **7.6 Satisfaction Level of ESI Policyholders**

According to Wirtz & Bateson (1999) “customer satisfaction refers to customers’ evaluative response regarding the services rendered by a service provider.” If the actual performance is more than expectation, it is termed as satisfaction. On the other hand, if the actual experience is below expectation, it is termed as dissatisfaction. It varies from person to person and from situation to situation. Measurement of satisfaction is an important tool for evaluating and improving service performance (Zairi,2000).

ESI Corporation being the most important social security organization in India offers several social security benefits to the largest segment of working population in the private sector. Recently the Corporation launched several quality initiatives to

boost customer satisfaction. A detailed analysis of the level of policyholders' satisfaction helps the Corporation to improve its overall performance efficiency. This section assesses the satisfaction level of policyholders towards the services of ESI Corporation, utilizing a five-point Likert scale with indicators. The results are summarized using descriptive statistics like mean and standard deviation. Besides, the level of satisfaction is measured with the help of One-Sample 't' test. These are presented below.

**Table 7.2**

*Descriptive Statistics of indicators of Satisfaction*

| <b>Indicators of Satisfaction</b>               | <b>N</b>   | <b>Mean</b>   | <b>Std. Deviation</b> |
|-------------------------------------------------|------------|---------------|-----------------------|
| Communication of Information by ESI Corporation | 450        | 1.8911        | .73969                |
| Infrastructure and diagnostic facilities        | 450        | 3.1956        | .85051                |
| Procedural formalities                          | 450        | 1.9467        | .74726                |
| Behaviour of ESI staffs                         | 450        | 2.6556        | .87225                |
| Accessibility of the services                   | 450        | 3.2111        | .79663                |
| <b>Medical services</b>                         | <b>450</b> | <b>3.7289</b> | <b>.68214</b>         |
| <b>Adequacy of cash benefits</b>                | 450        | <b>3.5111</b> | <b>.82344</b>         |
| <b>Online services of ESI Corporation</b>       | 450        | <b>3.5067</b> | <b>.87845</b>         |
| Grievance handling mechanism                    | 450        | 1.8844        | .76095                |
| <b>Premium contribution</b>                     | <b>450</b> | <b>3.9711</b> | <b>.68491</b>         |

Source: Primary Data

Table 7.2 shows the descriptive statistics of the indicators used to measure the satisfaction level of ESI policyholders. The result shows that the policyholders are satisfied with Premium Contribution (Mean – 3.9711, SD - .68491), Medical Services (Mean – 3.7289, SD - .68214), Adequacy of Cash Benefits (Mean – 3.5111, SD - .82344) and Online Services of ESI Corporation (3.5067, SD - .87845). But they are dissatisfied with the Grievance Handling Mechanism (Mean – 1.8844, SD - .76095), Communication of Information by ESI Corporation (Mean – 1.8911, SD - .73969) and Procedural Formalities (Mean - 1.9467, SD - .74726). Their

satisfaction level is neutral with regard to the factors such as Accessibility of the Services (Mean – 3.2111, SD - .79663), Infrastructure and Diagnostic Facilities (Mean - 3.1956, SD - .85051) and Behaviour of ESI staffs (Mean - 2.6556, SD-.87225).

### 7.6.1 The level of Satisfaction of ESI Services

Here, the level of satisfaction of ESI services is examined with the help One-Sample ‘t’ test. Since, the satisfaction is measured by using 10 indicators in 5 Point Likert Scale; the average mean score is denoted as three. Following hypothesis is formulated and tested for One-Sample ‘t’ test.

$H0_1$ : ESI Corporation offers average level of satisfaction to its policyholders ( $\bar{X} = 3$ ).

$H1_1$ : ESI Corporation does not offer average level of satisfaction to its policyholders ( $\bar{X} \neq 3$ ).

**Table 7.3**

*One Sample t Statistics and Test Result of Satisfaction Level*

| Satisfaction | One-Sample Statistics |        |                | One Sample Test (Test Value = 3) |       |                |
|--------------|-----------------------|--------|----------------|----------------------------------|-------|----------------|
|              | N                     | Mean   | Std. Deviation | t                                | D. f. | Sig. (p) value |
| Satisfaction | 450                   | 2.9502 | .6137          | 1.721                            | 449   | 0.086          |

Source: Primary Data

Table 7.3 exhibits the result of One sample t test used to assess the level of satisfaction of ESI policyholders. The p value of one sample t test is 0.086 and test statistic is 1.721. As the p value is more than 0.05, the null hypothesis is failed to reject at 5% level of significance. Hence it can be inferred that the policyholders have average level of satisfaction towards various services of ESI Corporation.

## 7.6.2 Comparison of Satisfaction level according to the demographic groups of the policyholders

Here, the satisfaction level of ESI services is compared among policyholders according to their demographic groups such as gender, age, marital status, education, income, area of residence and nature of organization. In order to compare mean scores, Independent Sample 't' test and One-way ANOVA/ Welch test is applied. Prior to this, Levene's test of Equality of variance is used to prove the homogeneity assumption of population variance. Post-hoc analysis is also conducted for the significant result of mean differences. The results are presented in the following pages.

### 7.6.2.1 Gender wise comparison of Satisfaction Level

In this case, gender is considered as a factor variable for checking the significant difference in the satisfaction level between male and female policyholders. The following hypothesis is formulated and independent sample t test is applied for the purpose of gender wise comparison of satisfaction level.

*H0<sub>2</sub>: There is no significant difference in the satisfaction level of male and female policyholders regarding ESI services.*

*H1<sub>2</sub>: There is significant difference in the satisfaction level of male and female policyholders regarding ESI services.*

**Table 7.4**

*Gender wise comparison of Satisfaction Level*

| Factor              | Gender | Mean  | SD   | Levene's Test for Equality of Variances |      | t-test result |       |
|---------------------|--------|-------|------|-----------------------------------------|------|---------------|-------|
|                     |        |       |      | F                                       | Sig. | t             | Sig.  |
| <b>Satisfaction</b> | Male   | 2.901 | .644 | 6.371*                                  | .012 | 1.836         | 0.067 |
|                     | Female | 3.006 | .559 |                                         |      | 1.851         | 0.065 |

Source: Primary Data

\*Significant at 5% level of significance

Table 7.4 shows the result of independent sample t test used to compare the satisfaction level of male and female ESI policyholders. As per the Levene’s test for equality of variances, p value is less than 0.05. Therefore, equality of variance assumption is not satisfied in this case. Hence t value and significance value of independent sample t test corresponding to equal variances not assumed is taken for the comparison purpose

As per the result of independent sample t test, t value is 1.851 and p value is 0.065. As the p value is greater than 0.05, the null hypothesis is failed to reject at 5% level of significance. Hence it can be interpreted that there exists no significant difference between male and female policyholders with regard to their satisfaction level. In other words, gender does not influence the satisfaction level of ESI policyholders.

### 7.6.2.2 Age wise comparison of Satisfaction Level

Here age group is considered as a factor variable for studying the significant difference in the satisfaction level of ESI policyholders. For comparing the satisfaction level across various age groups, One-way ANOVA/ Welch test is used. The following hypothesis is formulated and tested in this case.

*H0<sub>3</sub>: There is no significant difference in the satisfaction level among policyholders of different age groups regarding ESI services.*

*H1<sub>3</sub>: There is significant difference in the satisfaction level among policyholders of different age groups regarding ESI services.*

**Table 7.5**

*Age wise comparison of Satisfaction Level*

| Factor              | Descriptive Statistics of Age wise comparison<br>(Mean and SD) |                 |                 |                 |                 | Levene’s test of Equality of Variance |            | One- way ANOVA/ Welch test |            |
|---------------------|----------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|---------------------------------------|------------|----------------------------|------------|
|                     | Up to 25 years                                                 | 26-35 years     | 36-45 years     | 46-55 years     | Above 55 years  | Test statistics                       | Sig. value | Test Statistics            | Sig. value |
| <b>Satisfaction</b> | 2.543<br>(.663)                                                | 2.753<br>(.585) | 2.973<br>(.508) | 3.145<br>(.602) | 3.439<br>(.548) | 1.417                                 | 0.227      | 18.140**                   | .001       |

Source: Primary Data

\*\*Significant at 1% level of significance

Parentheses represent standard deviation

Table 7.5 shows the result of One-way ANOVA/ Welch test used to compare the satisfaction level of ESI policyholders of different age groups. Levene's test of equality of population variance points out that p value is 0.227. As it is more than 0.05, homogeneity assumption is satisfied in this case. Hence One-way ANOVA is applied here for comparison of mean scores.

From the result of ANOVA, it is clear that significant difference exists in the satisfaction level among the policyholders of different age groups. Test statistic in this case is 18.140 and p value is .001. As the significance value is lesser than 0.01, the null hypothesis is rejected at 1% level of significance.

Descriptive statistics further reveals that the policyholders belonging to the age category of above 45 years are more satisfied with the services of ESI Corporation than younger age groups. Therefore, age of the policyholders significantly influences the satisfaction level of ESI policyholders.

**Table 7.6**

*Multiple Comparisons of Satisfaction Level based on Age group – Scheffe's post hoc test*

| Age (I)        | Age (J)        | Mean Difference (I-J) | Sig. |
|----------------|----------------|-----------------------|------|
| Up to 25 years | 26-35 years    | -.21030               | .255 |
|                | 36-45 years    | -.43055**             | .000 |
|                | 46-55 years    | -.60255**             | .000 |
|                | Above 55 years | -.89689**             | .000 |
| 26-35 years    | 36-45 years    | -.22025*              | .016 |
|                | 46-55 years    | -.39225**             | .000 |
|                | Above 55 years | -.68659**             | .000 |
| 36-45 years    | 46-55 years    | -.17200               | .125 |
|                | Above 55 years | -.46634**             | .000 |
| 46-55 years    | Above 55 years | -.29435               | .073 |

Source: Primary Data

\*\*The mean difference is significant at the 0.01 level.

\*The mean difference is significant at the 0.05 level

As the result of One-way ANOVA is significant, a pair wise comparison of the satisfaction level of ESI policyholders belonging to different age groups are conducted here. Table 7.6 shows the result of Scheffe's Post hoc test of satisfaction level of policyholders of different age categories. From the table, it is evident that the policyholders belonging to the age group of 'Up to 25 years' are significantly different from all age groups except the policyholders belonging to 26-35 years of age. Similarly, the policyholders of 26-35 years of age are significantly different from all age groups except the policyholders of Up to 25 years of age. Significant difference is also observed between the policyholders of 36-45 years of age and Above 55 years of age. But the policyholders of 46-55 years of age do not differ significantly from the policyholders of 36-45 years of age and Above 55 years of age. The mean difference is more between the policyholders of above 55 years and up to 25 years (.89689). It points out that the aged policyholders are more satisfied with the services of ESI Corporation than the younger policyholders.

#### **7.6.2.3 Marital Status wise comparison of Satisfaction Level**

In this case, independent sample t test is used to examine the significant difference in the satisfaction level of ESI policyholders based on their marital status. Accordingly, the following hypothesis is formulated and tested.

*H0<sub>4</sub>: There is no significant difference in the satisfaction level of married and unmarried policyholders regarding ESI services.*

*H1<sub>4</sub>: There is significant difference in the satisfaction level of married and unmarried policyholders regarding ESI services.*

**Table 7.7***Marital Status wise comparison of Satisfaction Level*

| Factor       | Marital Status | Mean  | SD    | Levene's Test for Equality of Variances |       | t-test result |              |
|--------------|----------------|-------|-------|-----------------------------------------|-------|---------------|--------------|
|              |                |       |       | F                                       | Sig.  | t             | Sig.         |
| Satisfaction | Married        | 2.954 | 0.567 |                                         |       | 0.413         | 0.679        |
|              | Unmarried      | 2.924 | 0.689 | 4.338*                                  | 0.038 | <b>0.365</b>  | <b>0.715</b> |

Source: Primary Data

\*Significant at 5% level of significance

Table 7.7 shows the result of the comparison of satisfaction level of the services of ESI Corporation between married and unmarried policyholders. The p value of Levene's test is 0.038, which is less than 0.05. Hence homogeneity of variance cannot be assumed in this case. On the basis of the result of Levene's test, t value and p value of independent sample t test corresponding to equal variance not assumed is referred for comparing the mean scores of satisfaction level between married and unmarried.

As per the result of independent sample t test, t value corresponding to equal variance not assumed is 0.365 and p value is 0.715. Hence it is failed to reject null hypothesis at 5% level of significance. So, there is no significant difference between married and unmarried policyholders in their satisfaction regarding ESI services.

#### **7.6.2.4 Education wise comparison of Satisfaction Level**

In this case, satisfaction level is compared across policyholders having different educational background. For testing the significant difference among the policyholders having different educational qualification, One-way ANOVA/ Welch test is used. The following hypotheses is formulated and tested for this purpose.

*H<sub>05</sub>: There is no significant difference in the satisfaction level among policyholders having different Educational Qualification regarding ESI Services.*

*H15: There is significant difference in the satisfaction level among policyholders having different Educational Qualification regarding ESI Services.*

**Table 7.8**

*Education wise comparison of Satisfaction Level*

| Factor              | Descriptive Statistics of Education wise comparison<br>(Mean and SD) |                       |                 |                  |                       | Levene's test of Equality of Variance |            | One- way ANOVA/ Welch test |            |
|---------------------|----------------------------------------------------------------------|-----------------------|-----------------|------------------|-----------------------|---------------------------------------|------------|----------------------------|------------|
|                     | SSLC and Below                                                       | Plus Two / Pre Degree | Degree/ Diploma | Post- Graduation | Professional & Others | Test statistics                       | Sig. value | Test Statistics            | Sig. value |
| <b>Satisfaction</b> | 2.961<br>(.512)                                                      | 2.952<br>(.534)       | 2.945<br>(.628) | 2.946<br>(.641)  | 2.944<br>(.533)       | 1.888                                 | 0.112      | 1.049                      | 0.381      |

Source: Primary Data

Parentheses represent standard deviation

Table 7.8 shows the education wise comparison of the satisfaction level of ESI policyholders by using One-way ANOVA/ Welch test. As per the result of Levene's test, test statistic is 1.888 and p value is 0.112. As the p value is more than 0.05, equality of population variance is assumed here. Hence One-way ANOVA is used for the comparison of mean scores.

As per the result of One-way ANOVA, it is evident that no significant difference exists in the satisfaction level among the policyholders having different educational qualifications. In this case the value of test statistic is 1.049 and p value is 0.381. As the p value is more than 0.05, it is failed to reject the null hypothesis at 5% level of significance. Hence education background of the policyholder is not a significant factor influencing their satisfaction level.

#### **7.6.2.5 Income wise comparison of Satisfaction Level**

In this case, the satisfaction level of the policyholders of ESI Corporation is compared based on their income level by using One-way ANOVA/ Welch test. The following hypothesis is formulated and tested in this case.

*H0<sub>6</sub>: There is no significant difference in the satisfaction level among policyholders from different income category regarding ESI Services.*

*H1<sub>6</sub>: There is significant difference in the satisfaction level among policyholders from different income category regarding ESI Services.*

**Table 7.9**

*Income wise comparison of Satisfaction Level*

| Factor              | Descriptive Statistics of Income wise comparison (Mean and SD) |                 |                 |                 | Levene's test of Equality of Variance |            | One- way ANOVA/ Welch test |            |
|---------------------|----------------------------------------------------------------|-----------------|-----------------|-----------------|---------------------------------------|------------|----------------------------|------------|
|                     | Up to 5000                                                     | 5001-10000      | 10001-15000     | 15001-21000     | Test statistics                       | Sig. value | Test Statistics            | Sig. value |
| <b>Satisfaction</b> | 3.241<br>(.511)                                                | 3.181<br>(.608) | 2.937<br>(.493) | 2.660<br>(.630) | 2.595                                 | 0.052      | 25.38**                    | 0.000      |

Source: Primary Data

\*\*Significant at 1% level of significance

Parentheses represent standard deviation

Table 7.9 describes the income wise comparison of the satisfaction level of ESI policyholders by using One-way ANOVA/ Welch test. As per the result of Levene's test, homogeneity of population variance can be assumed, as the p value is greater than 0.05 (Test statistic – 2.595). Hence One-way ANOVA is used for the purpose of comparison.

From the result of One-way ANOVA, it is clear that there is significant difference in the satisfaction level of policyholders based on their income. The p value in this case is less than 0.01 and test statistic is 25.38. Hence, null hypothesis is rejected in this case.

Further, descriptive statistic reveals that the mean score of the satisfaction level of the policyholders belonging to the lower income category such as 'Up to Rs. 5000' and 'Rs. 5000-10000' is more than other groups. In short, income level is a significant factor which influence the satisfaction of the ESI policyholders.

**Table 7.10**

*Multiple Comparisons of Satisfaction Level based on Monthly Income – Scheffe’s post hoc test*

| Monthly Income<br>(I) | Monthly Income<br>(J) | Mean Difference<br>(I-J) | Sig. |
|-----------------------|-----------------------|--------------------------|------|
|                       | Rs. 5001- 10000       | .05916                   | .902 |
| Up to Rs. 5000        | Rs. 10001- 15000      | .30338**                 | .001 |
|                       | Rs. 15001- 21000      | .58021**                 | .000 |
| Rs. 5001- 10000       | Rs. 10001- 15000      | .24422*                  | .011 |
|                       | Rs. 15001- 21000      | .52105**                 | .000 |
| Rs. 10001- 15000      | Rs. 15001- 21000      | .27683**                 | .000 |

Source: Primary Data

\*\*The mean difference is significant at the 0.01 level.

\*The mean difference is significant at the 0.05 level

Table 7.10 shows the result of Scheffe’s Post hoc test, describing the pair wise comparison of the satisfaction level of ESI policyholders belonging to different income category. From the result, it is understood that the policyholders coming under ‘Up to Rs. 5000’ and ‘Rs 5001-10000’ income category are significantly different from other groups. However, there is no significant difference between the policyholders coming under ‘Up to Rs.5000’ income group and ‘Rs.5001-10000’ income group with regard to the satisfaction level of ESI scheme. Likewise, the policyholders belonging to Rs. 10001-15000 and Rs. 15001- 21000 are significantly different from all other groups of policyholders. The mean difference is the highest between the policyholders coming under ‘Up to Rs.5000’ income group and ‘Rs.15001-21000’ income group. It further describes that the lower income policyholders (Up to Rs. 5000 income group and Rs. 5001-10000 income group) are better satisfied with the services of ESI Corporation than the higher income group (Rs. 15001-21000).

### 7.6.2.6 Comparison of Satisfaction Level based on Area of Residence

Area of residence is an important factor which influences the satisfaction level of ESI policyholders. Here the satisfaction level of ESI policyholders residing in rural, urban and semi-urban areas are compared and analysed by using On-way ANOVA/ Welch test. The following hypothesis is formulated in this case.

*H07: There is no significant difference in the satisfaction level among policyholders residing in different areas regarding ESI Services.*

*H17: There is significant difference in the satisfaction level among policyholders residing in different areas regarding ESI Services.*

**Table 7.11**

*Area of Residence wise comparison of Satisfaction Level*

| Factor       | Descriptive Statistics of Area of Residence (Mean and SD) |                 |                 | Levene's test of Equality of Variance |            | One-way ANOVA/ Welch test |            |
|--------------|-----------------------------------------------------------|-----------------|-----------------|---------------------------------------|------------|---------------------------|------------|
|              | Rural                                                     | Urban           | Semi-urban      | Test statistics                       | Sig. value | Test Statistics           | Sig. value |
| Satisfaction | 2.948<br>(.551)                                           | 2.953<br>(.581) | 2.950<br>(.598) | 0.647                                 | 0.524      | 1.812                     | 0.164      |

Source: Primary Data  
Parentheses represent standard deviation

Table 7.11 provides the result of One-way ANOVA/ Welch test used to compare the satisfaction level of ESI policyholders living in rural, urban and semi-urban areas. The p value of Levene's test is 0.524. As it is more than 0.05, homogeneity assumption is satisfied and hence One-way ANOVA can be used for the purpose of analysis.

The result of One-way ANOVA describes that test statistic is 1.812 and significance value is 0.164. As the p value is more than 0.05, the null hypothesis is failed to reject at 5% level of significance. Hence there is no significant difference in the satisfaction level among ESI policyholders residing in rural, urban and semi urban areas. In other words, area of residence does not influence the satisfaction level of ESI policyholders.

### 7.6.2.7 Comparison of Satisfaction Level based on the Nature of Organization

For checking the significant difference in the satisfaction level of policyholders working in factory and shop/ establishment, independent sample t test is used. The following hypothesis is formulated and tested in this respect.

*H0<sub>8</sub>: There is no significant difference in the satisfaction level among policyholders working in Factory and Shop/ Establishment regarding ESI Services.*

*H1<sub>8</sub>: There is significant difference in the satisfaction level among policyholders working in Factory and Shop/ Establishment regarding ESI Services.*

**Table 7.12**

*Nature of Organization based comparison of Satisfaction Level*

| Factor       | Nature of the Organization | Mean  | SD    | Levene's Test for Equality of Variances |       | t-test result |       |
|--------------|----------------------------|-------|-------|-----------------------------------------|-------|---------------|-------|
|              |                            |       |       | F                                       | Sig.  | t             | Sig.  |
| Satisfaction | Factory                    | 3.499 | 0.459 | 1.823                                   | 0.178 | 14.13**       | 0.000 |
|              | Shop/<br>Establishment     | 2.739 | 0.529 |                                         |       |               |       |

Source: Primary Data

\*\*Significant at 1% level of significance

Table 7.12 depicts the result of independent sample t test used to compare the satisfaction level of ESI policyholders working in factory and shop/ establishment. As per the result of Levene's test, equality of population variance is assumed here. Because the significance value of Levene's test is 0.178, which is more than 0.05. So. The test statistic and p value corresponding to equal variance assumed is used for interpreting the result of independent sample t test.

Accordingly, the result of independent sample t test shows that test statistic is 14.13 and p value is lesser than 0.01. Hence null hypothesis is rejected at 1% level of significance and it can be understood that there is significant difference between the policyholders working in factory and shop/ establishment in their level of satisfaction regarding ESI services.

Descriptive statistic further shows that ESI policyholders working in factory are more satisfied with the services of ESI Corporation than the policyholders working in shops/ establishments. Hence nature of organization influences the satisfaction level of ESI policyholders.

### **7.6.3 Comparison of Satisfaction Level according to the ESI details of the policyholders**

In this section, the Satisfaction Level of ESI policyholders is examined based on their ESI details. Accordingly, two factor variables are considered for analysis in this part such as Duration of Membership under ESI Scheme and the Level of ESI Benefits Utilized. For the purpose of the comparison of mean scores, One-way ANOVA/ Welch test is used based on the homogeneity assumption. Levene's test is used for the purpose of checking the equality of population variance. In addition to that, Post hoc analysis is conducted for the pair wise comparison of the mean scores for the significant result. The results are as follows.

#### **7.6.3.1 Comparison of Satisfaction Level based on the Duration of ESI Membership**

This section explains the analysis of the satisfaction level of policyholders on the basis of the duration of ESI membership. For this purpose, One-way ANOVA/ Welch test is applied according to the homogeneity assumption of Equality of Variance. Following hypothesis is formulated and tested accordingly.

*H<sub>0</sub>: There is no significant difference in the satisfaction level regarding ESI services among policyholders according to Duration of ESI Membership.*

*H<sub>1</sub>: There is significant difference in the satisfaction level regarding ESI services among policyholders according to Duration of ESI Membership.*

**Table 7.13**

*Comparison of Satisfaction Level according to Duration of ESI Membership*

| Factor              | Descriptive Statistics of Duration of ESI Membership (Mean and SD) |                 |                 |                 |                 | Levene's test of Equality of Variance |            | One-way ANOVA/ Welch test |            |
|---------------------|--------------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|---------------------------------------|------------|---------------------------|------------|
|                     | Up to 5 years                                                      | 6-10 years      | 11-15 years     | 16-20 years     | Above 20 years  | Test statistics                       | Sig. value | Test Statistics           | Sig. value |
| <b>Satisfaction</b> | 2.609<br>(.548)                                                    | 2.948<br>(.491) | 3.139<br>(.526) | 3.551<br>(.541) | 3.605<br>(.479) | 0.722                                 | 0.577      | 42.87**                   | 0.000      |

Source: Primary Data

\*\*Significant at 1% level of significance

Parentheses represent standard deviation

Table 7.13 describes the result of the comparison of satisfaction level of ESI policyholders by using One-way ANOVA/Welch test. Levene's test is used to check the equality assumption of population variance. The significance value of Levene's test is 0.577. As the p value is more than 0.05, homogeneity assumption is satisfied. Hence, One-way ANOVA can be used in this case.

The result of One-way ANOVA shows that test statistics is 42.87 and p value is less than 0.01. Hence, the null hypothesis is rejected at 1% level of significance and it is inferred that there is significant difference in the satisfaction level of ESI policyholders based on the duration of membership under ESI scheme.

Further, the mean score analysis reveals that the ESI policyholders having more than 15 years of membership under ESI scheme are more satisfied than other groups having lesser duration of ESI membership. In short, duration of ESI membership is a significant factor influencing the satisfaction level of ESI policyholders.

**Table 7.14**

*Multiple Comparison of Satisfaction Level based on the Duration of ESI Membership – Scheffe's post hoc test*

| <b>Duration of ESI membership (I)</b> | <b>Duration of ESI membership (J)</b> | <b>Mean Difference (I-J)</b> | <b>Sig.</b> |
|---------------------------------------|---------------------------------------|------------------------------|-------------|
| Up to 5 years                         | 6-10 years                            | -.33881**                    | .000        |
|                                       | 11-15 years                           | -.52984**                    | .000        |
|                                       | 16-20 years                           | -.94141**                    | .000        |
|                                       | Above 20 years                        | -.99530**                    | .000        |
| 6-10 years                            | 11-15 years                           | -.19103                      | .065        |
|                                       | 16-20 years                           | -.60260**                    | .000        |
|                                       | Above 20 years                        | -.65649*                     | .000        |
| 11-15 years                           | 16-20 years                           | -.41158**                    | .000        |
|                                       | Above 20 years                        | -.46547**                    | .003        |
| 16-20 years                           | Above 20 years                        | -.05389                      | .995        |

Source: Primary Data

\*\*The mean difference is significant at the 0.01 level.

\*The mean difference is significant at the 0.05 level

Table 7.14 deals with the result of Scheffe's Post hoc test for the multiple comparison of satisfaction level of policyholders based on the duration of membership under ESI scheme. The significance value of the test reveals that there is no significant difference in the satisfaction level between the policyholders of '6-10 years of ESI membership' and '11-15 years of ESI membership' (p value - .065); and between the policyholders having '16-20 years of ESI Membership' and 'Above 20 years of ESI Membership' (p value - .995). In both cases, p values are higher than 0.05. But significant difference is observed between all other groups of policyholders in their satisfaction level. The highest significant mean score difference is found between the policyholders having 'Above 20 years of membership' under ESI scheme and the policyholders having 'up to 5 years of ESI membership' (.99530). It reveals that the policyholders having longer duration of ESI membership (16-20 years and Above 20 years) are better satisfied with the services of ESI Corporation than the policyholders of shorter duration of ESI membership.

### 7.6.3.2 Comparison of Satisfaction Level based on the Level of ESI Benefits utilization

This section deals with analysing the satisfaction level of ESI policyholders according to the level of utilization of ESI benefits. For this purpose, One-way ANOVA/ Welch test is applied according to the homogeneity assumption of Equality of Variance. Following hypothesis is formulated and tested accordingly.

*H<sub>010</sub>: There is no significant difference in the satisfaction level regarding ESI services among policyholders according to the level of ESI Benefits utilization.*

*H<sub>110</sub>: There is significant difference in the satisfaction level regarding ESI services among policyholders according to the level of ESI Benefits utilization.*

**Table 7.15**

*Comparison of Satisfaction Level according to the Level of ESI Benefits Utilization*

| Factor              | Descriptive Statistics of Level of ESI Benefit Utilisation (Mean and SD) |                 |                 |                   | Levene's test of Equality of Variance |            | One- way ANOVA/ Welch test |            |
|---------------------|--------------------------------------------------------------------------|-----------------|-----------------|-------------------|---------------------------------------|------------|----------------------------|------------|
|                     | Up to 3 times                                                            | 4-6 times       | 7-9 times       | More than 9 times | Test statistics                       | Sig. value | Test Statistics            | Sig. value |
| <b>Satisfaction</b> | 2.674<br>(.541)                                                          | 2.996<br>(.391) | 2.961<br>(.716) | 3.604<br>(.573)   | 11.19**                               | 0.000      | 46.00**                    | 0.000      |

Source: Primary Data

\*\*Significant at 1% level of significance

Parentheses represent standard deviation

Table 7.15 exhibits the result of One-way ANOVA/Welch test used to compare the satisfaction level of ESI policyholders according to the level of utilization of ESI benefits. The Levene's test used to check the equality assumption of population variance shows that, test statistic is 11.19 and p value is less than 0.01. Hence equality of variance cannot be assumed. Therefore, Welch test is used for comparison of the mean scores in this case.

As per the result of Welch test, t value is 46.00 and p value is less than 0.01. Hence, null hypothesis is rejected at 1% level of significance and it can be interpreted that there is significant difference in the satisfaction level of ESI policyholders according to the level of utilization of ESI benefits.

According to the analysis of the mean scores, ESI policyholders who are utilizing ESI benefits for 'more than 9 times' are more satisfied (3.604) with ESI services than other groups. In short, the level of ESI benefits utilized is a significant factor influencing the satisfaction level of ESI policyholders.

**Table 7.16**

*Multiple Comparisons of Satisfaction Level based on the Level of ESI Benefits Utilization -Tamhane's T2 post hoc test*

| Level of ESI Benefits Utilisation (I) | Level of ESI Benefits Utilisation (J) | Mean Difference (I-J) | Sig.  |
|---------------------------------------|---------------------------------------|-----------------------|-------|
| Up to 3 times                         | 4-6 times                             | -.32210**             | .000  |
|                                       | 7-9 times                             | -.28749*              | .044  |
|                                       | More than 9 times                     | -.93008**             | .000  |
| 4-6 times                             | 7-9 times                             | .03461                | 1.000 |
|                                       | More than 9 times                     | -.60798**             | .000  |
| 7-9 times                             | More than 9 times                     | -.64259**             | .000  |

\*\*The mean difference is significant at the 0.01 level.

\*The mean difference is significant at the 0.05 level

Source: Primary Data

Table 7.16 shows the result of Tamhane's T2 post hoc test for the multiple comparison of the satisfaction level of policyholders according to the level of ESI benefits utilized. The result reveals that the satisfaction level of the ESI policyholders using ESI benefits for more than 9 times in a year is significantly different from other groups of policyholders at 1 % level of significance. Similarly, the satisfaction level of the policyholders using ESI benefits only Up to 3 times in a year are also statistically different from other groups of policyholders. But no significant difference in the satisfaction level is observed between the policyholders

using ESI benefits for 4-6 times and 7-9 times in a year. Highest significant mean difference is found between the policyholders using ESI benefits ‘up to 3 times’ in a year and ‘more than 9 times’ in a year (.93008). It shows that the policyholders utilizing ESI benefits for a greater number of times (more than 9 times in a year) are more satisfied with the services of ESI Corporation than the policyholders using ESI services for lesser number of times (Up to 3 times in a year).

## **Section II**

### **7.7 Sense of Social Security of ESI Policyholders**

Social security is an integral part of the developmental process of an economy (Government of India, 2007). Its major objective is to ensure a minimum decent standard of living to its policyholders (Gottlieb, 2015). The social security benefits offered by the ESI Corporation under its multidimensional ESI scheme are indeed remarkable (Hoda & Rai, 2017) Medical benefits under ESI scheme are intended to improve the health outcome of the insured. ESI benefits such as sickness benefit, retirement benefit, unemployment allowance, maternity benefit etc. are offered to ensure the income security of insured. Whereas disablement benefit, dependent benefit, vocational rehabilitation, physical rehabilitation etc. aim to protect the insured against the possible risks at the workplace.

ESI Corporation is the only social security organization in the country which offers most of the social security benefits provided in the list of International Labour Organisation. Hence, it is crucial to analyse the sense of social security created by ESI Corporation among its policyholders. This section of analysis deals with the assessment and comparison of Sense of Social Security of ESI policyholders. Here the Sense of Social Security experienced by the ESI policyholders are analysed from three perspectives such as Health Protection, Provision of Income Security and Risk Coverage. Sense of Social Security is measured on a five-point Likert scale ranging from Strongly Disagree to Strongly Agree. The descriptive statistics such as Mean and Standard Deviation are used to describe the sense of social security. One Sample t test is used to assess the level of social security. Independent Sample t Test and One-way ANOVA/ Welch test are used to compare the sense of social security

across ESI policyholders of various demographic groups/ ESI details. The results are presented in the following pages.

**Table 7.17**

*Descriptive Statistics of indicators of Sense of Social Security*

| <b>Dimensions</b>                   | <b>Indicators</b>                                                                                                             | <b>N</b>   | <b>Mean</b>   | <b>Std. Deviation</b> |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|------------|---------------|-----------------------|
| <b>Health Protection</b>            | ESI scheme ensures free access to healthcare services                                                                         | 450        | 4.0733        | .61997                |
|                                     | ESI scheme protects my family from the rising cost of healthcare                                                              | 450        | 2.8889        | .84743                |
|                                     | ESI scheme offers better healthcare facilities                                                                                | 450        | 2.3200        | .90768                |
|                                     | I have peaceful mind knowing the medical bill reimbursement facility under ESI scheme                                         | 450        | 3.8333        | .67488                |
|                                     | <b>Total</b>                                                                                                                  | <b>450</b> | <b>3.2789</b> | <b>.65774</b>         |
| <b>Provision of Income Security</b> | Because of ESI coverage, I am not worried too much about unexpected financial loss arising from job related accident/ disease | 450        | 3.7600        | .68076                |
|                                     | ESI policy coverage positively impacts my quality of life                                                                     | 450        | 2.0400        | .81642                |
|                                     | Payment of ESI contribution is not a financial burden for the working poor                                                    | 450        | 4.2089        | .78738                |
|                                     | ESI benefits prevent extreme financial hardship                                                                               | 450        | 2.1133        | .83788                |
|                                     | <b>Total</b>                                                                                                                  | <b>450</b> | <b>3.0306</b> | <b>.63143</b>         |
| <b>Risk Coverage</b>                | ESI policy reduces the stress; I may have about financial risks impacting my quality of life                                  | 450        | 2.2978        | .84698                |
|                                     | I feel I can handle emergencies better due to my ESI coverage                                                                 | 450        | 2.5378        | .78383                |
|                                     | ESI scheme will meet my old age needs                                                                                         | 450        | 1.9089        | .84588                |
|                                     | ESI policy gives me confidence that I will be supported in crisis                                                             | 450        | 3.2400        | .66084                |
|                                     | ESI policy protects the social usefulness of productive workforce                                                             | 450        | 2.7489        | .85811                |
|                                     | <b>Total</b>                                                                                                                  | <b>450</b> | <b>2.5467</b> | <b>.64721</b>         |

Source: Primary Data

Table 7.17 describes the mean and standard deviation of the various statements and dimensions used to measure the sense of social security of ESI policyholders. As per the table, the statement 'Payment of ESI contribution is not a financial burden for the working poor' (Mean- 4.2089, SD- .78738) has the highest mean score followed by the statement 'ESI scheme ensures free access to healthcare services' (Mean – 4.0733, SD- .61997) and 'I have peaceful mind knowing the medical bill reimbursement facility under ESI scheme' (Mean – 3.8333, SD-.67488). The statement 'ESI scheme will meet my old age needs' (Mean- 1.9089, SD- .84588) has the lowest mean score followed by the statement 'ESI policy coverage positively impacts my quality of life' (Mean- 2.0400, SD- .81642) and 'ESI benefits prevent extreme financial hardship' (Mean – 2.1133, SD- .83788). Among the three dimensions used to measure the sense of social security of ESI policyholders, 'Health Protection' (Mean – 3.2789, SD -.65774) has the highest mean score and 'Risk Coverage' (Mean – 2.5467, SD- .64721) has the lowest mean score.

### **7.7.1 Sense of Social Security Level among ESI policyholders**

In this section, the sense of social security among ESI policyholders is identified by employing One-Sample 't' test for mean comparison. Since the sense of social security is measured under three dimensions in five-point Likert Scale, the test value (average) is taken as three. Accordingly, following hypothesis is formulated and tested.

*H<sub>011</sub>*: ESI Corporation offers average level of sense of social security to its policyholders ( $\bar{X} = 3$ ).

*H<sub>111</sub>*: ESI Corporation does not offer average level of sense of social security to its policyholders ( $\bar{X} \neq 3$ ).

**Table 7.18***One Sample t Statistics and Test Result of Sense of Social Security*

| Dimensions                   | One-Sample Statistics |        |                | One Sample Test (Test Value = 3) |       |                |
|------------------------------|-----------------------|--------|----------------|----------------------------------|-------|----------------|
|                              | N                     | Mean   | Std. Deviation | t                                | D. f. | Sig. (p) value |
| Health Protection            | 450                   | 3.2789 | .65774         | 8.995**                          | 449   | .000           |
| Provision of Income Security | 450                   | 3.0306 | .63143         | 1.027                            | 449   | .305           |
| Risk Coverage                | 450                   | 2.5467 | .64721         | 14.859**                         | 449   | .000           |
| Sense of Social Security     | 450                   | 2.9520 | .53989         | 1.885                            | 449   | .060           |

Source: Primary Data

\*\*Significant at 1% level of significance

Table 7.18 describes the result of One sample t test used to analyse the sense of social security of ESI policyholders. It also shows the dimension wise analysis of the sense of social security. From the table, it is evident that the significance values of Provision of Income Security (.305) and Overall Sense of Social Security (.060) are more than 0.05. Hence it is failed to reject the null hypothesis at 5% level of significance. Therefore, it can be inferred that there is an average level of Provision of Income Security and Overall Sense of Social Security among the policyholders of ESI scheme.

However, the significance values of Health Protection (.000) and Risk Coverage (.000) are less than 0.01. Hence the null hypothesis is rejected at 1% level of significance. It shows that the level of Health Protection and Risk Coverage enjoyed by the ESI policyholders is either below or above average level. In order to verify it, the mean scores of these two dimensions are examined. It is found that the mean score of the dimension 'Health Protection' (3.2789) is above three whereas it is below three in the case of 'Risk Coverage' (2.5467). It reveals that the ESI policyholders are receiving above average level of health protection from the ESI Corporation. But the risk coverage offered by the ESI Corporation is below average

### **7.7.2 Comparison of Sense of Social Security according to the demographic groups of the policyholders**

Here, the Sense of Social Security among policyholders is compared according to their demographic groups such as gender, age, marital status, education, income, area of residence and nature of organization. In order to compare the mean differences, Independent Sample ‘t’ test and One-way ANOVA/ Welch test is applied. Prior to this, Levene’s test of Equality of variance is applied to prove the homogeneity assumption of population variance. Additionally, post-hoc analysis is conducted for the significant result of mean differences. The results are presented in the following pages.

#### **7.7.2.1 Gender wise comparison of Sense of Social Security**

In this case, significant difference in the mean score of sense of social security between male and female policyholders are examined with the help of independent sample t test. The following hypothesis is formulated for the purpose of analysis.

*H0<sub>12</sub>: There is no significant difference in the sense of social security of male and female policyholders from the services of ESI Corporation.*

*H1<sub>12</sub>: There is significant difference in the sense of social security of male and female policyholders from the services of ESI Corporation.*

**Table 7.19**

*Gender wise comparison of Sense of Social Security*

| Dimensions               | Gender | Mean  | SD    | Levene's Test for Equality of Variances |       | t-test result |              |
|--------------------------|--------|-------|-------|-----------------------------------------|-------|---------------|--------------|
|                          |        |       |       | F                                       | Sig.  | t             | Sig.         |
| <b>Health protection</b> | Male   | 3.268 | 0.399 | 4.970                                   | 0.126 | 0.562         | <b>0.574</b> |
|                          | Female | 3.288 | 0.349 |                                         |       |               |              |

| Dimensions                          | Gender | Mean  | SD    | Levene's Test for Equality of Variances |       | t-test result |       |
|-------------------------------------|--------|-------|-------|-----------------------------------------|-------|---------------|-------|
|                                     |        |       |       | F                                       | Sig.  | t             | Sig.  |
| <b>Provision of Income security</b> | Male   | 2.992 | 0.611 | 0.831                                   | 0.362 | 1.381         | 0.168 |
|                                     | Female | 3.074 | 0.648 |                                         |       |               |       |
| <b>Risk coverage</b>                | Male   | 2.528 | 0.682 | 1.888                                   | 0.170 | 0.627         | 0.531 |
|                                     | Female | 2.570 | 0.737 |                                         |       |               |       |
| <b>Sense of Social Security</b>     | Male   | 2.923 | 0.574 | 1.874                                   | 0.172 | 1.380         | 0.168 |
|                                     | Female | 2.983 | 0.540 |                                         |       |               |       |

Source: Primary Data

Table 7.19 gives the result of independent sample t test used to make the gender wise comparison of the sense of social security of ESI policyholders. The p value of Levene's test in the case of Health Protection (0.126), Provision of Income Security (0.362), Risk Coverage (0.170) and Overall Sense of Social Security (0.172) are more than 0.05. Hence homogeneity of variance can be assumed in all these cases. Therefore, t statistics and significance value of t test corresponding to equal variance assumed is selected for comparing mean scores.

As per the result of independent sample t test, the p values of Health Protection (0.574), Provision of Income Security (0.168), Risk Coverage (0.531) and Overall Sense of Social Security (0.168) are more than 0.05. So, it is failed to reject the null hypotheses in these cases. Hence, it can be inferred that there is no significant difference between male and female policyholders in their sense of social security offered by ESI Corporation.

### 7.7.2.2 Age wise comparison of Sense of Social Security

Here age is taken as a factor variable for comparing the mean score of the sense of social security of ESI policyholders. For comparing the sense of social security across various age groups, One-way ANOVA/ Welch test is used. The following hypothesis is formulated and tested in this case.

*H0<sub>13</sub>: There is no significant difference in the sense of social security among ESI policyholders of different age groups from the services of ESI Corporation.*

*H1<sub>13</sub>: There is significant difference in the sense of social security among ESI policyholders of different age groups from the services of ESI Corporation.*

**Table 7.20**

*Age wise comparison of sense of social security*

| Dimensions                          | Descriptive Statistics of Age wise comparison<br>(Mean and SD) |                 |                 |                 |                 | Levene's test of Equality of Variance |            | One- way ANOVA/ Welch test |            |
|-------------------------------------|----------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|---------------------------------------|------------|----------------------------|------------|
|                                     | Up to 25 years                                                 | 26-35 years     | 36-45 years     | 46-55 years     | Above 55 years  | Test statistics                       | Sig. value | Test Statistics            | Sig. value |
| <b>Health protection</b>            | 2.731<br>(.532)                                                | 3.068<br>(.593) | 3.277<br>(.607) | 3.545<br>(.639) | 3.856<br>(.459) | 1.822                                 | 0.123      | 25.665**                   | 0.000      |
| <b>Provision of Income Security</b> | 2.731<br>(.547)                                                | 2.904<br>(.614) | 2.973<br>(.563) | 3.237<br>(.673) | 3.424<br>(.574) | 0.745                                 | 0.562      | 10.820**                   | 0.000      |
| <b>Risk coverage</b>                | 2.185<br>(.440)                                                | 2.427<br>(.644) | 2.487<br>(.609) | 2.768<br>(.633) | 2.952<br>(.678) | 1.298                                 | 0.270      | 12.029**                   | 0.000      |
| <b>Sense of Social Security</b>     | 2.549<br>(.399)                                                | 2.799<br>(.506) | 2.912<br>(.489) | 3.183<br>(.529) | 3.411<br>(.429) | 2.516*                                | 0.041      | 27.399**                   | 0.000      |

Source: Primary Data

\*\* Significant at 1% level of significance

\*Significant at 5% level of significance

Parentheses represent standard deviation

Table 7.20 provides the result of One-way ANOVA/ Welch test used to compare the sense of social security of ESI policyholders of different age groups. As per the result of Levene's test, homogeneity assumption is satisfied in the case of Health

Protection (P value – 0.123), Provision of Income Security (p value – 0.562) and Risk Coverage (p value – 0.270). The p values in all these cases are more than 0.05. Hence ANOVA is used for the purpose of mean comparison across various age groups in the case of these three dimensions. However, in the case of Overall Sense of Social Security (p value -0.041), homogeneity assumption is not satisfied at 5% level of significance. Hence Welch test is used in this case for mean comparison across various age groups.

As per the result of One-way ANOVA, the p values of Health Protection, Provision of Income Security and Risk Coverage are less than 0.01. Hence, null hypothesis is rejected in these three cases. In the same manner, the result of Welch test shows that the p value of Overall Sense of Social Security is also less than 0.01. Hence, null hypothesis is also rejected in the case of Overall Sense of Social Security. So, it can be inferred that there exists significant difference among ESI policyholders of various age category regarding their sense of social security.

From the descriptive statistic, it is found that aged policyholders belonging to the age group of 'Above 55 years' and '46-55 years' are getting more sense of social security in terms of health protection, income security and risk coverage than the younger age groups. Hence, age is a significant factor influencing the sense of social security of ESI policyholders.

**Table 7.21**

*Multiple Comparisons of Sense of Social Security Based on Age groups –Scheffe's post hoc test*

| Age (I)        | Age (J)     | Mean Difference (I-J) (Sig.) |                              |                   |
|----------------|-------------|------------------------------|------------------------------|-------------------|
|                |             | Health Protection            | Provision of Income Security | Risk Coverage     |
| Up to 25 years | 26-35 years | -.33675*<br>(.017)           | -.17275<br>(.517)            | -.24220<br>(.197) |
|                | 36-45 years | -.54535**<br>(.000)          | -.24215<br>(.170)            | -.30152<br>(.052) |
|                | 46-55 years | -.81380**                    | -.50524**                    | -.58257**         |

| Age (I)     | Age (J)        | Mean Difference (I-J) (Sig.) |                              |                     |
|-------------|----------------|------------------------------|------------------------------|---------------------|
|             |                | Health Protection            | Provision of Income Security | Risk Coverage       |
|             |                | (.000)                       | (.000)                       | (.000)              |
|             | Above 55 years | -1.12481**<br>(.000)         | -.69299**<br>(.000)          | -.76652**<br>(.000) |
|             | 36-45 years    | -.20860*<br>(.037)           | -.06940<br>(.884)            | -.05932<br>(.936)   |
| 26-35 years | 46-55 years    | -.47705**<br>(.000)          | -.33249**<br>(.000)          | -.34037**<br>(.000) |
|             | Above 55 years | -.78806**<br>(.000)          | -.52024**<br>(.000)          | -.52432**<br>(.000) |
|             | 46-55 years    | -.26845**<br>(.004)          | -.26308**<br>(.006)          | -.28104**<br>(.003) |
| 36-45 years | Above 55 years | -.57946**<br>(.000)          | -.45084**<br>(.001)          | -.46499**<br>(.001) |
| 46-55 years | Above 55 years | -.31102<br>(.066)            | -.18776<br>(.521)            | -.18395<br>(.562)   |

Source: Primary Data

\*Significant at 5% level of significance

\*\*Significant at 1% level of significance

Parentheses represent significance value

Table 7.21 discloses the result of Scheffe's Post hoc test for One-way ANOVA in the case of three dimensions of sense of social security such as Health Protection, Provision of Income Security and Risk Coverage.

As per the result, significant difference is observed between all age groups except between the policyholders of the age group of 46-55 years and Above 55 years in the case of 'Health Protection'. In respect of 'Provision of Income Security' and 'Risk Coverage', no significant difference is observed between the policyholders of Up to 25 years age and 26-35 years age and between the policyholders of 46-55 years age and Above 55 years age. Similarly, the policyholders of 36-45 years age group are not significantly different from the policyholders of Up to 25 years age and 26-35 years age. But significant difference exists between all other age groups in the case of 'Provision of Income Security' and 'Risk Coverage'.

Highest significant mean difference in the case of all dimensions of sense of social security is found between the policyholders of Up to 25 years age group and Above 55 years age group. It discloses that the aged policyholders (especially Above 55 years of age group) are experiencing better sense of social security in terms of health protection, provision of income security and risk coverage than younger policyholders (especially Up to 25 years of age group). In short age influence the sense of health protection, income security and risk coverage.

**Table 7.22**

*Multiple Comparisons of Sense of Social Security Based on Age groups –Tamhane’s T2 post hoc test*

| Age (I)        | Age (J)        | Sense of Social Security |                    |
|----------------|----------------|--------------------------|--------------------|
|                |                | Mean Difference (I-J)    | Significance Value |
| Up to 25 years | 26-35 years    | -.25057*                 | .018               |
|                | 36-45 years    | -.36301**                | .000               |
|                | 46-55 years    | -.63387**                | .000               |
|                | Above 55 years | -.86144**                | .000               |
| 26-35 years    | 36-45 years    | -.11244                  | .503               |
|                | 46-55 years    | -.38330**                | .000               |
|                | Above 55 years | -.61087**                | .000               |
| 36-45 years    | 46-55 years    | -.27086**                | .000               |
|                | Above 55 years | -.49843**                | .000               |
| 46-55 years    | Above 55 years | -.22757                  | .132               |

Source: Primary Data

\*Significant at 5% level of significance

\*\*Significant at 1% level of significance

Parentheses represent significance value

Table 7.22 presents the result of Tamhane’s T2 Post hoc test in respect of Overall Sense of Social Security. The table discloses that no significant difference is observed between the policyholders of 26-35 years age and 36-45 years age and between the policyholders of 46-55 years age and Above 55 years age. Significant difference exists between all other age groups in this respect.

The highest significant mean difference in this case is obtained between the policyholders of ‘Up to 25 years’ of age group and ‘Above 55 years’ of age group. It suggests that the overall sense of social security experienced by the aged policyholders are better than the younger ESI policyholders. In other words, age is a significant factor influencing the overall sense of social security of ESI policyholders.

### **7.7.2.3 Marital Status wise comparison of Sense of Social Security**

In order to check the significant difference in the sense of social security between married and unmarried ESI policyholders, independent sample t test is used. The following hypothesis is formulated and tested in this case.

*H0<sub>14</sub>: There is no significant difference in the sense of social security between married and unmarried policyholders regarding the services of ESI Corporation.*

*H1<sub>14</sub>: There is significant difference in the sense of social security between married and unmarried policyholders regarding the services of ESI Corporation.*

**Table 7.23**

*Marital Status wise comparison of Sense of Social Security*

| Dimensions                          | Gender    | Mean  | SD    | Levene's Test for Equality of Variances |       | t-test result |              |
|-------------------------------------|-----------|-------|-------|-----------------------------------------|-------|---------------|--------------|
|                                     |           |       |       | F                                       | Sig.  | t             | Sig.         |
| <b>Health protection</b>            | Married   | 3.284 | 0.619 | 0.026                                   | 0.871 | <b>0.366</b>  | <b>0.715</b> |
|                                     | Unmarried | 3.256 | 0.640 |                                         |       | 0.358         | 0.721        |
| <b>Provision of Income security</b> | Married   | 3.047 | 0.615 | 0.019                                   | 0.891 | <b>1.156</b>  | <b>0.248</b> |
|                                     | Unmarried | 2.959 | 0.643 |                                         |       | 1.124         | 0.262        |
| <b>Risk coverage</b>                | Married   | 2.555 | 0.620 | 0.109                                   | 0.741 | <b>0.670</b>  | <b>0.503</b> |
|                                     | Unmarried | 2.503 | 0.686 |                                         |       | 0.628         | 0.530        |
| <b>Sense of Social Security</b>     | Married   | 2.962 | 0.506 | 0.074                                   | 0.786 | <b>0.883</b>  | <b>0.378</b> |
|                                     | Unmarried | 2.906 | 0.563 |                                         |       | 0.825         | 0.41         |

Source: Primary Data

Table 7.23 gives the result of independent sample t test used to compare the sense of social security of ESI policyholders based on their marital status. As per the result of Levene's test, the p values of Health Protection (0.871), Provision of Income Security (0.891), Risk Coverage (0.741) and Overall Sense of Social Security (0.786) are above 0.05. Hence homogeneity of variance can be assumed for all the dimensions of sense of social security including overall sense of social security. As per the result of Levene's test, t value and 'p' value of independent sample t test corresponding to equal variance assumed is referred for comparing the mean scores between married and unmarried policyholders in respect of all the dimensions of sense of social security and overall sense of social security.

The result of independent sample t test points out that the p values of various factors of sense of social security such as Health Protection, Provision of Income Security and Risk Coverage are above 0.05. It is found that the p value of Overall Sense of Social Security is also above 0.05. Hence it is failed to reject null hypothesis at 5% level of significance. Hence it can be inferred that there exists no significant difference between married and unmarried policyholders in respect of various dimensions of sense of social security including overall sense of social security.

#### **7.7.2.4 Education wise comparison of Sense of Social Security**

In this case the mean score of the Sense of Social Security is compared across the policyholders of different educational background. In order to test the significant difference among the policyholders having different educational qualification, One-way ANOVA/ Welch test is used. The following hypothesis is formulated and tested for this purpose.

*H<sub>015</sub>: There is no significant difference in the sense of social security among ESI policyholders having different Educational Qualifications.*

*H<sub>115</sub>: There is significant difference in the sense of social security among ESI policyholders having different Educational Qualifications.*

**Table 7.24**

*Education wise comparison of Sense of Social Security*

| Dimensions                          | Descriptive Statistics of Educational Qualification wise comparison<br>(Mean and SD) |                       |                 |                  |                       | Levene's test of Equality of Variance |            | One-way ANOVA/ Welch test |            |
|-------------------------------------|--------------------------------------------------------------------------------------|-----------------------|-----------------|------------------|-----------------------|---------------------------------------|------------|---------------------------|------------|
|                                     | SSLC and Below                                                                       | Plus Two / Pre Degree | Degree/ Diploma | Post- Graduation | Professional & Others | Test statistics                       | Sig. value | Test Statistics           | Sig. value |
| <b>Health protection</b>            | 3.260<br>(.359)                                                                      | 3.271<br>(.348)       | 3.279<br>(.401) | 3.301<br>(.385)  | 3.299<br>(.209)       | 1.385                                 | .096       | 1.336                     | .256       |
| <b>Provision of Income security</b> | 2.981<br>(.694)                                                                      | 3.040<br>(.588)       | 3.171<br>(.586) | 2.880<br>(.541)  | 2.941<br>(.638)       | 1.431                                 | .223       | 2.001                     | .093       |
| <b>Risk coverage</b>                | 2.517<br>(.673)                                                                      | 2.537<br>(.979)       | 2.583<br>(.728) | 2.544<br>(.729)  | 2.531<br>(.640)       | .430                                  | .787       | 1.454                     | .215       |
| <b>Sense of Social Security</b>     | 2.919<br>(.560)                                                                      | 2.949<br>(.492)       | 3.011<br>(.579) | 2.908<br>(.563)  | 2.924<br>(.553)       | 1.234                                 | .295       | 2.111                     | .078       |

Source: Primary Data  
 Parentheses represent standard deviation

Table 7.24 provides the result of One-way ANOVA/ Welch test used to compare the sense of social security of ESI policyholders having different educational qualifications. As per the result of Levene's test, equality of population variance can be assumed in the case of all dimensions of sense of social security including overall sense of social security. Because the p values of Levene's test is more than 0.05 in all these cases. Hence One-way ANOVA is employed for comparison purpose.

The result of One-way ANOVA reveals that the p values of Health Protection (.256), Provision of Income Security (.093), Risk Coverage (.215) and Overall Sense of Social Security (.078) are above 0.05. Hence it is failed to reject the null hypothesis in this respect. So, it can be inferred that there is no significant difference in the sense of social security experienced by the policyholders based on their educational qualification. In other words, educational qualification is not an important factor which influences the sense of social security of ESI policyholders.

### 7.7.2.5 Income wise comparison of Sense of Social Security

Monthly income is an important factor which usually influence the social security feeling of individuals. Here the mean score of the sense of social security of ESI policyholders of different income levels is compared by using One-way ANOVA/ Welch test. The following hypothesis is framed and tested in this respect.

*H0<sub>16</sub>: There is no significant difference in the sense of social security among policyholders from different income category.*

*H1<sub>16</sub>: There is significant difference in the sense of social security among policyholders from different income category.*

**Table 7.25**

*Income wise comparison of Sense of Social Security*

| Dimensions                          | Descriptive Statistics of Income wise comparison<br>(Mean and SD) |                 |                 |                 | Levene's test of Equality of Variance |            | One- way ANOVA/ Welch test |            |
|-------------------------------------|-------------------------------------------------------------------|-----------------|-----------------|-----------------|---------------------------------------|------------|----------------------------|------------|
|                                     | Up to 5000                                                        | 5001- 10000     | 10001- 15000    | 15001- 21000    | Test statistics                       | Sig. value | Test Statistics            | Sig. value |
| <b>Health protection</b>            | 3.592<br>(.621)                                                   | 3.448<br>(.646) | 3.250<br>(.541) | 3.027<br>(.674) | 5.055**                               | 0.002      | 16.268**                   | .000       |
| <b>Provision of Income security</b> | 3.128<br>(.701)                                                   | 3.267<br>(.575) | 3.024<br>(.534) | 2.839<br>(.643) | 3.817*                                | 0.010      | 10.023**                   | .000       |
| <b>Risk coverage</b>                | 2.641<br>(.572)                                                   | 2.648<br>(.634) | 2.526<br>(.663) | 2.450<br>(.671) | 1.471                                 | 0.222      | 2.520                      | .057       |
| <b>Sense of Social Security</b>     | 3.120<br>(.528)                                                   | 3.121<br>(.489) | 2.933<br>(.466) | 2.772<br>(.575) | 3.143*                                | 0.025      | 11.291**                   | .000       |

Source: Primary Data

\*\* Significant at 1% level of significance

\*Significant at 5% level of significance

Parentheses represent standard deviation

Table 7.25 discloses the result of One-way ANOVA/ Welch test used to analyse the sense of social security of ESI policyholders of different income category. As per the result of Levene's test, homogeneity of population variance can be assumed only

in the case of Risk Coverage. The p value in this case is 0.222, which is above 0.05. Hence One-way ANOVA is applied in the case of Risk Coverage for comparing the mean scores. However, the p value of Levene's test is less than 0.05 in the case of Health Protection (0.002), Provision of Income Security (0.010) and Overall Sense of Social Security (0.025). Hence, Welch test is used in these three cases for comparison of mean scores.

The result of One-way ANOVA in the case of Risk Coverage shows that p value is 0.057. As it is more than 0.05, it is failed to reject the null hypothesis in this case. So, there is no significant difference among policyholders of various income groups in their feeling of Risk Coverage from the services of ESI Corporation.

As per the result of Welch test, the p values of Health Protection, Provision of Income Security and Overall Sense of Social Security are less than 0.01. Hence null hypothesis is rejected at 1% level of significance and hence there exists significant difference among policyholders of different income category in their sense of Health Protection, Provision of Income Security and Overall Social Security.

Comparative analysis of the mean score discloses that the lower income ESI policyholders having the monthly income of Up to Rs. 10000 experience more health protection, income security and also overall sense of social security when compared to the policyholders of the income category of Rs. 10001-15000 and Rs. 15001 -21000. Hence, monthly income can be considered as a relevant factor influencing the experience regarding health protection, provision of income security and overall sense of social security. Whereas monthly income does not influence the sense of Risk Coverage in a significant manner.

**Table 7.26**

*Multiple Comparisons of Sense of Social Security Based on Income –Tamhane’s T2 post hoc test*

| Monthly Income (I) | Monthly Income (J) | Mean Difference (I-J) (Sig.) |                              |                          |
|--------------------|--------------------|------------------------------|------------------------------|--------------------------|
|                    |                    | Health Protection            | Provision of Income Security | Sense of Social Security |
|                    | Rs. 5001-10000     | .14446<br>(.576)             | -.13851<br>(.641)            | -.00064<br>(1.000)       |
| Up to Rs. 5000     | Rs. 10001-15000    | .34226**<br>(.000)           | .10378<br>(.825)             | .18690<br>(.056)         |
|                    | Rs. 15001-21000    | .56577**<br>(.000)           | .28857*<br>(.013)            | .34816**<br>(.000)       |
| Rs. 5001-10000     | Rs. 10001-15000    | .19780<br>(.107)             | .24229*<br>(.011)            | .18755*<br>(.030)        |
|                    | Rs. 15001-21000    | .42131**<br>(.000)           | .42708**<br>(.000)           | .34880**<br>(.000)       |
| Rs. 10001-15000    | Rs. 15001-21000    | .22351*<br>(.015)            | .18479<br>(.057)             | .16126<br>(.063)         |

Source: Primary Data

\*Significant at 5% level of significance

\*\*Significant at 1% level of significance

Parentheses represent significance value

As the result of Welch test is significant in the case of Health Protection, Provision of Income Security and Overall Sense of Social Security, a pair wise comparison of the policyholders of different income category in this respect is made here. Table 7.26 unveils the result of Tamhane’s T2 post hoc test in respect of these three aspects.

As per the result, in the case of Health Protection, significant difference is observed between all income groups except between the policyholders of Up to Rs. 5000 and Rs.5001-10000; and between the policyholders of Rs. 5001-10000 and Rs. 10001-15000. In the case of Provision of Income Security and Overall Sense of Social Security, policyholders coming under the income group of Rs. 15001-21000 are significantly different from the policyholders of Up to Rs. 5000 income group and

Rs. 5001-10000 income group. In the same manner, significant difference is also found between the policyholders of Rs. 5001-10000 income group and Rs. 10001-15000 income group in these two aspects. No significant difference is observed between other groups in the case of Provision of Income Security and Overall Sense of Social Security.

In the case of Health Protection, highest significant mean difference is observed between the policyholders of Up to Rs 5000 income group and Rs. 15001-21000 income group. In the case of Provision of Income Security and Overall Sense of Social Security, highest significant mean difference is found between the policyholders of Rs. 5001-10000 income group and Rs. 15001-21000 income group. It reveals that the level of health protection, provision of income security and overall sense of social security experienced by the lower income policyholders (Up to Rs. 5000 and Rs. 5001-10000) are higher than the higher income group (Rs 15001-21000)

#### **7.7.2.6 Comparison of Sense of Social Security based on Area of Residence**

Here the mean score of the sense of social security experienced by the policyholders residing in rural, urban and semi urban areas are compared and analysed with the help of One-way ANOVA/ Welch test. The following hypothesis is formulated in this case.

*H<sub>017</sub>: There is no significant difference in the sense of social security among policyholders residing in different areas.*

*H<sub>117</sub>: There is significant difference in the sense of social security among policyholders residing in different areas.*

**Table 7.27***Area of Residence wise comparison of Sense of Social Security*

| Dimensions                          | Descriptive Statistics of Area of Residence (Mean and SD) |                 |                 | Levene's test of Equality of Variance |            | One- way ANOVA/ Welch test |            |
|-------------------------------------|-----------------------------------------------------------|-----------------|-----------------|---------------------------------------|------------|----------------------------|------------|
|                                     | Urban                                                     | Rural           | Semi-urban      | Test statistics                       | Sig. value | Test Statistics            | Sig. value |
| <b>Health protection</b>            | 3.291<br>(.367)                                           | 3.269<br>(.386) | 3.282<br>(.366) | 0.191                                 | 0.826      | 2.190                      | .113       |
| <b>Provision of Income security</b> | 3.179<br>(.604)                                           | 2.911<br>(.582) | 3.032<br>(.559) | 0.051                                 | 0.950      | 2.437                      | .088       |
| <b>Risk coverage</b>                | 2.525<br>(.683)                                           | 2.567<br>(.709) | 2.541<br>(.776) | 3.807                                 | 0.223      | 0.629                      | .533       |
| <b>Sense of Social Security</b>     | 2.998<br>(.493)                                           | 2.915<br>(.532) | 2.951<br>(.584) | 4.148                                 | 0.116      | 1.398                      | .903       |

Source: Primary Data

Parentheses represent standard deviation

Table 7.27 shows the result of One-way ANOVA/ Welch test used to analyse the sense of social security of ESI policyholders residing in Rural, Urban and Semi-urban areas. As per the result of Levene's test of equality of population variance, homogeneity of variance can be assumed in the case of Health Protection (p value – 0.826), Provision of Income Security (p value – 0.950), Risk Coverage (p value – 0.223) and Overall Sense of Social Security (p value – 0.116). The p values in all these cases are more than 0.05. Hence ANOVA is used for comparing mean scores.

The result of One-way ANOVA presents that the p values of Health Protection (.113), Provision of Income Security (.088), Risk Coverage (.533) and Overall Sense of Social Security (.903) are above 0.05. Hence, the researcher failed to reject the null hypotheses in these cases at 5% level of significance. Therefore, it can be inferred that there is no significant difference among the policyholders residing in different areas in respect of their sense of social security. In other words, area of

residence does not influence the sense of social security experienced by the ESI policyholders.

### **7.7.2.7 Comparison of Sense of Social Security based on the Nature of Organization**

In order to check the significant difference in the mean score of sense of social security between the policyholders working in factory and shop/ establishment, independent sample t test is used. In this respect, the following hypotheses is formulated and tested.

*H0<sub>18</sub>: There is no significant difference in the sense of social security between the policyholders working in Factory and Shop/ Establishment.*

*H1<sub>18</sub>: There is significant difference in the sense of social security between the policyholders working in Factory and Shop/ Establishment.*

**Table 7.28**

*Nature of Organization wise comparison of Sense of Social Security*

| Dimensions                          | Nature of the Organization | Mean  | SD    | Levene's Test for Equality of Variances |      | t-test result   |             |
|-------------------------------------|----------------------------|-------|-------|-----------------------------------------|------|-----------------|-------------|
|                                     |                            |       |       | F                                       | Sig. | T               | Sig.        |
| <b>Health Protection</b>            | Factory                    | 3.836 | 0.497 | 1.821                                   | .178 | <b>13.086**</b> | <b>.000</b> |
|                                     | Shop/ Establishment        | 3.065 | 0.582 |                                         |      |                 |             |
| <b>Provision of Income security</b> | Factory                    | 3.465 | 0.481 | 11.126*                                 | .001 | <b>9.972**</b>  | <b>.000</b> |
|                                     | Shop/ Establishment        | 2.864 | 0.603 |                                         |      |                 |             |
| <b>Risk coverage</b>                | Factory                    | 2.950 | 0.642 | 3.417                                   | .065 | <b>8.891**</b>  | <b>.000</b> |
|                                     | Shop/ Establishment        | 2.391 | 0.579 |                                         |      |                 |             |
| <b>Sense of Social Security</b>     | Factory                    | 3.417 | 0.414 | 2.030                                   | .155 | <b>13.385**</b> | <b>.000</b> |
|                                     | Shop/ Establishment        | 2.773 | 0.472 |                                         |      |                 |             |

Source: Primary Data

\*Significant at 5% level of significance, \*\*Significant at 1% level of significance

Table 7.28 discloses the result of independent sample t test used to examine the significant difference between the policyholders working in factory and shop/ establishment with regard to various dimensions of sense of social security and overall sense of social security. The result of Levene's test indicates that equal variance can be assumed in respect of Health Protection (p value -0.178), Risk Coverage (p value – 0.065) and Overall Sense of Social Security (p value – 0.155). The p value of Levene's test in these three cases are more than 0.05. Hence, t value and significance value of t test corresponding to equal variance assumed is used for comparing the mean scores between the policyholders in respect of these three dimensions. However, equal variance cannot be assumed in the case of Provision of Income Security, as the p value of Levene's test is less than 0.01.

As per the result of independent sample t test, the p values of various dimensions of sense of social security and overall sense of social security are less than 0.01. So, the null hypothesis is rejected for all the factors of sense of social security including overall sense of social security at 1% level of significance. Hence it can be understood that there is significant difference between the policyholders working in factory and shop/ establishment in respect of the level of health protection, income security, risk coverage and overall sense of social security.

Comparison of the mean score further reveals that the mean scores of various dimensions of sense of social security and overall sense of social security of policyholders working in factory are more than that of the policyholders working in shop/ establishment. Hence the policyholders working in factory are experiencing better sense of social security due to ESI coverage than the policyholders working in shops/ establishments. Therefore, nature of organization is a significant factor influencing the sense of social security of ESI policyholders.

### **7.7.3 Comparison of Sense of Social Security Based on the ESI details of the policyholders**

In this segment, the Sense of Social Security offered by the ESI Corporation is observed and compared across the ESI details of the policyholders. Consequently, two factor variables are considered for analysis in this part such as Duration of

Membership under ESI Scheme, and the Level of ESI Benefits Utilized. In order to compare the mean scores, One-way ANOVA/ Welch test is used based on the homogeneity assumption. The results are as follows.

### 7.7.3.1 Comparison of Sense of Social Security based on the Duration of ESI Membership

This section describes the analysis of the mean score of sense of social security of ESI policyholders on the basis of duration of ESI membership. Following hypothesis is formulated and tested accordingly.

*H0<sub>19</sub>: There is no significant difference in the sense of social security among policyholders according to Duration of ESI Membership.*

*H1<sub>19</sub>: There is significant difference in the sense of social security among policyholders according to Duration of ESI Membership.*

**Table 7.29**

*Duration of ESI Membership wise comparison of Sense of Social Security*

| Dimensions                          | Descriptive Statistics of Duration of Membership wise comparison (Mean and SD) |                 |                 |                 |                 | Levene's test of Equality of Variance |            | One- way ANOVA/ Welch test |            |
|-------------------------------------|--------------------------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|---------------------------------------|------------|----------------------------|------------|
|                                     | Up to 5 years                                                                  | 6-10 years      | 11-15 years     | 16-20 years     | Above 20 years  | Test statistics                       | Sig. value | Test Statistics            | Sig. value |
| <b>Health protection</b>            | 2.935<br>(.603)                                                                | 3.246<br>(.581) | 3.555<br>(.559) | 3.850<br>(.512) | 3.863<br>(.455) | 0.412                                 | .800       | 36.240**                   | .000       |
| <b>Provision of Income security</b> | 2.746<br>(.573)                                                                | 3.056<br>(.539) | 3.134<br>(.694) | 3.550<br>(.463) | 3.600<br>(.392) | 2.610*                                | .035       | 33.941**                   | .000       |
| <b>Risk coverage</b>                | 2.322<br>(.621)                                                                | 2.488<br>(.578) | 2.702<br>(.598) | 3.053<br>(.624) | 2.980<br>(.601) | 0.323                                 | .863       | 17.965**                   | .000       |
| <b>Sense of Social Security</b>     | 2.668<br>(.504)                                                                | 2.930<br>(.433) | 3.130<br>(.489) | 3.484<br>(.415) | 3.481<br>(.318) | 1.731                                 | .142       | 39.827**                   | .000       |

Source: Primary Data

\*\* Significant at 1% level of significance

\*Significant at 5% level of significance

Parentheses represent standard deviation

Table 7.29 shows the result of One-way ANOVA/ Welch test used to compare the sense of social security across policyholders having different period of membership under ESI scheme. The result of Levene's test discloses that homogeneity assumption is satisfied in the case of Health Protection (p value - .8000), Risk Coverage (p value - .863) and Sense of Social Security (.142). Under all these cases p value of Levene's test is more than 0.05 and hence One-way ANOVA is used for comparing the mean scores. But in the case of Provision of Income Security (p value- .035), p value is less than 0.05. Homogeneity assumption is not satisfied in this case at 5% level of significance and hence Welch test is used for the purpose of mean comparison.

As per the result of One-way ANOVA, the p values of Health Protection, Risk Coverage and overall sense of social security are less than 0.01. Hence, null hypothesis is rejected under these cases at 1% level of significance. The result of Welch test shows that the p value of Provision of Income security is also less than 0.01. So null hypothesis is rejected for Risk Coverage also. Therefore, it can be inferred that there exists significant difference in various dimensions of sense of social security and overall sense of social security across the policyholders having different period of ESI membership.

Analysis of the mean score further describes that the policyholders having longer period of ESI membership (16-20 years and Above 20 years) are experiencing better sense of social security such as better health protection, income security and risk coverage than the ESI policyholders with shorter period of ESI membership. Hence, it can be interpreted that duration of ESI membership is a significant factor influencing the sense of social security of ESI policyholders.

**Table 7.30**

*Multiple Comparison of Sense of Social Security Based on Duration of ESI Membership– Scheffe’s post hoc test*

| Duration of ESI Membership (I) | Duration of ESI Membership (J) | Mean Difference (I-J) (Sig.) |                     |                          |
|--------------------------------|--------------------------------|------------------------------|---------------------|--------------------------|
|                                |                                | Health Protection            | Risk Coverage       | Sense of Social Security |
| Up to 5 years                  | 6-10 years                     | -.31142**<br>(.000)          | -.16564<br>(.128)   | -.26252**<br>(.000)      |
|                                | 11-15 years                    | -.62038**<br>(.000)          | -.37990**<br>(.000) | -.46285**<br>(.000)      |
|                                | 16-20 years                    | -.91515**<br>(.000)          | -.73091**<br>(.000) | -.81687**<br>(.000)      |
|                                | Above 20 years                 | -.92765**<br>(.000)          | -.65758**<br>(.000) | -.81326**<br>(.000)      |
| 6-10 years                     | 11-15 years                    | -.30896**<br>(.001)          | -.21427<br>(.078)   | -.20033*<br>(.017)       |
|                                | 16-20 years                    | -.60373**<br>(.000)          | -.56527**<br>(.000) | -.55434**<br>(.000)      |
|                                | Above 20 years                 | -.61623**<br>(.000)          | -.49194**<br>(.007) | -.55073**<br>(.000)      |
| 11-15 years                    | 16-20 years                    | -.29477*<br>(.043)           | -.35101*<br>(.014)  | -.35402**<br>(.000)      |
|                                | Above 20 years                 | -.30727<br>(.198)            | -.27767<br>(.344)   | -.35041*<br>(.021)       |
| 16-20 years                    | Above 20 years                 | -.01250<br>(1.000)           | .07333<br>(.991)    | .00361<br>(1.000)        |

Source: Primary Data

\*Significant at 5% level of significance

\*\*Significant at 1% level of significance

Parentheses represent significance value

Table 7.30 shows the result of Scheffe’s Post hoc test for One-way ANOVA in respect of various dimensions of sense of social security and overall sense of social security. Here a pair wise comparison of the mean score of the policyholders having different duration of ESI membership is carried out.

The result reveals that in the case of Health Protection, no significant difference is observed between the policyholders having the ESI membership of 11-15 years and Above 20 years; and between the policyholders having the ESI membership of 16-20 years and Above 20 years. But significant difference exists between all other groups.

In respect of Risk Coverage, the policyholders with 6-10 years of ESI membership do not differ significantly from the policyholders having Up to 5 years of ESI membership and 11-15 years of ESI membership. Likewise, the policyholders having Above 20 years of ESI membership do not differ significantly from the policyholders with 11-15 years of ESI membership and 16-20 years of ESI membership. However, significant difference exists between the policyholders of all other groups in this case.

In the case of Overall Sense of Social Security, significant difference is observed between all groups of policyholders based on the duration of ESI membership except between the policyholders of 16-20 years of ESI membership and Above 20 years of ESI membership. It can be understood from the post hoc result that there is no significant difference between the policyholders having the ESI membership of 16-20 years and Above 20 years in respect of Health Protection, Risk Coverage and Overall Sense of Social Security.

The highest significant mean difference in the case of Health Protection is found between the policyholders of Up to 5 years of ESI membership and Above 20 years of ESI membership. In the case of Risk Coverage and Overall Sense of Social Security, the highest significant mean difference is seen between the policyholders of Up to 5 years of ESI membership and 16-20 years of ESI membership. It indicates that the policyholders having longer period of ESI membership (16-20 years and Above 20 years) are experiencing better level of Health Protection, Risk Coverage and Overall Sense of Social Security than the policyholders having shorter period of ESI membership.

**Table 7.31**

*Multiple Comparisons of Sense of Social Security Based on Duration of ESI Membership – Tamhane’s T2 Post hoc test*

| Duration of ESI Membership (I) | Duration of ESI Membership (J) | Provision of Income Security |                    |
|--------------------------------|--------------------------------|------------------------------|--------------------|
|                                |                                | Mean Difference (I-J)        | Significance Value |
| Up to 5 years                  | 6-10 years                     | -.31052**                    | .000               |
|                                | 11-15 years                    | -.38827**                    | .000               |
|                                | 16-20 years                    | -.80455**                    | .000               |
|                                | Above 20 years                 | -.85455**                    | .000               |
| 6-10 years                     | 11-15 years                    | -.07775                      | .992               |
|                                | 16-20 years                    | -.49403**                    | .000               |
|                                | Above 20 years                 | -.54403**                    | .000               |
| 11-15 years                    | 16-20 years                    | -.41628**                    | .001               |
|                                | Above 20 years                 | -.46628**                    | .002               |
| 16-20 years                    | Above 20 years                 | -.05000                      | 1.000              |

Source: Primary Data

\*\*Significant at 1% level of significance

Table 7.31 shows the result of Tamhane’s T2 Post hoc test in respect of the Provision of Income Security. In this case, a pair wise comparison of the policyholders with different duration of ESI membership is made. The result points out that no significant difference is observed between the policyholders having 6-10 years of ESI membership and 11-15 years of ESI membership in respect of the provision of income security. Similarly, the policyholders of 16-20 years of ESI membership do not differ significantly from the policyholders of Above 20 years of ESI membership. Significant difference exists between all other groups of policyholders in the case of Provision of Income Security

Highest significant mean difference is observed between the policyholders having ESI membership of Up to 5 years and Above 20 years. It suggests that the level of income security experienced by the policyholders who remain as a member under ESI scheme for a period of more than 20 years is much higher than the policyholders of Up to 5 years of ESI membership.

### 7.7.3.2 Comparison of Sense of Social Security based on the Level of ESI Benefits utilization

This section presents the analysis of the sense of social security of ESI policyholders on the basis of the level of ESI benefits utilization. For this purpose, One-way ANOVA/ Welch test is applied according to the homogeneity assumption of Equality of Variance. Moreover, post-hoc analysis is conducted for the significant results. Following hypothesis is formulated and tested accordingly.

*H0<sub>20</sub>: There is no significant difference in the sense of social security among ESI policyholders according to the Level of ESI Benefits utilization.*

*H1<sub>20</sub>: There is significant difference in the sense of social security among ESI policyholders according to the Level of ESI Benefits utilization.*

**Table 7.32**

*Comparison of Sense of Social Security According to the Level of ESI Benefits Utilisation*

| Dimensions                          | Descriptive Statistics of Level of ESI Benefits Utilization (Mean and SD) |                 |                 |                   | Levene's test of Equality of Variance |            | One-way ANOVA/ Welch test |            |
|-------------------------------------|---------------------------------------------------------------------------|-----------------|-----------------|-------------------|---------------------------------------|------------|---------------------------|------------|
|                                     | Up to 3 times                                                             | 4-6 times       | 7-9 times       | More than 9 times | Test statistics                       | Sig. value | Test Statistics           | Sig. value |
| <b>Health protection</b>            | 2.993<br>(.625)                                                           | 3.309<br>(.460) | 3.300<br>(.721) | 3.985<br>(.469)   | 10.746**                              | .000       | 61.837**                  | .000       |
| <b>Provision of Income security</b> | 2.836<br>(.603)                                                           | 3.005<br>(.588) | 3.145<br>(.654) | 3.526<br>(.483)   | 3.178*                                | .024       | 30.150**                  | .000       |
| <b>Risk coverage</b>                | 2.335<br>(.643)                                                           | 2.527<br>(.531) | 2.647<br>(.689) | 3.088<br>(.508)   | 3.767*                                | .011       | 32.099**                  | .000       |
| <b>Sense of Social Security</b>     | 2.721<br>(.507)                                                           | 2.947<br>(.399) | 3.031<br>(.612) | 3.533<br>(.335)   | 8.340**                               | .000       | 75.643**                  | .000       |

Source: Primary Data

\*\*Significant at 1% level of significance

\*Significant at 5% level of significance

Parentheses represent standard deviation

Table 7.32 depicts the result of One-way ANOVA/ Welch test used to analyse the Sense of Social Security of ESI policyholders according to the level of utilization of ESI benefits. As per the result of Levene's test, homogeneity assumption cannot be assumed in the case of Health Protection and Overall Sense of Social Security at 1% level of significance. As the p value under these cases are less than 0.01. Similarly, homogeneity assumption is not satisfied in respect of Provision of Income Security and Risk Coverage at 5% level of significance. Because the p values of Levene's test in these cases are less than 0.05. Hence Welch test is used for mean comparison of all the dimensions of Sense of Social Security and Overall Sense of Social Security.

As per the result of Welch test, the p values of all dimensions of Sense of Social Security and Overall Sense of Social Security are less than 0.01. Hence the null hypothesis is rejected in all these cases. So, there exists significant difference in the Sense of Social Security among ESI policyholders according to the level of utilization of ESI benefits.

From the descriptive statistics, it is evident that, the policyholders who are using ESI benefits for a greater number of times are experiencing more Sense of Social Security than the policyholders using ESI benefits for a lesser number of times. The mean score of the sense of social security of the policyholders who are utilizing ESI benefits only up to three times in a year is very low when compared to other groups. Hence, it can be inferred that the level of utilization of ESI benefits significantly influence the Sense of Social Security of ESI policyholders.

**Table 7.33**

*Multiple Comparisons of Sense of Social Security Based on the Level of ESI benefits utilization - Tamhane's T2 post hoc test*

| Level of ESI Benefits Utilised (I) | Level of ESI Benefits Utilised (J) | Mean Difference (I-J) (Sig.) |                              |                     |                          |
|------------------------------------|------------------------------------|------------------------------|------------------------------|---------------------|--------------------------|
|                                    |                                    | Health Protection            | Provision of Income Security | Risk Coverage       | Sense of Social Security |
| Up to 3 times                      | 4-6 times                          | -.31561**<br>(.000)          | -.16980<br>(.065)            | -.19238*<br>(.020)  | -.22593**<br>(.000)      |
|                                    | 7-9 times                          | -.30668*<br>(.032)           | -.30989*<br>(.014)           | -.31251*<br>(.021)  | -.30970**<br>(.006)      |
|                                    | More than 9 times                  | -.99198**<br>(.000)          | -.69017**<br>(.000)          | -.75348**<br>(.000) | -.81188**<br>(.000)      |
| 4-6 times                          | 7-9 times                          | .00893<br>(1.000)            | -.14010<br>(.672)            | -.12013<br>(.819)   | -.08377<br>(.925)        |
|                                    | More than 9 times                  | -.67637**<br>(.000)          | -.52038**<br>(.000)          | -.56109**<br>(.000) | -.58595**<br>(.000)      |
| 7-9 times                          | More than 9 times                  | -.68529**<br>(.000)          | -.38028**<br>(.003)          | -.44096**<br>(.001) | -.50218**<br>(.000)      |

Source: Primary Data

\*Significant at 5% level of significance

\*\*Significant at 1% level of significance

Parentheses represent significance value

Table 7.33 shows the result of Tamhane's T2 Post hoc test in respect of various dimensions of Sense of Social Security and Overall Sense of Social Security. From the result, it is found that significant difference exists between all groups of policyholders except between the policyholders using ESI benefits 4-6 times and 7-9 times in respect of Health Protection, Risk Coverage and Overall Sense of Social Security.

In respect of the Provision of Income Security, the policyholders using ESI benefits for 4-6 times in a year do not differ significantly from the policyholders using ESI benefits Up to 3 times and 7-9 times in a year. But significant difference exists between all other groups of policyholders in this respect.

The highest significant mean difference in respect of various dimensions of sense of social security and overall sense of social security is found between the policyholders utilizing ESI benefits 'Up to 3 times' in a year and 'More than 9 times' in a year. It indicates that the sense of social security experienced by the

policyholders who are utilizing ESI benefits for a greater number of times (More than 9 times in a year) is much better than the policyholders utilizing ESI benefits only lesser number of times (Up to 3 times in a year)

## **7.8 Conclusion**

This chapter analysed the satisfaction level and sense of social security experienced by the ESI policyholders. The statistical techniques such as mean, standard deviation, one sample t test, Levene's test of equality of variance, One-way ANOVA/ Welch test and Scheffe/ Tamhane's Post hoc test are used for the analysis purpose. The first section shows the analysis of the satisfaction level of ESI policyholders using 10 indicators. Descriptive statistics such as mean and standard deviation reveals that the policyholders are satisfied with the medical services, adequacy of cash benefits, online services of ESI Corporation and premium contribution. Whereas the policyholders are dissatisfied with the communication of information, procedural formalities and grievance handling mechanism. As per the result of One sample t test, ESI Corporation offers only average level of satisfaction to its policyholders. Comparison of satisfaction level according to the demographic profile & ESI details revealed significant difference in the satisfaction level based on age, income, nature of the organization, duration of ESI membership and level of ESI benefits utilized.

The second section presents the analysis of the sense of social security of ESI policyholders. The Sense of Social Security is measured by using 13 statements under 3 dimensions such as Health Protection, Provision of Income Security and Risk Coverage. The result showed that ESI Corporation is offering average level of income security to its policyholders. The level of health protection enjoyed by the ESI policyholders is above average level whereas it is below average in the case of risk coverage. Overall sense of social security offered by the ESI Corporation is only on an average level. Comparative analysis of the sense of social security across various demographic groups and ESI details disclosed significant difference in the sense of social security experienced by the ESI policyholders based on their age, income, nature of organization, duration of ESI membership and level of ESI benefits utilized. The results of the analysis provide insights in to the effectiveness of ESI benefits and the potential areas requiring improvement for enhancing the satisfaction level and sense of social security of ESI policyholders.

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## *Chapter 8*

# **ANALYSIS OF RELATIONSHIP AMONG SERVICE QUALITY, SATISFACTION LEVEL AND SENSE OF SOCIAL SECURITY AND THE INFLUENCE OF AWARENESS AND KNOWLEDGE ON THE SATISFACTION LEVEL**

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|-----|-------------------------------------|-----|
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## **8.1 Introduction**

In the previous chapters, the researcher has analyzed ESI Awareness and Knowledge level, Service Quality, Satisfaction Level and Sense of Social Security among ESI policyholders. In order to derive meaningful conclusion, it is quite relevant to understand the relationship among the proposed variables of the study. Accordingly, the present chapter reports the relationship among various constructs used in this study. Here, the relationship is measured by applying Structural Equation Modeling.

Structural Equation Modelling is used to analyse the relationship among latent constructs which are represented by multiple measures (Lei & Wu, 2007). It is a combination of multiple regression and factor analysis which helps to deal with multicollinearity and unreliability issues (Bacon, 1997). It helps to analyse the cause and effect relationship between the latent constructs which include estimation of variance, covariance, Confirmatory Factor Analysis, linear regression, hypothesis testing and modification of theoretical models for getting the best fit indices (Hoyle & Lomax, 1995) . Structural Equation Modelling can also be used to explain the role of mediating and moderating variable in the relationship between independent and dependent variables (Joseph F Hair et al., 2021).

SEM is usually performed in two stages. In the first stage the relationship between observed variables and underlying constructs is analysed by conducting Confirmatory Factor Analysis. During the second stage, the relationship between the latent constructs are specified in the structural model and it is tested (J.F. Hair et al., 1995). The present study employed Covariance Based SEM (CB-SEM) to explain the relationships among variables. SEM is performed by using SPSS AMOS version 23. In order to make a detailed analysis of the influence of various dimensions of

independent variables on the dependent variable, regression analysis is also conducted in this chapter.

## 8.2 Objectives

The second part of the fourth objective which is studying **the influence of awareness and knowledge on the satisfaction level** and sixth objective which is **assessing the influence of service quality on the sense of social security of ESI policyholders by considering satisfaction level as a mediating variable** are discussed in this chapter.

## 8.3 Hypotheses

- H<sub>13</sub>: Awareness level on ESI services has a positive effect on Satisfaction Level of ESI policyholders.
- H<sub>14</sub>: Knowledge level on ESI services has a positive effect on Satisfaction Level of ESI policyholders.
- H<sub>15</sub>: Service quality of ESI Corporation has a positive effect on the sense of social security experienced by the ESI policyholders.
- H<sub>16</sub>: Service quality of ESI Corporation has a positive effect on policyholders' satisfaction.
- H<sub>17</sub>: ESI Policyholders' satisfaction has a positive effect on their sense of social security.
- H<sub>18</sub>: ESI Policyholders' satisfaction has a mediating role between service quality of ESI Corporation and sense of social security of ESI policyholders.

## 8.4 Confirmatory Factor Analysis

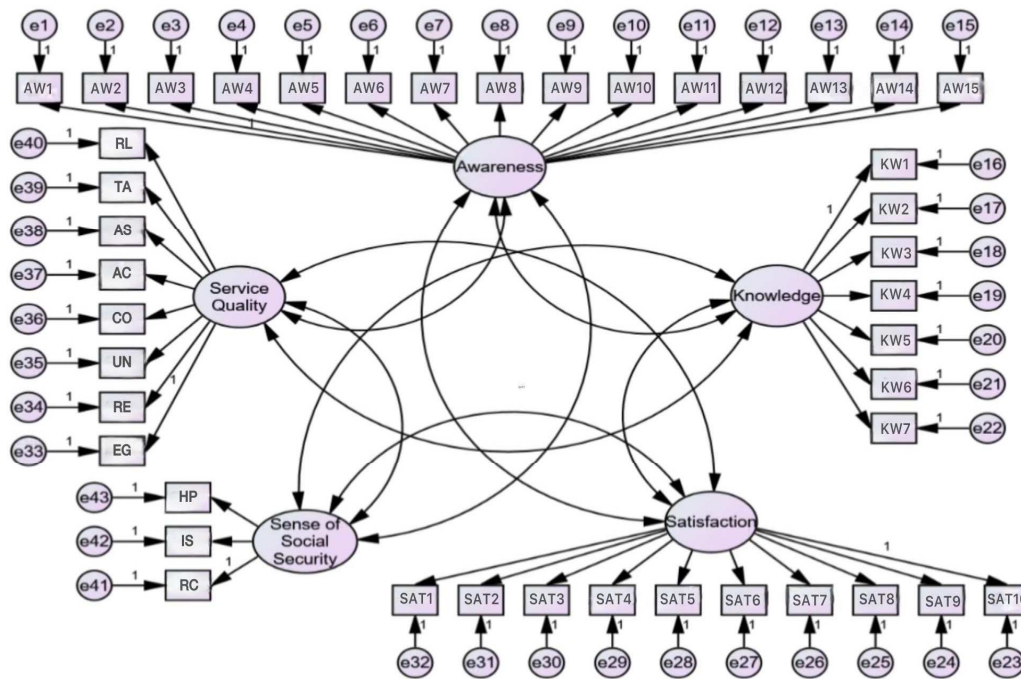
Confirmatory Factor Analysis is the first stage under Structural Equation Modelling. It is used for measuring the validity and model fit of the conceptual model proposed in the study. CFA result is described with measurement model, model fit indices

and validity and reliability results. The validation of the measurement models of Service Quality and Sense of Social Security is also described in this section.

### 8.4.1 Confirmatory Factor Analysis - Conceptual Model of the Study

**Figure 8.1**

*Proposed Model of the Study*



**Table 8.1**

*Model Fit Indices - Conceptual Model of the Study*

| Indices                          | Value Obtained | Recommended Values of Good Fit | Recommended Values of Acceptable Fit |
|----------------------------------|----------------|--------------------------------|--------------------------------------|
| Normed chi-square (CMIN/df)      | 3.741          | $\leq 3$                       | $\leq 5$                             |
| Root Mean Square Residuals (RMR) | 0.036          | $\leq 0.05$                    | $\leq 0.08$                          |
| Comparative Fit Index (CFI)      | 0.848          | $\geq 0.90$                    | $\geq 0.80$                          |
| Goodness of Fit Index (GFI)      | 0.810          | $\geq 0.90$                    | $\geq 0.80$                          |
| Incremental Fit Index (IFI)      | 0.849          | $\geq 0.90$                    | $\geq 0.80$                          |
| Tucker Fit Index (TLI)           | 0.838          | $\geq 0.90$                    | $\geq 0.80$                          |

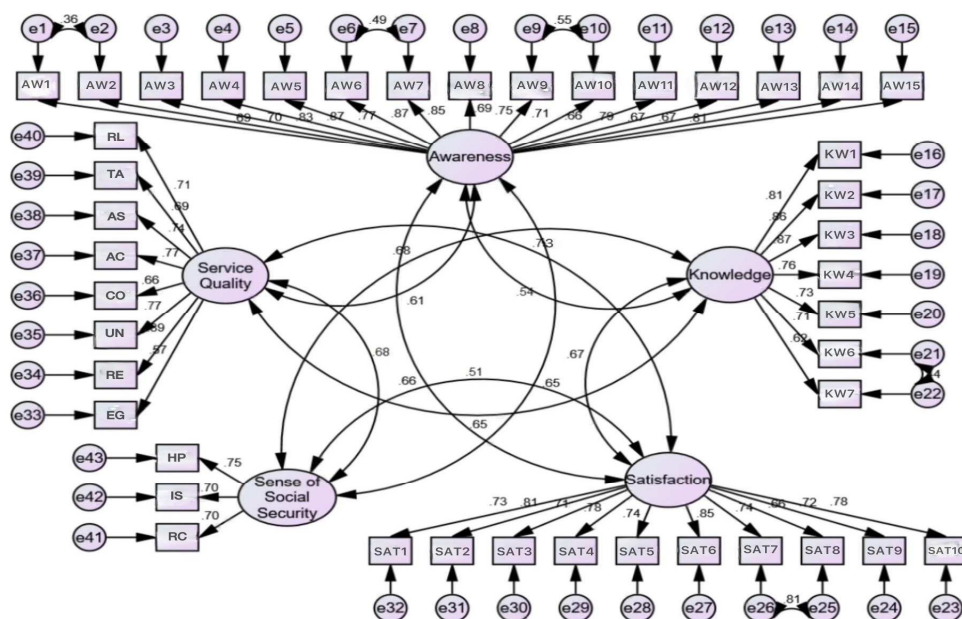
| Indices                                         | Value Obtained | Recommended Values of Good Fit | Recommended Values of Acceptable Fit |
|-------------------------------------------------|----------------|--------------------------------|--------------------------------------|
| Normed Fit Index (NFI)                          | 0.805          | $\geq 0.90$                    | $\geq 0.80$                          |
| Relative Fit Index (RFI)                        | 0.891          | $\geq 0.90$                    | $\geq 0.80$                          |
| Root Mean Square Error of Approximation (RMSEA) | 0.078          | $\leq 0.08$                    | $= 0.08$                             |

Source: Primary Data

The acceptability of the proposed conceptual model is examined with the help of the above modification indices. In this case the values CFI, IFI, TLI, NFI and RFI are above the recommended limit of acceptable fit with values greater than 0.80. Similarly, the value of CMIN/df is 3.741 which lies within the recommended value of acceptable fit of less than 5. The value of RMR (0.036) is within the recommended value of good fit of less than 0.05 and the value of RMSEA (0.078) is also within the limit of good fit. Therefore, the proposed model can be accepted with good fit indices.

**Figure 8.2**

*Measurement Model of the Study*



**Table 8.2**

*Validity and Reliability Statistics - Conceptual Model of the Study*

| Constructs                          | Indicator<br>s | Factor<br>Loading<br>s | CR                                                                             | AVE                                        | MSV                                                   |
|-------------------------------------|----------------|------------------------|--------------------------------------------------------------------------------|--------------------------------------------|-------------------------------------------------------|
|                                     |                |                        | $CR = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + \sum Var(\varepsilon_i)}$ | $AVE = \frac{\sum_{i=1}^n \lambda_i^2}{n}$ | = square of highest correlation b/w latent constructs |
| <b>Awareness<br/>(AW)</b>           | AW1            | .686                   | 0.953                                                                          | 0.577                                      | 0.435                                                 |
|                                     | AW2            | .700                   |                                                                                |                                            |                                                       |
|                                     | AW3            | .831                   |                                                                                |                                            |                                                       |
|                                     | AW4            | .873                   |                                                                                |                                            |                                                       |
|                                     | AW5            | .773                   |                                                                                |                                            |                                                       |
|                                     | AW6            | .868                   |                                                                                |                                            |                                                       |
|                                     | AW7            | .852                   |                                                                                |                                            |                                                       |
|                                     | AW8            | .695                   |                                                                                |                                            |                                                       |
|                                     | AW9            | .745                   |                                                                                |                                            |                                                       |
|                                     | AW10           | .714                   |                                                                                |                                            |                                                       |
|                                     | AW11           | .662                   |                                                                                |                                            |                                                       |
|                                     | AW12           | .792                   |                                                                                |                                            |                                                       |
|                                     | AW13           | .669                   |                                                                                |                                            |                                                       |
|                                     | AW14           | .671                   |                                                                                |                                            |                                                       |
|                                     | AW15           | .810                   |                                                                                |                                            |                                                       |
| <b>Knowledge<br/>(KW)</b>           | KW1            | .814                   | 0.910                                                                          | 0.593                                      | 0.462                                                 |
|                                     | KW2            | .857                   |                                                                                |                                            |                                                       |
|                                     | KW3            | .869                   |                                                                                |                                            |                                                       |
|                                     | KW4            | .761                   |                                                                                |                                            |                                                       |
|                                     | KW5            | .733                   |                                                                                |                                            |                                                       |
|                                     | KW6            | .713                   |                                                                                |                                            |                                                       |
|                                     | KW7            | .617                   |                                                                                |                                            |                                                       |
| <b>Service<br/>Quality<br/>(SQ)</b> | RL             | .712                   | 0.900                                                                          | 0.535                                      | 0.532                                                 |
|                                     | TA             | .686                   |                                                                                |                                            |                                                       |
|                                     | AS             | .745                   |                                                                                |                                            |                                                       |
|                                     | AC             | .767                   |                                                                                |                                            |                                                       |
|                                     | CO             | .657                   |                                                                                |                                            |                                                       |
|                                     | UN             | .777                   |                                                                                |                                            |                                                       |
|                                     | RE             | .890                   |                                                                                |                                            |                                                       |
|                                     | EG             | .579                   |                                                                                |                                            |                                                       |

| Constructs                     | Indicators | Factor Loadings | CR                                                                             |       | AVE                                        |  | MSV<br>= square of highest correlation b/w latent constructs |
|--------------------------------|------------|-----------------|--------------------------------------------------------------------------------|-------|--------------------------------------------|--|--------------------------------------------------------------|
|                                |            |                 | $CR = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + \sum Var(\varepsilon_i)}$ |       | $AVE = \frac{\sum_{i=1}^n \lambda_i^2}{n}$ |  |                                                              |
| Satisfaction (SAT)             | SAT1       | .726            | 0.928                                                                          | 0.566 | 0.532                                      |  |                                                              |
|                                | SAT2       | .811            |                                                                                |       |                                            |  |                                                              |
|                                | SAT3       | .706            |                                                                                |       |                                            |  |                                                              |
|                                | SAT4       | .777            |                                                                                |       |                                            |  |                                                              |
|                                | SAT5       | .744            |                                                                                |       |                                            |  |                                                              |
|                                | SAT6       | .846            |                                                                                |       |                                            |  |                                                              |
|                                | SAT7       | .736            |                                                                                |       |                                            |  |                                                              |
|                                | SAT8       | .663            |                                                                                |       |                                            |  |                                                              |
|                                | SAT9       | .719            |                                                                                |       |                                            |  |                                                              |
|                                | SAT10      | .780            |                                                                                |       |                                            |  |                                                              |
| Sense of Social Security (SSS) | HP         | .750            | 0.916                                                                          | 0.515 | 0.462                                      |  |                                                              |
|                                | IS         | .700            |                                                                                |       |                                            |  |                                                              |
|                                | RC         | .701            |                                                                                |       |                                            |  |                                                              |

Source: Primary Data

Table 8.2 describes the Standardized Factor Loadings, Composite Reliability (CR), Average Variance Extracted (AVE) and Maximum Shared Variance (MSV) of each construct used in the conceptual model of the study. The values of all Standardized Factor Loadings are above 0.50, which reveals that all variables are satisfactorily contributing to the constructs.

In order to prove the Convergent Validity, three conditions need to be satisfied namely, the value of Composite Reliability (CR) should be greater than 0.70, the value of Average Variance Extracted (AVE) should be greater than 0.50 and the value of Composite Reliability (CR) should be greater than Average Variance Extracted (AVE). Here, the values of CR and AVE of Awareness = 0.953 & 0.577, Knowledge = 0.910 & 0.593, Service Quality = 0.900 & 0.535, Satisfaction = 0.928 & 0.566 and Sense of Social Security = 0.916 & 0.515 have fulfilled the above mentioned criteria. Hence, the Convergent Validity is proved.

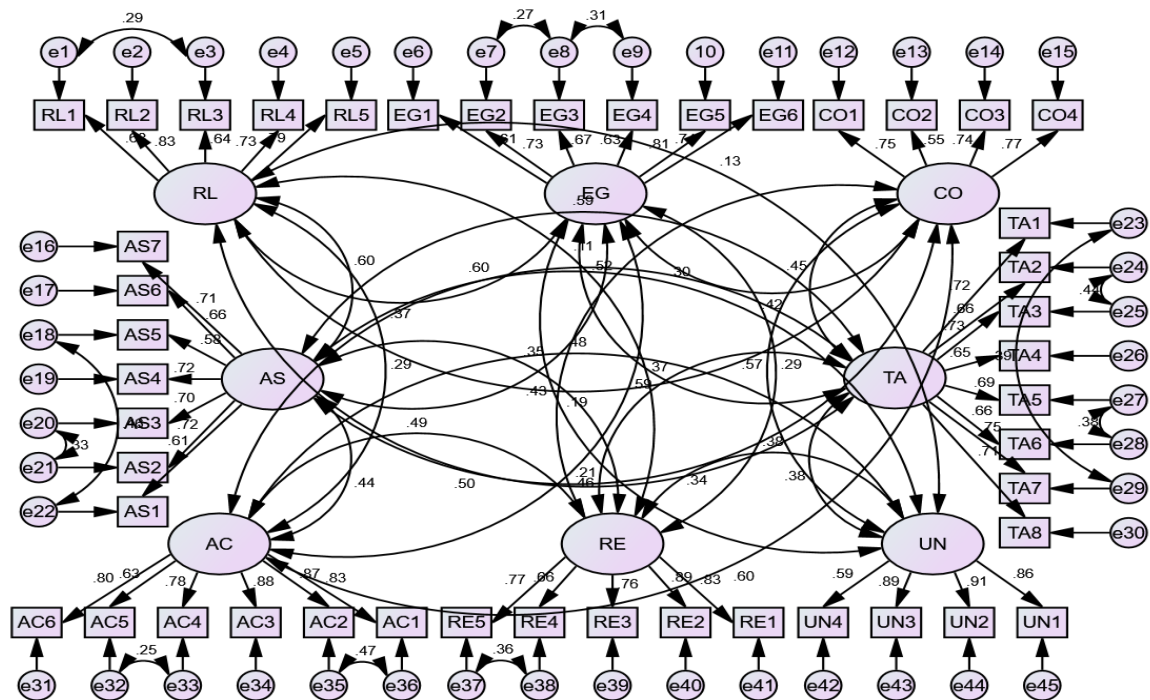
The Average Variance Extracted (AVE) should be greater than Maximum Shared Variance (MSV) to prove Discriminant Validity. This condition is satisfied in the case of all constructs such as Awareness (AVE - .577 & MSV - 0.435), Knowledge (AVE - .593 & MSV - .462), Service Quality (AVE - 0.535 & MSV- .532), Satisfaction (AVE - .566 & MSV - .532) and Sense of Social Security (AVE- .515 & MSV - .462). Hence, the criterion for Discriminant Validity is also proved.

### 8.4.2 Confirmatory Factor Analysis – Service Quality

The result of CFA of Service Quality is explained with the help of measurement model, model fit indices and validity & reliability results.

**Figure 8.3**

*Measurement Model of CFA- Service Quality*



Source: Primary Data

Figure 8.3 is the measurement model used to explain the interrelationship between the constructs and items used to measure the ‘Service Quality’ (SQ).

**Table 8.3***Model Fit Indices – Service Quality*

| <b>Indices</b>                                  | <b>Value Obtained</b> | <b>Recommended Values of Good Fit</b> | <b>Recommended Values of Acceptable Fit</b> |
|-------------------------------------------------|-----------------------|---------------------------------------|---------------------------------------------|
| Normed chi-square (CMIN/df)                     | 2.653                 | $\leq 3$                              | $\leq 5$                                    |
| Root Mean Square Residuals (RMR)                | 0.039                 | $\leq 0.05$                           | $\leq 0.08$                                 |
| Comparative Fit Index (CFI)                     | 0.881                 | $\geq 0.90$                           | $\geq 0.80$                                 |
| Goodness of Fit Index (GFI)                     | 0.806                 | $\geq 0.90$                           | $\geq 0.80$                                 |
| Incremental Fit Index (IFI)                     | 0.882                 | $\geq 0.90$                           | $\geq 0.80$                                 |
| Tucker Fit Index (TLI)                          | 0.870                 | $\geq 0.90$                           | $\geq 0.80$                                 |
| Normed Fit Index (NFI)                          | 0.823                 | $\geq 0.90$                           | $\geq 0.80$                                 |
| Relative Fit Index (RFI)                        | 0.807                 | $\geq 0.90$                           | $\geq 0.80$                                 |
| Root Mean Square Error of Approximation (RMSEA) | 0.061                 | $< 0.08$                              | $= 0.08$                                    |

Source: Primary Data

As per Table 8.3, the value of indices such as CFI, IFI, NFI, RFI and TLI are above the recommended limit of acceptable fit. Similarly, the value of CMIN/df is 2.653 which lies within the recommended value of good fit of less than 3. The value of RMR (0.039) is also within the limit of recommended value of good fit of less than 0.05 and the value of RMSEA (0.061) is also within the limit of less than 0.08. Therefore, the model used to measure the ‘Service Quality’ (SQ) is acceptable with good fit indices.

**Table 8.4**

*Validity and Reliability Statistics – Service Quality*

| Constructs                | Statements | Factor Loadings | CR<br>$CR = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + \sum Var(\varepsilon_i)}$ | AVE<br>$AVE = \frac{\sum_{i=1}^n \lambda_i^2}{n}$ | MSV<br>= square of highest correlation b/w latent constructs |
|---------------------------|------------|-----------------|--------------------------------------------------------------------------------------|---------------------------------------------------|--------------------------------------------------------------|
| <b>Reliability (RL)</b>   | RL1        | .680            | 0.855                                                                                | 0.544                                             | 0.361                                                        |
|                           | RL2        | .828            |                                                                                      |                                                   |                                                              |
|                           | RL3        | .642            |                                                                                      |                                                   |                                                              |
|                           | RL4        | .728            |                                                                                      |                                                   |                                                              |
|                           | RL5        | .794            |                                                                                      |                                                   |                                                              |
| <b>Tangibility (TA)</b>   | TA1        | .724            | 0.882                                                                                | 0.510                                             | 0.346                                                        |
|                           | TA2        | .659            |                                                                                      |                                                   |                                                              |
|                           | TA3        | .727            |                                                                                      |                                                   |                                                              |
|                           | TA4        | .658            |                                                                                      |                                                   |                                                              |
|                           | TA5        | .685            |                                                                                      |                                                   |                                                              |
|                           | TA6        | .664            |                                                                                      |                                                   |                                                              |
|                           | TA7        | .750            |                                                                                      |                                                   |                                                              |
|                           | TA8        | .707            |                                                                                      |                                                   |                                                              |
| <b>Assurance (AS)</b>     | AS1        | .613            | 0.852                                                                                | 0.503                                             | 0.346                                                        |
|                           | AS2        | .717            |                                                                                      |                                                   |                                                              |
|                           | AS3        | .700            |                                                                                      |                                                   |                                                              |
|                           | AS4        | .721            |                                                                                      |                                                   |                                                              |
|                           | AS5        | .577            |                                                                                      |                                                   |                                                              |
|                           | AS6        | .658            |                                                                                      |                                                   |                                                              |
|                           | AS7        | .709            |                                                                                      |                                                   |                                                              |
| <b>Accessibility (AC)</b> | AC1        | .828            | 0.915                                                                                | 0.646                                             | 0.362                                                        |
|                           | AC2        | .870            |                                                                                      |                                                   |                                                              |
|                           | AC3        | .885            |                                                                                      |                                                   |                                                              |
|                           | AC4        | .780            |                                                                                      |                                                   |                                                              |
|                           | AC5        | .634            |                                                                                      |                                                   |                                                              |
|                           | AC6        | .798            |                                                                                      |                                                   |                                                              |
| <b>Communication (CO)</b> | CO1        | .751            | 0.799                                                                                | 0.503                                             | 0.362                                                        |
|                           | CO2        | .555            |                                                                                      |                                                   |                                                              |
|                           | CO3        | .737            |                                                                                      |                                                   |                                                              |
|                           | CO4        | .772            |                                                                                      |                                                   |                                                              |

| Constructs                                 | Statements | Factor Loadings | CR                                                                             | AVE                                        | MSV                                                   |
|--------------------------------------------|------------|-----------------|--------------------------------------------------------------------------------|--------------------------------------------|-------------------------------------------------------|
|                                            |            |                 | $CR = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + \sum Var(\varepsilon_i)}$ | $AVE = \frac{\sum_{i=1}^n \lambda_i^2}{n}$ | = square of highest correlation b/w latent constructs |
| <b>Understanding of Policyholders (UN)</b> | UN1        | .858            | 0.891                                                                          | 0.677                                      | 0.321                                                 |
|                                            | UN2        | .911            |                                                                                |                                            |                                                       |
|                                            | UN3        | .888            |                                                                                |                                            |                                                       |
|                                            | UN4        | .595            |                                                                                |                                            |                                                       |
| <b>Responsiveness (RE)</b>                 | RE1        | .833            | 0.890                                                                          | 0.619                                      | 0.267                                                 |
|                                            | RE2        | .890            |                                                                                |                                            |                                                       |
|                                            | RE3        | .762            |                                                                                |                                            |                                                       |
|                                            | RE4        | .665            |                                                                                |                                            |                                                       |
|                                            | RE5        | .767            |                                                                                |                                            |                                                       |
| <b>E-governance (EG)</b>                   | EG1        | .613            | 0.869                                                                          | 0.527                                      | 0.345                                                 |
|                                            | EG2        | .726            |                                                                                |                                            |                                                       |
|                                            | EG3        | .674            |                                                                                |                                            |                                                       |
|                                            | EG4        | .774            |                                                                                |                                            |                                                       |
|                                            | EG5        | .814            |                                                                                |                                            |                                                       |
|                                            | EG6        | .737            |                                                                                |                                            |                                                       |

Source: Primary Data

Table 8.4 describes the Standardized Factor Loadings, Composite Reliability (CR), Average Variance Extracted (AVE) and Maximum Shared Variance (MSV) of each construct used to measure the variable 'Service Quality' (SQ) of ESI Corporation. Almost all the values of Standardized Factor Loadings are above 0.60, which indicates all the factors are satisfactorily contributing to the constructs.

Here, the values of CR and AVE of Reliability = 0.855 & 0.544, Tangibility = 0.882 & 0.510, Assurance = 0.852 & 0.503, Accessibility = 0.915 & 0.646, Communication = 0.799 & 0.503, Understanding of Policyholders = 0.891 & 0.677, Responsiveness = 0.890 & 0.619, E-governance = 0.869 & 0.527 have fulfilled the criteria required for proving Convergent Validity.

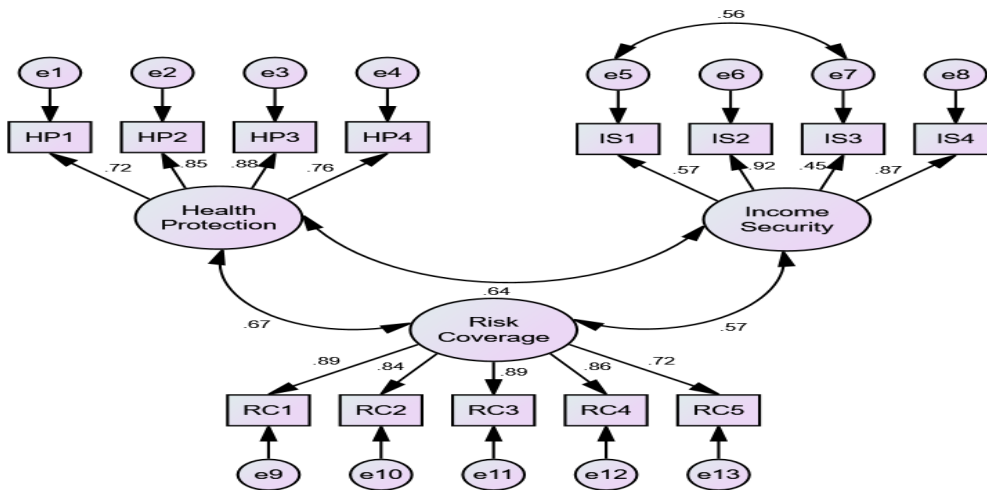
The Discriminant Validity of the scale is proved with the criteria of Average Variance Extracted (AVE) should be greater than Maximum Shared Variance (MSV). In this case,  $0.544 > 0.361$  of Reliability,  $0.510 > 0.346$  of Tangibility,  $0.503 > 0.346$  of Assurance,  $0.646 > 0.362$  of Accessibility,  $0.503 > 0.362$  of Communication,  $0.677 > 0.321$  of Understanding,  $0.619 > 0.267$  of Responsiveness,  $0.527 > 0.345$  of E-governance have fulfilled the above specified conditions. Hence, the criterion for Discriminant Validity is also proved. In short, the model is said to be good fit for measuring the variable ‘Service Quality’ (SQ) of ESI Corporation.

### 8.4.3 Confirmatory Factor Analysis – Sense of Social Security (SSS)

The result of CFA is explained with the help of measurement model, model fit indices and validity results.

**Figure 8.4**

*Measurement Model of CFA – Sense of Social Security (SSS)*



Source: Primary Data

Figure 8.4 is the measurement model used to explain the interrelationship between the constructs and items used to measure the ‘Sense of Social Security’ (SSS).

**Table 8.5***Model Fit Indices – Sense of Social Security*

| <b>Indices</b>                                  | <b>Value Obtained</b> | <b>Recommended Values of Good Fit</b> | <b>Recommended Values of Acceptable Fit</b> |
|-------------------------------------------------|-----------------------|---------------------------------------|---------------------------------------------|
| Normed chi-square (CMIN/df)                     | 3.906                 | $\leq 3$                              | $\leq 5$                                    |
| Root Mean Square Residuals (RMR)                | 0.029                 | $\leq 0.05$                           | $\leq 0.08$                                 |
| Comparative Fit Index (CFI)                     | 0.956                 | $\geq 0.90$                           | $\geq 0.80$                                 |
| Goodness of Fit Index (GFI)                     | 0.917                 | $\geq 0.90$                           | $\geq 0.80$                                 |
| Incremental Fit Index (IFI)                     | 0.957                 | $\geq 0.90$                           | $\geq 0.80$                                 |
| Tucker Fit Index (TLI)                          | 0.944                 | $\geq 0.90$                           | $\geq 0.80$                                 |
| Normed Fit Index (NFI)                          | 0.943                 | $\geq 0.90$                           | $\geq 0.80$                                 |
| Relative Fit Index (RFI)                        | 0.927                 | $\geq 0.90$                           | $\geq 0.80$                                 |
| Root Mean Square Error of Approximation (RMSEA) | 0.080                 | $< 0.08$                              | $= 0.08$                                    |

Source: Primary Data

As per Table 8.5, the indices such as CFI, GFI, IFI, TLI, NFI and RFI are above the recommended limit of greater than 0.90. Similarly, the value of CMIN/df is 3.906, which lies within the limit of acceptable fit of less than 5. Besides, the value of RMR (0.029) is within the recommended limit of less than 0.05 and the value of RMSEA (0.080) is also within the acceptable value of 0.08. Therefore, the model used to measure the ‘Sense of Social Security’ (SSS) of ESI policyholders is acceptable with good fit indices.

**Table 8.6**

*Validity and Reliability Statistics – Sense of Social Security*

| Constructs                               | Statements | Factor Loadings | CR                                                                             | AVE                                        | MSV                                                   |
|------------------------------------------|------------|-----------------|--------------------------------------------------------------------------------|--------------------------------------------|-------------------------------------------------------|
|                                          |            |                 | $CR = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + \sum Var(\varepsilon_i)}$ | $AVE = \frac{\sum_{i=1}^n \lambda_i^2}{n}$ | = square of highest correlation b/w latent constructs |
| <b>Health Protection (HP)</b>            | HP1        | .724            | 0.880                                                                          | 0.648                                      | 0.452                                                 |
|                                          | HP2        | .849            |                                                                                |                                            |                                                       |
|                                          | HP3        | .877            |                                                                                |                                            |                                                       |
|                                          | HP4        | .759            |                                                                                |                                            |                                                       |
| <b>Provision of Income Security (IS)</b> | IS1        | .572            | 0.807                                                                          | 0.530                                      | 0.410                                                 |
|                                          | IS2        | .918            |                                                                                |                                            |                                                       |
|                                          | IS3        | .447            |                                                                                |                                            |                                                       |
|                                          | IS4        | .866            |                                                                                |                                            |                                                       |
| <b>Risk Coverage (RC)</b>                | RC1        | .887            | 0.924                                                                          | 0.709                                      | 0.452                                                 |
|                                          | RC2        | .839            |                                                                                |                                            |                                                       |
|                                          | RC3        | .888            |                                                                                |                                            |                                                       |
|                                          | RC4        | .863            |                                                                                |                                            |                                                       |
|                                          | RC5        | .722            |                                                                                |                                            |                                                       |

Source: Primary Data

Table 8.6 describes that all the factors are satisfactorily contributing to the constructs. Here, the values of CR and AVE of Health Protection (HP) = 0.880 & 0.648, Provision of Income Security (IS) = 0.807 & 0.530, and Risk Coverage (RC) = 0.924 & 0.709 fulfilled the criteria for proving the Convergent Validity.

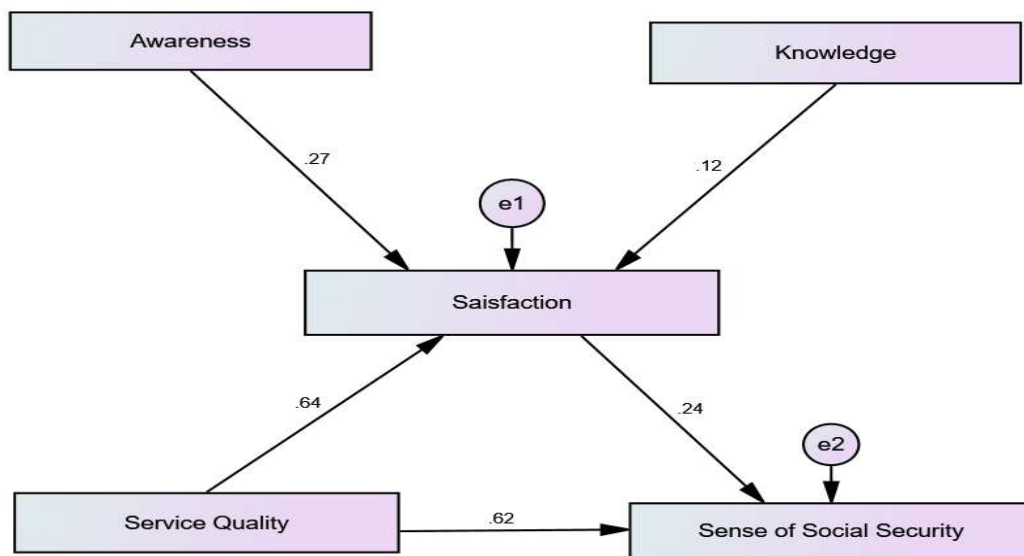
The Discriminant Validity of the scale is proved with the criteria that Average Variance Extracted (AVE) should be greater than Maximum Shared Variance (MSV). Here the Average Variance Extracted (AVE) of all the constructs is greater than the value of Maximum Shared Variance (MSV) such as 0.648>0.452 of Health Protection, 0.530>0.410 of Provision of Income Security, and 0.709>0.452 of Risk Coverage. Hence, the model is said to be good fit for measuring the ‘Sense of Social Security’ (SSS) created by the ESI Corporation.

## 8.5 Structural Equation Modelling

Results of Structural Equation Modelling is shown below. It includes both Structural Equation model and the result of hypotheses testing

**Figure 8.5**

*Structural Equation Model*



Source: Primary Data

Figure 8.5 shows the Structural Equation model explaining the relationship among various constructs of the study. It explains the mediating role of the Satisfaction level of policyholders in the empirical relationship between Service Quality of ESI Corporation and Sense of Social Security of ESI policyholders. Further it shows that ESI Awareness level and Knowledge level influence the Satisfaction level of ESI policyholders. Here imputed model is used to explain the relationship. Service Quality, ESI Awareness level and knowledge level are shown as independent variables in this model. The direct influences are shown in the measurement model through path co-efficient.

### **8.5.1 Relationship Between ESI Awareness and Satisfaction Level**

*H<sub>13</sub>: Awareness level on ESI services has a positive effect on the Satisfaction Level of ESI policyholders.*

Result of testing the hypothesis showing the positive effect of Awareness level on the Satisfaction level of ESI policyholders is given in the following table

**Table 8.7**

*Hypothesis testing result of relationship between ESI Awareness level and Satisfaction level*

| <b>Hypothesis</b> | <b>Path</b>              | <b>Path Co-efficient</b> | <b>p (Sig.) Value</b> | <b>Result</b> |
|-------------------|--------------------------|--------------------------|-----------------------|---------------|
| H <sub>13</sub>   | Awareness → Satisfaction | 0.269**                  | <0.001                | Supported     |

Source: Primary Data

\*\* Significant at 1% level of significance

Table 8.7 reveals that Awareness level ( $\beta=0.269$ ,  $p<0.001$ ) is a significant factor influencing the Satisfaction level of ESI policyholders. Since the ‘p’ value is significant at 1% level of significance; the proposed alternative hypothesis (H<sub>13</sub>) is accepted and the awareness level has significant positive impact on the satisfaction level of the policyholders. It further reveals that the satisfaction level of ESI policyholders would increase by 0.269 for every unit of standard deviation increase in their awareness level. In other words, whenever the awareness level of ESI policyholders is increased, their satisfaction level will also be increased in the same direction.

This finding is consistent with the findings of some previous studies conducted by International Labour Organisation (2022); Krishnamurthi & Sasikala (2017); Geng et al., (2021) and Iqbal et al., (2021) in which the researchers investigated and established significant direct relationship between awareness and satisfaction level. Here, the researcher established direct significant relationship between ESI Awareness level and Satisfaction level of ESI policyholders.

### 8.5.2 Relationship between ESI Knowledge and Satisfaction Level

*H<sub>14</sub>: Knowledge level on ESI services has a positive effect on the Satisfaction Level of ESI policyholders.*

Result of testing the hypothesis showing the positive effect of Knowledge level on the Satisfaction level of ESI policyholders is given in the following table

**Table 8.8**

*Hypothesis testing result of relationship between ESI Knowledge level and Satisfaction level*

| Hypothesis      | Path                     | Path Co-efficient | p (Sig.) Value | Result    |
|-----------------|--------------------------|-------------------|----------------|-----------|
| H <sub>14</sub> | Knowledge → Satisfaction | 0.124*            | 0.047          | Supported |

Source: Primary Data

\* Significant at 5% level of significance

The result exposes that Knowledge level ( $\beta=0.124$ ,  $p<0.05$ ) is a significant factor influencing the Satisfaction level of the ESI policyholders. Since the 'p' value is significant at 5% level of significance; the proposed alternative hypothesis (H<sub>14</sub>) is accepted and the Knowledge level has significant positive impact on the Satisfaction level of the policyholders. It further reveals that the satisfaction level of ESI policyholders would increase by 0.124 for every unit of standard deviation increase in their knowledge level. In other words, whenever the knowledge level of the policyholders is increased, their satisfaction level will also be increased in the same direction.

These results were confirmed by some previous studies conducted by Aldosari et al. (2016) and International Labour Organisation (2022) in which the researchers investigated and established significant direct relationship between knowledge and satisfaction level. Here also, the researcher established direct significant relationship between ESI Knowledge level and Satisfaction level of ESI policyholders.

### 8.5.3 Relationship among Service Quality, Satisfaction Level and Sense of Social Security

The results of the hypotheses showing the direct relationship between Service Quality and Sense of Social Security; Service Quality and Satisfaction level and Satisfaction level and Sense of Social Security are given in the below table.

**Table 8.9**

*Hypothesis testing result of the direct relationship among Service Quality, Satisfaction level and Sense of Social Security*

| Hypotheses      | Path                                       | Path Co-efficient | p (Sig.) Value | Result    |
|-----------------|--------------------------------------------|-------------------|----------------|-----------|
| H <sub>15</sub> | Service Quality → Sense of Social Security | 0.617**           | <0.001         | Supported |
| H <sub>16</sub> | Service Quality → Satisfaction Level       | 0.639**           | <0.001         | Supported |
| H <sub>17</sub> | Satisfaction → Sense of Social Security    | 0.244**           | <0.001         | Supported |

Source: Primary Data

\*\* Significant at 1% level of significance

#### 8.5.3.1 Direct Relationship between Service Quality and Sense of Social Security

*H<sub>15</sub>: Service quality of ESI Corporation has a positive effect on the Sense of Social Security of ESI policyholders.*

The result shown in Table 8.9 reflects that Service Quality ( $\beta=0.617$ ,  $p<0.01$ ) is the prominent factor influencing the Sense of Social Security. Since the 'p' value is significant at 1% level of significance; the proposed alternative hypothesis is accepted and the service quality has a direct significant positive relationship with sense of social security. It further reveals that the sense of social security would increase by 0.617 for every unit of standard deviation increase in service quality perception. In other words, whenever the Service Quality of ESI Corporation is

increased, Sense of Social Security among policyholders will also be increased in the same direction.

The study supports the findings of the previous literatures authored by Woodside et al. (1989); Olorunniwo et al. (2006) and Sivakumar & Srinivasan (2009). In these studies, significant relationship is established between service quality and behavioural intentions/ outcomes of customers. Here also significant positive relationship is established between service quality of ESI Corporation and the behavioural intention of ESI policyholders termed as sense of social security.

#### **8.5.3.1.1 Regression Analysis between Service Quality and Sense of Social Security**

In order to assess the influence of each dimension of service quality on various factors of sense of social security, regression analysis is carried out. Following Hypotheses are formulated in this respect

H<sub>15a</sub>: Various dimensions of service Quality have significant influence on Health Protection.

H<sub>15b</sub>: Various dimensions of service Quality have significant influence on Provision of Income Security.

H<sub>15c</sub>: Various dimensions of service Quality have significant influence on Risk Coverage.

H<sub>15d</sub>: Various dimensions of service Quality have significant influence on Sense of Social Security.

**Table 8.10**

*Cause and Effect Relationship between various dimensions of Service Quality and Sense of Social Security*

| Service Quality dimensions     | Health Protection                               |            | Provision of Income Security                    |            | Risk Coverage                                   |            | Sense of Social Security                        |            |
|--------------------------------|-------------------------------------------------|------------|-------------------------------------------------|------------|-------------------------------------------------|------------|-------------------------------------------------|------------|
|                                | R <sup>2</sup> value (Adjusted R <sup>2</sup> ) | Sig. value | R <sup>2</sup> value (Adjusted R <sup>2</sup> ) | Sig. value | R <sup>2</sup> value (Adjusted R <sup>2</sup> ) | Sig. value | R <sup>2</sup> value (Adjusted R <sup>2</sup> ) | Sig. value |
| Reliability                    | 0.173<br>(0.171)                                | <0.001     | 0.326<br>(0.106)                                | <0.001     | 0.032<br>(0.030)                                | <0.001     | 0.149<br>(0.148)                                | <0.001     |
| Tangibility                    | 0.280<br>(0.278)                                | <0.001     | 0.532<br>(0.283)                                | <0.001     | 0.153<br>(0.151)                                | <0.001     | 0.369<br>(0.368)                                | <0.001     |
| Assurance                      | 0.115<br>(0.113)                                | <0.001     | 0.243<br>(0.059)                                | <0.001     | 0.088<br>(0.086)                                | <0.001     | 0.137<br>(0.135)                                | <0.001     |
| Accessibility                  | 0.294<br>(0.293)                                | <0.001     | 0.529<br>(0.280)                                | <0.001     | 0.346<br>(0.344)                                | <0.001     | 0.489<br>(0.488)                                | <0.001     |
| Communication                  | 0.196<br>(0.195)                                | <0.001     | 0.438<br>(0.192)                                | <0.001     | 0.261<br>(0.259)                                | <0.001     | 0.349<br>(0.348)                                | <0.001     |
| Understanding of Policyholders | 0.121<br>(0.119)                                | <0.001     | 0.305<br>(0.093)                                | <0.001     | 0.171<br>(0.169)                                | <0.001     | .211<br>(0.209)                                 | <0.001     |
| Responsiveness                 | 0.061<br>(0.059)                                | <0.001     | 0.196<br>(0.039)                                | <0.001     | 0.146<br>(0.144)                                | <0.001     | 0.118<br>(0.116)                                | <0.001     |
| E-governance                   | 0.159<br>(0.157)                                | <0.001     | 0.412<br>(0.170)                                | <0.001     | 0.141<br>(0.139)                                | <0.001     | 0.248<br>(0.246)                                | <0.001     |
| Service Quality                | 0.575<br>(0.575)                                | <0.001     | 0.360<br>(0.359)                                | <0.001     | 0.392<br>(0.390)                                | <0.001     | 0.627<br>(0.626)                                | <0.001     |

Source: Primary Data

Table 8.10 shows the coefficient of determination, adjusted co-efficient of determination and significant value of the regression analysis between various dimensions of service quality and various factors of sense of social security. Each dimension of Service Quality has significant positive influence on Health Protection, Provision of Income Security, Risk Coverage and Sense of Social Security. Among various dimensions of service quality, Accessibility (0.294) has the highest significant positive influence on Health Protection which is followed by Tangibility (0.280) and Communication (0.196). Whereas Tangibility (0.532) has the highest

significant positive influence on Provision of Income Security followed by Accessibility (0.529) and Communication (0.438). In respect of Risk Coverage, Accessibility (0.346) has the highest significant positive influence which is followed by Communication (0.261) and Understanding of Policyholders (0.171). Among various dimensions of Service Quality, Accessibility (0.489) has the highest significant positive influence on Sense of Social Security which is followed by Tangibility (0.369) and Communication (0.349). Responsiveness has the lowest significant positive influence on Health Protection (0.061), Provision of Income Security (0.196) and Sense of Social Security (0.118). Whereas Reliability has the lowest significant positive influence on Risk Coverage (0.032).

### **8.5.3.2 Direct Relationship between Service Quality and Satisfaction Level**

*H<sub>16</sub>: Service quality of ESI Corporation has a positive effect on Policyholders' Satisfaction.*

The result shown in Table 8.9 reveals that Service Quality ( $\beta=0.639$ ,  $p<0.01$ ) is an important factor which is influencing the Policyholders' Satisfaction. Since the 'p' value is significant at 1% level of significance; the proposed alternative hypothesis is accepted and the service quality has a direct significant positive relationship with Policyholders' Satisfaction. It further reveals that the satisfaction level would increase by 0.639 for every unit of standard deviation increase in service quality perception. In other words, whenever the service quality of ESI Corporation is increased, Policyholders' Satisfaction will also be increased in the same direction.

The current study validates the results of the previous studies conducted by Verma et al. (2013); Jayantkumar & Dasharathbhai (2019); (Kumar et al., 2018) and Jain & Kaondal (2019). All these studies pointed out the significant and positive influence of service quality on the satisfaction level of ESI policyholders.

#### **8.5.3.2.1 Regression Analysis between Service Quality and Satisfaction Level**

In order to assess the influence of each dimension of service quality on the satisfaction level of ESI policyholders, regression analysis is carried out. Following Hypothesis is formulated in this respect

H<sub>16a</sub>: Various dimensions of service Quality have significant influence on Satisfaction level of ESI policyholders.

**Table 8.11**

*Cause and Effect Relationship between various dimensions of Service Quality and Satisfaction Level*

| <b>Service Quality dimensions</b> | <b>Satisfaction Level</b>  |                               |                   |
|-----------------------------------|----------------------------|-------------------------------|-------------------|
|                                   | <b>R<sup>2</sup> value</b> | <b>Adjusted R<sup>2</sup></b> | <b>Sig. value</b> |
| Reliability                       | 0.215                      | 0.213                         | <0.001            |
| Tangibility                       | 0.324                      | 0.323                         | <0.001            |
| Assurance                         | 0.105                      | 0.103                         | <0.001            |
| Accessibility                     | 0.399                      | 0.397                         | <0.001            |
| Communication                     | 0.309                      | 0.307                         | <0.001            |
| Understanding                     | 0.109                      | 0.107                         | <0.001            |
| Responsiveness                    | 0.106                      | 0.104                         | <0.001            |
| E-governance                      | 0.262                      | 0.260                         | <0.001            |
| Service Quality                   | 0.548                      | 0.547                         | <0.001            |

Source: Primary Data

Table 8.11 shows the coefficient of determination, adjusted co-efficient of determination and significant value of the regression analysis between various dimensions of service quality and Satisfaction level of ESI policyholders. Each dimension of Service Quality has significant positive influence on the Satisfaction level. Among various dimensions of service quality, Accessibility (0.399) has the highest significant positive influence on Satisfaction level which is followed by Tangibility (0.324) and Communication (0.309). Whereas Assurance (0.105) has the lowest significant positive influence on the Satisfaction level of ESI policyholders. The influence of Overall Service Quality on the Satisfaction level of ESI policyholders is 0.548.

### **8.5.3.3 Direct Relationship between Satisfaction Level and Sense of Social Security**

*H<sub>17</sub>: ESI Policyholders' satisfaction has a positive effect on their Sense of Social Security.*

The result shown in Table 8.9 reports that Policyholders' Satisfaction ( $\beta=0.244$ ,  $p<0.01$ ) is a significant factor influencing the Sense of Social Security experienced by them. Since the 'p' value is significant at 1% level of significance; the proposed alternative hypothesis is accepted and the Policyholders' Satisfaction has a direct significant positive relationship with Sense of Social Security. It further reveals that the sense of social security would increase by 0.244 for every unit of standard deviation increase in the satisfaction level of ESI policyholders. In other words, whenever the satisfaction level of the policyholders is increased, their sense of social security will also be increased in the same direction.

This finding is consistent with the findings of some previous studies conducted by Cronin & Taylor (1992); Ha Nguyen & Nagase (2021) and Meesala & Paul (2016) in which the researchers investigated and established the relationship between satisfaction and behavioural intention/ purchase intention. Here, the researcher established direct significant relationship between ESI policyholders' level of satisfaction and their behavioural outcome termed as sense of social security.

### **8.5.3.4 Mediating role of Satisfaction in the relationship between Service Quality and Sense of Social Security**

Mediation is the process of understanding the effect of an independent variable on a dependent variable under the influence of a third variable termed as mediator. Mediation analysis describes how or why such relationship occur (Baron & Kenny, 1986). This section of analysis deals with the mediating role of Satisfaction in the relationship between Service Quality and Sense of Social Security. In order to do the same, SEM is used by considering Service Quality as the independent variable, Sense of Social Security as the dependent variable and Satisfaction as the mediating

variables. The mediation effect is examined by using bootstrapping (5000 bootstrap samples) method. Hypothesis relating to mediation effect is given below.

*H<sub>18</sub>: ESI Policyholders' satisfaction has a mediating role between Service Quality and Sense of Social Security of Policyholders.*

**Table 8.12**

*Mediation Testing result of the Model (Total, Direct and Mediation Effect of Paths) using Bootstrapping Procedure*

| Indepe-<br>ndent<br>Variable | Mediating<br>Variable | Depend-<br>ent<br>Variable     | Standar-<br>dized<br>Total<br>Effect | Standar-<br>dized<br>Direct<br>Effect | Standard<br>ized<br>Indirect<br>Effect | VAF          | Sig.<br>Value | Result of<br>Mediation |
|------------------------------|-----------------------|--------------------------------|--------------------------------------|---------------------------------------|----------------------------------------|--------------|---------------|------------------------|
| Service<br>Quality           | Satisfaction          | Sense of<br>Social<br>Security | 0.773                                | 0.617                                 | 0.156                                  | <b>0.202</b> | 0.000         | Partial<br>Mediation   |

Source: Primary data

Table 8.12 shows the standardised total effect ( $\beta = 0.773$ ,  $p < 0.01$ ), standardized direct effect ( $\beta = 0.617$ ,  $p < 0.01$ ) and standardized indirect effect ( $\beta = 0.156$ ,  $p < 0.01$ ). From the above table it is clear that there is a partial mediation of Satisfaction level in the relationship between Service Quality and Sense of Social Security according to the strength of mediation which is calculated as Variance Accounted For (VAF) of 0.202. This value coming under the range of 0.2 to 0.8, hence there exists 20.2% of partial mediation of Satisfaction level in the proposed relationship. Partial mediation exists if the independent variable exerts some of its influence on the dependent variable through the mediating variable and it also exerts some of its influence directly on the dependent variable without mediating variable. In other words significant direct relationship between Service Quality and Sense of Social Security remained evident in both the mediated and unmediated models. The introduction of Satisfaction as a mediating variable resulted in a decrease in the strength of direct relationship between Service Quality and Sense of Social Security from  $\beta = 0.773$  to  $\beta = 0.617$ . Since the 'p' value is significant at 1% level of significance, the proposed alternative hypothesis ( $H_{18}$ ) is accepted and hence

Satisfaction level mediates the relationship between Service Quality of ESI Corporation and Sense of Social Security of ESI policyholders.

The mediation effect of satisfaction in the relationship between service quality and favourable behavioural intention is confirmed by many previous studies. Supporting literature include the studies conducted by Caruana (2002); Agyapong et al. (2017); Mosahab et al. (2010); Abdel Fattah et al. (2021) and Meesala & Paul (2016). These studies pointed out that customer satisfaction plays the role of a mediator in the relationship between service quality and service loyalty/ behavioural intention. The present study also revealed the mediating role of policyholders satisfaction in the relationship between service quality of ESI Corporation and Sense of Social Security of ESI policyholders. Sense of Social Security is the behavioural outcome of ESI policyholders on availing the services of ESI Corporation.

## **8.6 Conclusion**

This chapter discusses the empirical relationship among ESI Awareness, ESI Knowledge, Service Quality, Satisfaction Level and Sense of Social Security. Structural Equation Modelling is employed for analysing the direct relationship between variables as well as the mediation effect of variables. Structural Equation Modelling is performed by using SPSS AMOS version 23. At the beginning of the chapter, the acceptability of the measurement models are proved with good fit indices and also the reliability and validity of the constructs are assessed. The relationship between Service Quality and Sense of Social Security taking Satisfaction as a mediating variable is tested in the chapter. The result revealed that Service Quality is an important predictor variable of Sense of Social Security experienced by ESI policyholders and the Policyholders' Satisfaction Level partially mediates this relationship (VAF – 0.202). Co-efficient of determination further explained the influence of various dimensions of independent variables on the dependent variable. The influence of ESI Awareness and Knowledge level on the Satisfaction level of ESI policyholders is also examined in this chapter. It is found that ESI Awareness Level and Knowledge level are significant predictors of the Satisfaction Level of ESI policyholders. ESI Corporation can consider these results while formulating its policies relating to service design and delivery.

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## *Chapter 9*

# **SUMMARY, FINDINGS AND CONCLUSION**

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## **9.1 Introduction**

The present chapter reports the concluding part of the research work which is based on the research problem, objectives, hypotheses, methodology and results. It involves the summary of chapters, findings and conclusion of the study. Findings are presented on the basis of the research objectives.

## **9.2 Summary of Chapters**

The research work entitled ‘Social Security for the Organised Working Class in Kerala through Employees’ State Insurance Corporation: Analysis of Service Quality’ is carried out with the main objective of analysing the service quality of ESI Corporation during the post reform period in Kerala. The study analyses the satisfaction level and sense of social security experienced by the ESI policyholders. The researcher also tries to identify the awareness and knowledge level about ESI services and the level of utilisation of ESI benefits among policyholders. The research work further assesses the cause-and-effect relationship among service quality, satisfaction level and sense of social security and also examines the influence of ESI awareness and knowledge on the satisfaction level of the policyholders. The mediation effect in the relationship between variables is also assessed in the study. The research report is presented in 10 chapters as below.

The first chapter gives an introduction to the study. It involves statement of problem, research questions, objectives, conceptual model, hypotheses, operational definition of terms, significance, scope and limitations. Chapter scheme is also mentioned at the end of the chapter.

The second chapter deals with literature review. Previous studies related to the current research work are organised as per the objectives of the study under three broad headings such as reviews relating to ESI Corporation; reviews relating to social security and reviews relating to service quality and satisfaction. At the end of the chapter, research gap is also presented.

Theoretical Overview is provided in the third chapter. This chapter describes the concept of social security, international social security organisations and social security legislations in India. It also explains about ESI scheme and ESI Act 1948. Further this chapter presents a detailed description of ESI Corporation including its constitution, working machinery and social security benefits. The functioning of ESI scheme in Kerala is also mentioned in the chapter. In addition to this, the concept of service quality and various service quality models are reported at the end of this chapter.

The fourth chapter discusses the research methodology employed in the study. It includes research design, research onion, source of data, population, sampling design, tools used for data collection and analysis, variables of the study, period of data collection, results of pilot study, data cleaning, software used for data analysis and the results of normality, reliability and validity assessment. Multi stage stratified sampling framework is used in the study. Further the skewness and kurtosis values showed that data is normal and can proceed with parametric tests. Content validity and construct validity is also described in the chapter. Primary data collected in the study through a structured questionnaire is analysed by using percentage, mean, standard deviation, independent sample t test, one sample t test, one way ANOVA/ Welch test, Scheffe's post hoc test/ Tamhane's T2 post hoc test, regression and Structural Equation Modelling.

Fifth chapter involves two sections. The first section tries to identify the awareness and knowledge level about ESI services and the second section examines the level of utilisation of ESI benefits. This chapter also presents the demographic profile and ESI details of the respondents. The awareness and knowledge level about various benefits and services of ESI Corporation is identified with the help of mean,

standard deviation and one sample t test. It is compared across policyholders belonging to various demographic groups and ESI details by using Independent Sample t test/ One way ANOVA/ Welch test. Post hoc test is also conducted for the pair wise comparison of the variables. The association of level of ESI benefit utilisation with the demographic profile, ESI details as well as with the awareness and knowledge level is examined with the help of Chi-square test.

Sixth chapter analyses the service quality offered by ESI Corporation during the post reform period. Modified SERVPERF scale confirmed in the study is based on eight dimensions such as Reliability, Tangibility, Assurance, Accessibility, Communication, Responsiveness, Understanding of the policyholders and E-governance. The level of service quality perceived is identified with the help of mean, standard deviation and one sample t test. It is compared across policyholders belonging to various demographic groups and ESI details by using Independent Sample t test/ One way ANOVA/ Welch test. Post hoc test is also conducted for the pair wise comparison of the variables.

Seventh chapter involves two sections. First section analyses the satisfaction level of ESI policyholders and the second section investigates the sense of social security experienced by the ESI policyholders. Sense of social security is measured on the basis of three dimensions such as Health Protection, Provision of Income Security and Risk Coverage. The level of satisfaction and sense of social security is studied with the help of mean, standard deviation and one sample t test. Satisfaction level and Sense of Social Security are compared across policyholders belonging to various demographic group and ESI details by using Independent Sample t test/ One way ANOVA/ Welch test. Post hoc test is also conducted for the pair wise comparison of the variables.

Eight chapter investigates the cause-and-effect relationship between various constructs used in the study. Structural Equation Modelling is used for checking the cause-and-effect relationship. Confirmatory Factor Analysis result showed that the measurement scale used in the study is reliable and valid. This chapter also

examined the mediating role of satisfaction in the relationship between ESI Service Quality and Sense of Social Security of ESI policyholders.

Ninth chapter reports the summary of chapters, findings of the study and conclusion. Findings are presented based on the objectives of the study under four sections. First section shows the findings derived from the first and second objectives of the study. It also presents the demographic profile and ESI details of the respondents. Second section pertains to the third objective of the study. Third section discusses the findings derived from the fourth and fifth objectives and the last section deals with the findings observed from the sixth objective of the study.

Tenth chapter is the last chapter of this research report. It includes recommendations, implications and scope for further research. Recommendations are given to ESI Corporation, ESI policyholders, Employers and the Government/ Policymakers. Implications include both theoretical and practical implications.

### **9.3 Findings of the Study**

The findings of the study are summarised in this chapter under 4 sections. Section I deals with the demographic profile and ESI related details of the respondents; awareness and knowledge about ESI services and the level of ESI benefit utilisation. Section II deals with the service quality of ESI Corporation. Section III explains the satisfaction level of ESI policyholders and their sense of social security. This section also describes the influence of awareness and knowledge on the satisfaction level of ESI policyholders. Section IV discusses the relationship among Service Quality, Satisfaction level and Sense of Social Security. It also points out the mediation effect of satisfaction in the relationship between service quality and sense of social security of ESI policyholders.

#### **Section I**

Section I presents the demographic profile and ESI related details of the respondents. In addition to that the findings derived from the first and second objectives of the study are also included in this section. The first objective is related to identifying the level of awareness and knowledge relating to ESI services and the

second objective focused on examining the level of ESI benefit utilisation among ESI policyholders. Accordingly, the findings are listed below.

### **9.3.1 Demographic Profile and ESI Related Details of the Respondents**

In this section, the researcher presented the demographic details of ESI policyholders such as gender, age, marital status, educational qualification, income, area of residence and nature of the organization. Details relating to the ESI profile of the policyholders such as duration of membership under ESI scheme, sources of awareness about ESI scheme, no. of dependents as per ESI policy and level of ESI benefits utilization are also mentioned here. Descriptive statistic such as percentage is used for the analysis purpose. The findings are given below

#### **9.3.1.1 Demographic Profile of the Respondents**

- Among the respondents, 52.9% are male and 47.1% are female. Most of the respondents are young belonging to the age group of 36-45 years (31.3%) and 26-35 years (27.8%).
- Majority of the respondents are married (82%) and educated. 31.1% of the respondents are under graduates and 17.3% of the respondents are post graduates. However, 24.2% of the respondents are having educational qualification only up to SSLC level.
- Monthly income of most of the respondents falls in between Rs. 15001 and Rs. 21000 (33.6%) which is followed by the income group of respondents ranging from Rs. 10001 to Rs. 15000 (27.6%). Only 18.7% of the respondents belong to the income category of up to Rs. 5000 per month.
- Most of the respondents are living in rural area (48.7%) and are working in shop/ establishment (72.2%). Only 27.8% of the respondents are working in factory.

### 9.3.1.2 ESI Related Details of the Respondents

- The duration of membership under ESI scheme for most of the respondents is up to 5 years (36.7%) which is followed by 6 to 10 years of ESI membership (29.8%).
- The major source of awareness regarding ESI scheme is co-workers and friends (42.9%) which is followed by employer (26%) and ESI website (12.2%). E-mail/SMS from ESI Corporation (0.9%) and trade union officials (2%) have only insignificant role in creating awareness regarding ESI scheme
- Most of the respondents (42.7%) have 3-4 ESI dependents in their family and only 6.2% of the respondents have more than 6 ESI dependents in their family.
- 41.6% of the respondents availed ESI benefits only up to 3 times in a year and 31.1% of the respondents availed it for 4-6 times in a year. Only a few respondents (15.1%) availed ESI benefits for more than 9 times in a year.

### 9.3.2 Awareness and Knowledge regarding ESI Services

In this section, the researcher has analysed the awareness and knowledge level about ESI services among ESI policyholders. In order to describe the awareness and knowledge level, descriptive statistics such as mean and standard deviation are used. Further, to check the level of awareness and knowledge and for its comparison across different demographic groups and ESI details, inferential statistical techniques such as one sample t test, independent sample t test, one way ANOVA/ Welch test and Scheffe /Tamhane's T2 post-hoc test are used.

#### 9.3.2.1 Discussion on ESI Awareness Level based on Descriptive Statistic and One Sample t Test

- ESI Policyholders are very aware about the salary/ wage limit of ESI coverage (3.52) and they are moderately aware about the amount of premium contribution (2.78), medical benefits (3.26), sickness benefits (2.87) and benefits for family members (2.95).

- ESI policyholders are slightly aware regarding the maternity benefit (2.33), dependent benefit (2.17), disablement benefit (2.23), ESI medical helpline number (2.19) and the availability of AYUSH facility (2.58).
- ESI policyholders are almost unaware about payment of confinement expenses (1.62), funeral expenses (1.55), old age medical care (1.57), unemployment allowance (1.63) and Ask An Appointment mobile app (1.42) with mean score of less than 1.80.
- The overall awareness level about various services of ESI Corporation among policyholders is below average (2.20).

### **9.3.2.2 Discussion on ESI Knowledge Level based on Descriptive Statistic and One Sample t Test**

- ESI policyholders have moderate level of knowledge regarding the medical services/ facilities available in ESI hospitals/ dispensaries (3.04) and the procedure for the reimbursement of medical bill (2.96).
- ESI policyholders have only limited level of knowledge regarding the procedure for claiming cash benefit (2.38), list of empanelled hospitals for super speciality services (2.11) and the procedure for checking claim status of ESI scheme online (1.96).
- ESI policyholders have almost no knowledge regarding the procedure for grievance redressal (1.55) and the services of ESI court prevailing in the country (1.31).
- The overall knowledge level about various services of ESI Corporation among policyholders is below average (2.19).

### **9.3.2.3 Comparison of ESI Awareness and Knowledge Level Across Various Demographic Groups**

- There is no significant difference between male and female policyholders regarding the awareness and knowledge level of ESI services.

- There is significant difference in the awareness and knowledge level of ESI services among policyholders of different age group. As per the mean score, policyholders belonging to the age group of above 55 years have moderate level of awareness and knowledge regarding ESI services. Policyholders belonging to the age group of 26-55 years are only slightly aware and they have only limited knowledge about ESI services. Whereas the policyholders of the age group of up to 25 years are almost unaware and they have no knowledge regarding various aspects of ESI services. But there is no significant difference in the awareness level between the policyholders of Up to 25 years of age and 26-35 years of age; and 46-55 years of age and above 55 years of age. In the case of knowledge level, no significant difference is observed between the policyholders of 46-55 years of age and above 55 years of age.
- There is no significant difference in the awareness and knowledge level of ESI services between married and unmarried ESI policyholders.
- There exists significant difference in the awareness and knowledge level of ESI policyholders based on their educational qualification. Post graduate ESI policyholders have more awareness and knowledge regarding ESI services than other group of policyholders. But the awareness and knowledge level of Post Graduate policyholders do not differ significantly from the policyholders having professional and technical qualifications.
- Significant difference does not exist among policyholders of different income groups with regard to the awareness and knowledge level of ESI services.
- There exists significant difference in the awareness and knowledge level of ESI services among policyholders based on the area of residence. ESI policyholders residing in urban area have more awareness and knowledge of ESI services compared to those living in semi urban and rural areas. But the awareness level of the policyholders living in the urban area does not differ significantly from the semi-urban policyholders. Similarly, the knowledge level of rural policyholders does not differ significantly from the semi-urban policyholders.

- Significant difference is seen between the policyholders working in factory and shop/ establishment in respect of the awareness and knowledge level of ESI services. ESI policyholders working in factory have more awareness (Mean – 2.873) and knowledge (Mean – 2.832) regarding ESI services than those working in shop/ establishment.

#### **9.3.2.4 Comparison of ESI Awareness and Knowledge Level based on ESI Details**

- There exists significant difference in the awareness and knowledge level of policyholders according to the duration of membership under ESI scheme. The policyholders having more than 15 years of membership under ESI scheme have moderate level of awareness and knowledge regarding ESI services which is significantly higher than other groups of policyholders. It is also observed that the awareness and knowledge about ESI services among the policyholders increase as a result of increase in the duration of membership under ESI scheme.
- There exists significant difference in the awareness and knowledge level of policyholders according to the source of awareness of ESI scheme. The mean score shows that employers and co-workers/friends are playing an important role in creating awareness and knowledge among ESI policyholders when compared to other sources of awareness whereas trade union officials and E-mail/ SMS are playing least important role in creating awareness and knowledge among ESI policyholders. The contribution of ESI Corporation officials in creating awareness and knowledge among ESI policyholders is comparatively low.

#### **9.3.3 Level of ESI Benefit Utilisation Among ESI Policyholders**

Chi-square test of independence is used to examine the association between the level of ESI benefits utilised and the demographic profile/ ESI details of the respondents. In order to analyse the association, the demographic variables like gender, age, marital status, educational qualification, Gross monthly income, area of residence and nature of the organisation are considered. The association of the level of ESI benefits utilisation with ESI details such as duration of ESI membership and number

of ESI dependents as well as awareness and knowledge level about ESI services are also assessed. The findings are given below:

- There is no significant association between gender and level of utilisation of ESI benefits.
- There is a statistically significant association between the age and level of utilisation of ESI benefits. Aged policyholders (46-55 years and above 55 years) are making more use of ESI benefits in a year (more than 9 times) than younger policyholders. Only 20% of the policyholders of up to 25 years age, 6.4% of the policyholders of 26-35 years age and 9.93% of the policyholders of 36-45 years are using ESI benefits more than 9 times in a year. But it is 25.23% and 30.30% respectively in the case of the policyholders of 46-55 years and above 55 years age group.
- There is a statistically significant association between the marital status and level of utilisation of ESI benefits. Married policyholders are making more use of ESI benefits than the unmarried policyholders. 16.26% of the married policyholders are using ESI benefits more than 9 times in a year whereas it is only 9.88% in the case of unmarried policyholders. 58.02% of the unmarried policyholders are using ESI benefits only up to 3 times in a year.
- There exists no significant association between the educational qualification of the respondents and the level of utilisation of ESI benefits.
- There exists a significant association between the income level of the respondents and the level of utilisation of ESI benefits. The level of ESI benefits utilisation is comparatively low among higher income group of respondents. Majority of the policyholders having the monthly income of Up to Rs.5000 (47.62%), Rs. 5001-10000 (29.67%) and Rs. 10001-15000 (39.52%) are using ESI benefits 4-6 times in a year. But a huge proportion of the policyholders having monthly income of Rs. 15001-21000 (60.27%) are using ESI benefits only up to 3 times in a year. 29.76% of the policyholders belonging to the income group of up to Rs. 5000 are using ESI benefits more than 9 times in a

year. Whereas it is only 5.96% in respect of the policyholders having the monthly income of Rs. 15001-21000.

- Significant association is found between the area of residence of the policyholder and the level of utilisation of ESI benefits. It is understood from the result that the policyholders living in urban and semi-urban areas are making more use of ESI benefits than the policyholders in rural area. Only 5.02% of the rural policyholders are availing ESI benefits more than 9 times in a year. Whereas 24.42% of the urban policyholders and 25.42% of the semi-urban policyholders are availing ESI benefits more than 9 times in a year. The major reasons are lack of awareness and knowledge regarding ESI services of the policyholders living in rural area and insufficient number of ESI healthcare facilities and branch offices in rural areas.
- Significant association is observed between the nature of organisation and the level of ESI benefit utilisation. Policyholders working in factory are making more use of ESI benefits than the policyholders in shop/ establishment. Most of the ESI policyholders working in factory (35.20%) are using ESI benefits more than 9 times in a year. But only 7.38% of the policyholders working in shop/ establishment is using the same for more than 9 times in a year.
- Significant association is observed between the duration of ESI membership and the level of utilisation of ESI benefits. It is observed that the policyholders make more use of ESI benefits with an increase in the duration of ESI membership. Most of the policyholders having lesser period of membership under ESI scheme (below 10 years) are using ESI benefits only up to 3 times in a year. Whereas most of the policyholders having more than 15 years of ESI membership are using ESI benefits more than 9 times in a year. The major reason for this association is increase in the awareness and knowledge level as a result of the increase in duration of ESI membership.
- Statistically significant association exists between the number of ESI dependents and the level of utilisation of ESI benefits. It is found that the level of ESI benefit utilisation increases with an increase in the number of ESI dependents.

Most of the ESI policyholders having a smaller number of ESI dependents (up to 4) are using ESI benefits only up to 3 times in a year. But majority of the policyholders having more than 6 ESI dependents are using ESI benefits more than 9 times in a year. The major reason is that the policyholder having more ESI dependents are making more use of medical benefits. Medical benefits are available to the dependents of ESI policyholders from day one of joining in to the insurable employment.

- Significant association exists between the level of awareness on ESI services and the level of utilisation of ESI benefits. Most of the slightly aware ESI policyholders (61.59%) are using benefits up to 3 times in a year and most of the moderately aware policyholders (44.51%) are using ESI benefits 4-6 times in a year. Majority of the highly aware policyholders (37.61%) are using ESI benefits more than 9 times in a year. Hence awareness is a significant factor influencing the level of utilisation of ESI benefits.
- Significant association also exists between the level of knowledge on ESI services and the level of utilisation of ESI benefits. Most of the policyholders having limited knowledge about ESI services (61.25%) are using ESI benefits only up to 3 times in a year and most of the policyholders having moderate ESI knowledge (45.65%) are using ESI benefits 4-6 times in a year. Majority of the policyholders having good ESI knowledge (36.79%) are using ESI benefits more than 9 times in a year. Hence knowledge is also a significant factor influencing the level of utilisation of ESI benefits.

## Section II

Section II presents the findings derived from the third objective of the study. Third objective is concerned with analysing the service quality of ESI Corporation during the post reform period.

### 9.3.4 Service Quality of ESI Corporation

In this section, the researcher has analysed the service quality of ESI Corporation measured through the modified SERVPERF scale. Forty-five statements grouped

under eight dimensions such as Reliability, Tangibility, Assurance, Accessibility, Communication, Understanding of Policyholders, Responsiveness and E-governance are used to measure the service quality of ESI Corporation. In order to describe the service quality perception, descriptive statistics such as mean and standard deviation are used. Further, to check the level of service quality and for its comparison across different demographic groups and ESI details, inferential statistical techniques such as one sample t test, independent sample t test, one way ANOVA/ Welch test and Scheffe /Tamhane's T2 post hoc test are used.

#### **9.3.4.1 Service Quality of ESI Corporation Based on Descriptive Statistic and One Sample t Test**

A five-point Likert Scale of Agreement ranging from Strongly Disagree to Strongly Agree is used for measuring the perception regarding the service quality of ESI Corporation. Mean and Standard Deviation are used for describing the service quality. One sample t test is used to examine the level of service quality offered by the ESI Corporation during the post reform period. As per the opinion of ESI policyholders, the following findings are derived based on the mean score.

- ESI policyholders strongly agree with the following statements
  - a. It is safe to enter the ESI hospital/ dispensary premises to access healthcare (4.58).
  - b. ESI staffs have knowledge and expertise to answer policyholders' queries (4.54).
  - c. ESI Corporation maintains policyholders' information in a confidential manner (4.39).
  - d. ESI hospital/ dispensary ensures correctness of medical reports and documents (4.27)
  - e. Cash benefits are directly transferred to the bank account of ESI beneficiaries (4.38).

- ESI policyholders agree with the following statements
  - a. ESI Corporation fulfils promises in a timely manner (3.73).
  - b. Staff of ESI Corporation is dependable in handling customers' problems (4.17).
  - c. ESI premises are corruption free (3.93).
  - d. ESI Corporation has adequate number of branch offices for customer service (3.62).
  - e. There are sufficient staffs in ESI premises (3.51).
  - f. The staff of ESI Corporation has neat and professional appearance (3.78).
  - g. Sanitation and cleanliness in ESI Healthcare facilities are good (3.99).
  - h. Adequate bed facilities are available in ESI Healthcare institutions (3.64).
  - i. Standard medicines are provided in ESI Healthcare facilities (3.45).
  - j. ESI staffs are competent in redressing customers' grievances (3.54).
  - k. Branch offices are conveniently located (3.44).
  - l. ESI Corporation provides information in a language understandable to policyholders (3.93).
  - m. ESI Corporation offers reimbursement facility for medicines which are not available in ESI pharmacy (4.04).
  - n. It is possible to check claim status under ESI Scheme online (3.94).
  - o. ESI Corporation has a well - structured informative website (3.71)
- ESI policyholders have no opinion regarding the following statements.
  - a. The behaviour of ESI staffs creates confidence in policyholders (2.78)

- b. ESI doctors and nurses are professionally prepared to treat the patients (3.20).
- c. It is easy to access ESI Healthcare facilities (3.28).
- d. Branch offices have operating hours convenient to all policyholders (3.02)
- e. ESI scheme offers emergency health care services (3.13)
- f. ESI officials guide the policyholders regarding benefits and services (2.85)
- g. ESI staffs are always willing to help policyholders (2.70)
- h. The procedure for submitting online leave claim is simple (3.19)
- The policyholders disagree with the following statements.
  - a. ESI Corporation provides hassle free claim settlement process (1.84).
  - b. ESI healthcare facilities have technically graded and up to date equipment (2.04).
  - c. Medical accessories are sufficiently provided in ESI Healthcare institutions (2.11).
  - d. ESI staff always treat policyholders with courtesy (2.12).
  - e. Timing of ESI dispensaries are convenient (2.59).
  - f. ESI doctors listen to the patients and keep them informed about their health conditions (2.36).
  - g. ESI officials give personal attention to the policyholders (2.08).
  - h. Service providers at ESI Healthcare facilities are caring and understand patient concern (2.16).
  - i. ESI Corporation has the policyholders' best interest at heart (2.10).

- j. ESI Corporation keeps customers informed about when services will be performed (2.26).
  - k. The policyholders receive prompt services from ESI Healthcare institutions (2.16).
  - l. ESI Corporation welcomes feedback from policyholders (1.83).
  - m. ESI Corporation provides proactive information through SMS/e-mail (2.02).
  - n. ESI Corporation offers an effective online public grievance redressal mechanism (2.18).
- ESI policyholders strongly disagree with the following statements.
    - a. Specialist services are available in ESI healthcare institutions (1.67).
    - b. ESI Corporation provides accurate and updated information about its benefits and services (1.67).
    - c. ESI Corporation regularly organises awareness campaign (mean – 1.32).
  - Among the dimensions used to measure service quality, Assurance (mean – 3.59, SD- .38) has the highest mean score followed by Reliability (mean – 3.58, SD- .55) and Tangibility (mean – 3.27, SD - .53).
  - The dimension Communication (mean – 2.32, SD - .51) has the lowest mean score followed by Responsiveness (mean – 2.36, SD- .42) and Understanding of Policyholders (mean – 2.59, SD- .56)
  - ESI Corporation is offering above average level of service quality in respect of the dimensions such as Reliability (3.59), Tangibility (3.27), Assurance (3.59) and E-Governance (3.24) whereas below average level of service quality regarding Accessibility (2.85), Communication (2.32), Understanding of

policyholders (2.59) and Responsiveness (2.36). The Overall Service Quality of ESI Corporation is on an average level (2.98).

#### **9.3.4.2 Comparison of Service Quality of ESI Corporation Across Various Demographic Groups**

Demographic variables such as gender, age, marital status, educational qualification, income, area of residence and nature of the organization are considered for comparison purpose.

- There exists no significant difference between male and female policyholders with regard to their perception regarding various factors of service quality as well as overall service quality of ESI Corporation.
- There exists significant difference in the perception regarding service quality of ESI Corporation across various age groups. Aged policyholders (age group of above 55 years and 46-55 years) have better perception regarding various factors of service quality including overall service quality when compared to the younger age groups.
- Significant difference is observed between married and unmarried ESI policyholders in respect of their perception regarding various dimensions of service quality and overall service quality. Mean score revealed that married policyholders have better perception regarding the service quality of ESI Corporation than unmarried policyholders.
- Significant difference is not observed in the service quality perception among policyholders having different educational qualifications. Hence, educational qualification is not a significant factor which influences the perception regarding the service quality of ESI Corporation.
- There exists significant difference in the perception regarding service quality factors such as Reliability, Tangibility, Assurance, Accessibility, Communication E-governance and Overall Service Quality among policyholders

of various income groups. From the mean score, it is found that the lower income group of policyholders (monthly income below Rs. 5000 and Rs. 5001-10000) have better perception regarding service quality when compared to the higher income category of policyholders (monthly income Rs. 10001-15000 and Rs. 15001-21000). However, no significant difference is observed in the case of perception regarding 'Understanding of Policyholders' and 'Responsiveness' among various income groups of policyholders.

- There is no significant difference among the policyholders residing in rural, urban and semi-urban areas in respect of their perception regarding various factors of service quality. Hence area of residence is not a significant factor which influences the service quality perceptions of ESI policyholders.
- There is significant difference between the policyholders working in factory and shop/ establishment in respect of their perception regarding Reliability, Tangibility, Assurance, Accessibility, Communication, Understanding of Policyholders, E-governance and Overall service quality. Comparison of the mean score revealed that the policyholders working in factory have better perception regarding the service quality of ESI Corporation. However, no significant difference is observed between the policyholders working in factory and shop/ establishment in their perception towards 'Responsiveness' dimension.

#### **9.3.4.3 Comparison of Service Quality of ESI Corporation Across Various ESI Details**

ESI details such as duration of ESI membership and level of ESI benefits utilised are considered for comparing the mean scores of service quality. Findings are listed below

- There is a significant difference in the service quality perception regarding Reliability, Tangibility, Assurance, Accessibility, Communication, E-governance and Overall Service Quality among the policyholders based on the

duration of ESI membership. Descriptive statistic indicates that the policyholder who remains as a member under ESI scheme for a longer period has better perception regarding the service quality of ESI Corporation than others. However, no significant difference exists in the perception regarding 'Responsiveness' and 'Understanding of policyholders' among the policyholders based on the duration of membership under ESI scheme.

- Significant difference is observed in the service quality perception among ESI policyholders based on the level of utilization of ESI benefits. Descriptive statistics reveals that the policyholders who are using ESI benefits for a greater number of times have better perception regarding various dimensions of service quality than others.

### **Section III**

Section III reports the results of fourth and fifth objectives of the study. Fourth objective is concerned with studying the satisfaction level and the influence of awareness and knowledge on the satisfaction level of ESI policyholders. Fifth objective evaluates the sense of social security of ESI policyholders from the services of ESI Corporation.

#### **9.3.5 Satisfaction level of ESI policyholders**

The satisfaction level of ESI policyholders is measured by using 10 variables such as communication of information, infrastructure and diagnostic facilities, procedural formalities, behaviour of ESI staffs, accessibility of the services, medical services, adequacy of cash benefits, online services of ESI Corporation, grievance handling mechanism and premium contribution. Mean and Standard Deviation are used for describing the variables and one sample t test is used for assessing the satisfaction level. For comparing the satisfaction level across various demographic groups/ ESI details, independent sample t test, one way ANOVA/ Welch test and Scheffe/ Tamhane's T2 post-hoc test are used. Accordingly, the findings are listed below:

### **9.3.5.1 Satisfaction Level Based on Descriptive Statistic and One-Sample t Test**

- ESI Policyholders are satisfied with Premium Contribution (3.97), Medical Services (3.73), Adequacy of Cash Benefits (3.51) and Online Services of ESI Corporation (3.51).
- The satisfaction level of ESI policyholders is neutral with regard to the factors such as Accessibility of the Services (3.21), Infrastructure and Diagnostic Facilities (3.19) and Behaviour of ESI staffs (2.66).
- ESI Policyholders are dissatisfied with the Grievance Handling Mechanism (1.88), Communication of Information by ESI Corporation (1.89) and Procedural Formalities (1.95).
- ESI policyholders have average level of satisfaction towards various services of ESI Corporation (2.95)

### **9.3.5.2 Comparison of Satisfaction Level Across Various Demographic Groups**

Here the satisfaction level of ESI policyholders is compared according to gender, age, marital status, educational qualification, income, area of residence and nature of the organisation. Major findings are given below:

- There is no significant difference between male and female policyholders with regard to their satisfaction level. Hence, gender does not influence the satisfaction level of ESI policyholders.
- Significant difference is observed in the satisfaction level among the policyholders of different age groups. Mean score showed that the policyholders belonging to the age category of above 45 years are more satisfied with the services of ESI Corporation than younger age groups.
- Significant difference does not exist between married and unmarried policyholders in their satisfaction regarding ESI services. Hence marital status does not influence the satisfaction level of ESI policyholders.

- No significant difference exists in the satisfaction level among the policyholders having different educational qualifications. Hence education background of the policyholder is not a significant factor influencing their satisfaction level.
- Significant difference is observed in the satisfaction level of policyholders based on their income. It is further found that lower income policyholders (Up to Rs. 5000 income group and Rs. 5001-10000 income group) are better satisfied with the services of ESI Corporation than higher income group (Rs. 15001-21000).
- There is no significant difference in the satisfaction level among ESI policyholders residing in rural, urban and semi urban areas. It indicates that area of residence does not influence the satisfaction level of ESI policyholders.
- There is significant difference between the policyholders working in factory and shop/ establishment in their level of satisfaction regarding ESI services. Descriptive statistic further reveals that ESI policyholders working in factory are more satisfied with the services of ESI Corporation than the policyholders working in shops/ establishments.

### **9.3.5.3 Comparison of Satisfaction Level of ESI Policyholders based on ESI Details**

In this case, the satisfaction level of ESI Policyholders is compared according to the duration of ESI membership and level of ESI benefits utilised. Findings are reported below:

- There is significant difference in the satisfaction level of ESI policyholders based on the duration of membership under ESI scheme. Mean score analysis reveals that the ESI policyholders having more than 15 years of membership under ESI scheme are more satisfied than other groups having lesser duration of ESI membership.
- It is also noticed that significant difference exists in the satisfaction level of ESI policyholders according to the level of utilization of ESI benefits. ESI

policyholders utilizing ESI benefits for a greater number of times (more than 9 times in a year) are more satisfied with the services of ESI Corporation than the policyholders using ESI services for lesser number of times (Up to 3 times in a year).

#### **9.3.5.4 Influence of ESI Awareness and Knowledge Level on the Satisfaction level of ESI policyholders.**

This section reports the relationship between ESI Awareness level and Policyholders' Satisfaction as well as the relationship between ESI Knowledge level and Policyholders' Satisfaction by using Covariance based SEM. In this case, Awareness and Knowledge level are considered as independent Variables and Satisfaction level is taken as a dependent variable.

- The hypothesised measurement model shows that there is significant positive cause and effect relationship between ESI awareness and Satisfaction level. ESI Awareness level positively influences the Satisfaction level of ESI policyholders ( $\beta=0.269$ ,  $p<0.01$ ). It further reveals that Satisfaction level of ESI policyholders would increase by 0.269 for every unit of standard deviation increase in the ESI Awareness level of policyholders and this regression coefficient value is significant at 1% level. Hence Awareness level about ESI service is an important predictor variable of the Satisfaction level of ESI policyholders.
- The hypothesised measurement model also shows there is significant positive cause and effect relationship between ESI Knowledge level and Satisfaction level. ESI Knowledge level positively influences the Satisfaction level of ESI policyholders ( $\beta=0.124$ ,  $p<0.05$ ). It further reveals that Satisfaction level of ESI policyholders would increase by 0.124 for every unit of standard deviation increase in the ESI Knowledge level of policyholders and this regression coefficient value is significant at 5% level. Hence Knowledge level about ESI service is an important predictor variable of Satisfaction level of ESI policyholders.

### **9.3.6 Sense of Social Security of ESI policyholders**

The Sense of Social Security of ESI policyholders is measured by using 13 statements under three dimensions such as Health Protection, Provision of Income Security and Risk Coverage. Mean and Standard Deviation are used for describing the variables and one sample t test is used for assessing the sense of social security. For comparing the sense of social security across various demographic groups/ ESI details, independent sample t test, one way ANOVA/ Welch test and Scheffe /Tamhane's T2 post-hoc test are used. Accordingly, the findings are given below:

#### **9.3.6.1 Sense of Social Security Based on Descriptive Statistics and One Sample t test**

- ESI Policyholders strongly agree that the payment of ESI contribution is not a financial burden for the working poor (4.21). Policyholders further agree that ESI scheme ensures free access to healthcare services (4.07) and they have peaceful mind by knowing the medical bill reimbursement facility under ESI scheme (3.83). They also agree that due to ESI coverage, they are not too much worried about unexpected financial loss arising from job related accident/ disease (3.76).
- ESI policyholders are neutral with the statements such as ESI scheme protects the policyholders' family from the rising cost of healthcare (2.89), ESI policy gives confidence to the policyholders by offering support in crisis (3.24) and ESI policy protects the social usefulness of productive workforce (2.75).
- ESI policyholders disagree with the statements that ESI scheme offers better healthcare facilities (2.32), ESI policy coverage positively impacts the quality of life of policyholders (2.04), ESI benefits prevent extreme financial hardship (2.11), ESI policy reduces the stress about financial risks impacting the quality of life (2.29), ESI policyholders feel that they can handle emergencies better due to their ESI coverage (2.54) and ESI scheme will meet the old age needs (1.91) .

- Among the three dimensions used to measure the sense of social security of ESI policyholders, 'Health Protection' (Mean – 3.2789, SD -.65774) has the highest mean score and 'Risk Coverage' (Mean – 2.5467, SD- .64721) has the lowest mean score.
- ESI policyholders are getting above average level of health protection (3.28) and average level of income security (3.03) from the services of ESI Corporation. But according to their opinion, ESI Corporation offers below average level of risk coverage (2.55) to its policyholders. The overall sense of social security offered by the ESI Corporation is only on an average level (2.95).

### **9.3.6.2 Comparison of Sense of Social Security Across Various Demographic Groups**

Here the sense of social security of ESI policyholders is compared according to gender, age, marital status, educational qualification, income, area of residence and nature of the organisation. Major findings are reported below:

- There is no significant difference between male and female policyholders in the sense of social security offered by ESI Corporation. Hence, gender is not a significant factor influencing the sense of social security of ESI policyholders.
- There exists significant difference among ESI policyholders of various age category regarding their sense of social security. Aged policyholders (age group of 'Above 55 years' and '46-55 years') are experiencing better sense of social security in terms of health protection, income security and risk coverage than the younger age groups.
- Significant difference is not observed between married and unmarried policyholders in respect of various dimensions of sense of social security and overall sense of social security.
- There is no significant difference in the sense of social security experienced by the policyholders based on their educational qualification. It indicates that

educational qualification is not an important factor which influences the sense of social security of ESI policyholders.

- Significant difference is observed among the policyholders of different income category in their feeling of Health Protection, Provision of Income Security and Overall Sense of Social Security. Comparative analysis of the mean score discloses that the lower income category of ESI policyholders having the monthly income of Up to Rs. 10000 experience more health protection, income security and overall sense of social security when compared to the policyholders of the income category of Rs. 10001-15000 and Rs. 15001 -21000. Whereas monthly income does not influence the sense of Risk Coverage in a significant manner.
- There is no significant difference among the policyholders residing in different areas in respect of their sense of social security. It shows that area of residence does not influence the sense of social security experienced by the ESI policyholders.
- There is significant difference between the policyholders working in factory and shop/ establishment in respect of their sense of social security. The policyholders working in factory are experiencing better sense of social security due to ESI coverage than the policyholders working in shops/ establishments. The major reason is that policyholders working in factory are making more use of ESI benefits such as sickness benefit, disablement benefit and physical and vocational rehabilitation allowance than the policyholders working in shop/ establishment.

#### **9.3.6.3 Comparison of Sense of Social Security Based on ESI Details**

In this case, the sense of social security of ESI Policyholders are compared according to the duration of ESI membership and level of ESI benefits utilised. Findings are listed below:

- There is significant difference in various dimensions of sense of social security and overall sense of social security across the policyholders having different duration of ESI membership. Analysis of the mean score further describes that the policyholders having longer period of ESI membership (16-20 years and Above 20 years) are experiencing better sense of social security such as better health protection, provision of income security and risk coverage than the ESI policyholders with shorter period of ESI membership.
- There exists significant difference in the Sense of Social Security among ESI policyholders according to the level of utilization of ESI benefits. The policyholders who are using ESI benefits for a greater number of times are experiencing more Sense of Social Security than the policyholders using ESI benefits for a lesser number of times.

#### **Section IV**

Section IV reports the results of sixth objective of the study. Sixth objective is concerned with assessing the influence of service quality on the sense of social security of ESI policyholders and the mediating role of policyholders' satisfaction in this relationship.

#### **9.3.7 The relationship among ESI service quality, satisfaction and sense of social security of ESI policyholders.**

This section reports the relationship among Service Quality, Satisfaction Level and Sense of Social Security by using Covariance based SEM. In this case, Service Quality is considered as an independent Variable, Satisfaction Level as a mediating variable and Sense of Social Security is taken as a dependent variable. Bootstrapping method (5000 samples) is used to analyse the mediation effect. The direct relationship among the independent and dependent variables, independent and

mediating variable, mediating and dependent variable as well as the mediation effect of Satisfaction is presented below.

- The hypothesised measurement model of the study shows that there is significant positive cause and effect relationship between Service Quality and Sense of Social Security. Service Quality of ESI Corporation positively influences the Sense of Social Security of ESI policyholders ( $\beta=0.617$ ,  $p<0.01$ ). It further reveals that Sense of Social Security of ESI policyholders would increase by 0.617 for every unit of standard deviation increase in the service quality perception of ESI policyholders and this regression coefficient value is significant at 1% level. Hence Service Quality can be considered as an important predictor variable of Sense of Social Security.
- Among various dimensions of Service Quality, Accessibility has the highest significant positive influence on Health Protection ( $R^2$  value – 0.294), Risk Coverage ( $R^2$  value – 0.346) and Overall Sense of Social Security ( $R^2$  value – 0.489). Tangibility has the highest significant positive influence on Provision of income security ( $R^2$  value – 0.532).
- The hypothesised measurement model shows that there is significant positive cause and effect relationship between Service Quality and Satisfaction level. Service Quality of ESI Corporation positively influences the Satisfaction level of ESI policyholders ( $\beta=0.639$ ,  $p<0.01$ ). It further reveals that Satisfaction level of ESI policyholders would increase by 0.639 for every unit of standard deviation increase in the service quality perception of ESI policyholders and this beta coefficient value is significant at 1% level. Hence Service Quality is an important predictor variable of the Satisfaction level of ESI policyholders.
- Among various dimensions of service quality, Accessibility ( $R^2$  value – 0.399) and Tangibility ( $R^2$  value - 0.324) have more impact on the satisfaction level of

ESI policyholders. Whereas Assurance ( $R^2$  value – 0.105) has the lowest influence on the satisfaction level of ESI policyholders.

- The hypothesised measurement model shows that there is significant positive cause and effect relationship between Satisfaction level and Sense of Social Security of ESI policyholders. Satisfaction level of ESI policyholders positively influences their Sense of Social Security ( $\beta=0.244$ ,  $p<0.01$ ). It further reveals that Sense of Social Security of ESI policyholders would increase by 0.244 for every unit of standard deviation increase in the Satisfaction level of ESI policyholders and this regression coefficient value is significant at 1% level. Hence Satisfaction level is an important predictor variable of the Sense of Social Security of ESI policyholders.
- It is found that the Structural Equation Model representing the mediating effect of Satisfaction on Sense of Social Security in response to Service Quality of ESI Corporation yielded a good model fit. It is further found that Satisfaction level partially mediates (VAF- 20.2%) the relationship between service quality and sense of social security. It also suggests that Service Quality and Satisfaction are unique factors which ESI Corporation can use to enhance the Sense of Social Security of ESI policyholders. In other words, to enhance the Sense of Social Security, ESI Corporation has to increase the Satisfaction level of policyholders by improving the Service Quality of ESI Corporation.

#### **9.4 Conclusion**

The present research entitled ‘Social Security for the Organised Working Class in Kerala through Employees’ State Insurance Corporation: Analysis of Service Quality’ aimed to evaluate the service quality of ESI Corporation in Kerala during the post reform period. It also studies the satisfaction level and sense of social security experienced by the ESI policyholders. Further it measures the awareness and knowledge level about ESI services and the level of ESI benefits utilised by the

policyholders. Data collected from the ESI policyholders using a structured questionnaire is analysed by using suitable descriptive and inferential statistical tools. The findings of the study pointed out several critical concerns.

It is observed that the awareness level and knowledge level about ESI service is below average among the ESI policyholders. Some of the policyholders are not at all aware about many new initiatives of ESI Corporation. This low level of awareness and knowledge significantly reduced the level of utilisation of ESI benefits. It is also observed that the overall service quality perceived by the ESI policyholders is only on an average level. The level of service quality perceived in respect of the dimensions Communication, Responsiveness and Understanding of Policyholders is very low. Similarly, the satisfaction level of policyholders regarding the services and benefits of ESI Corporation is also on an average level only. Moreover, the policyholders are dissatisfied with the grievance handling mechanism, Communication of information and procedural formalities. Low level of awareness and knowledge is identified as one of the reasons of low level of satisfaction. It also highlights that the services offered by the ESI Corporation are not meeting properly the expectations and needs of the policyholders. Furthermore, analysis of the sense of social security reveals that the risk coverage offered by the ESI Corporation is below average and the income security and overall sense of social security offered is on an average level only. However, health protection offered by the Corporation is above average level.

The study also revealed that low level of awareness and knowledge, average level of service quality, satisfaction and sense of social security are interconnected issues which significantly influence the overall efficiency of ESI Corporation. The findings of the study highlighted the urgent need for the ESI Corporation to implement comprehensive measures to improve the awareness and knowledge level of policyholders about ESI services and to increase the level of ESI benefit utilisation. Enhancing service quality with special focus on Accessibility, Tangibility and

Communication is essential to rebuild the trust as well as to improve the overall experience of policyholders. Simplifying procedural formalities, improving grievance redressal mechanism and developing better communication strategies further encourage greater satisfaction among ESI policyholders. In short, strengthening of ESI awareness and knowledge level, service quality and satisfaction are essential for realising the ultimate objective of ESI Corporation which is creating high sense of social security involving high level of health protection, provision of income security and risk coverage.

*Chapter 10*

**RECOMMENDATIONS, IMPLICATIONS  
AND  
SCOPE FOR FURTHER RESEARCH**

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## **10.1 Introduction**

The present chapter is the concluding part of the research work entitled ‘Social Security for the Organised Working Class in Kerala through Employees’ State Insurance Corporation: Analysis of Service Quality’. This chapter includes the recommendations, implications of the study and scope for further research in this area. Recommendations are developed and reported for the improvement of the functioning of ESI Corporation to ensure maximum social security to the organised sector workers. The recommendations are formulated as per the findings of the study. Implications represent the contributions of the research work towards the stakeholders namely ESI Corporation, ESI policyholders, Employers and Government/ Policymakers. Moreover, the scope for further research provides different opportunities for the upcoming researchers in the particular research area.

## **10.2 Recommendations**

The following recommendations are derived based on the findings and conclusion of the research work stated in the previous chapter. Recommendations are developed for various parties related to the research such as ESI Corporation, ESI Policyholders, Employers and the Government/ Policymakers.

### **10.2.1 Recommendations to ESI Corporation**

1. As per the findings of the study the level of awareness and knowledge regarding ESI scheme is below average among ESI policyholders. The policyholders are not aware about the new initiatives of ESI Corporation and do not know about the functioning of ESI court and the grievance redressal cell. Moreover, ‘Communication’ is an important factor of service quality which influences the

satisfaction level and sense of social security of ESI policyholders. Hence the following strategies may be taken by the ESI Corporation for improving the awareness and knowledge level among ESI policyholders.

- The publications of ESI Corporation such as Booklets, Pamphlets, ESI Samachar, ESI Diary etc. which contain the details of ESI benefits, new initiatives, machineries of ESI Corporation and procedural formalities can be provided to ESI registered units for distributing among insured persons. It should print details in English, Hindi and Malayalam.
- ESI Corporation should advertise its achievements along with published statistical data to help the policyholders to understand its benefits and services.
- Introduction of new benefits/ services, change in the existing benefits/ services should be communicated to the insured persons through some popular newspaper dailies and electronic media. Printed educational material in Malayalam can also be given to ESI policyholders in this regard. In addition to which special lectures may be delivered in the ESI registered units by expert officers of ESI Corporation while introducing new ESI benefits.
- ESI Corporation should conduct seminars/ workshops for generating awareness and knowledge about ESI services in the branch offices at least twice in a year. Every policyholder registered under the respective branch office should be invited to attend the seminar/ workshop. E-mails should be sent to the registered employers in this regard. Details regarding ESI benefits, medical services, procedural formalities for claiming cash benefits and reimbursement of medical bills, procedure for availing super specialty treatment and procedure for online claim request and for checking claim status, online services etc. may be explained and demonstrated in the seminar/ workshop. Further the services of Grievance Redressal Cell and ESI Court must also be informed to ESI policyholders.

- Posters containing details relating to the benefits and services of ESI Corporation including procedural formalities should be displayed in all ESI registered units and ESI Branch Offices.
  - Accurate and updated information about benefits and services must be communicated to ESI policyholders through multiple channels such as E-mail, SMS, social media etc. Further Mobile Apps and Online Advisory services can also be used for this purpose.
  - The Corporation may appoint special information officers to visit ESI registered units periodically to create awareness and knowledge about the benefits and services of ESI Corporation among ESI policyholders.
2. It is recommended for the ESI Corporation to regularly conduct medical camps among ESI policyholders to check their health status especially in rural areas. It helps to create a good rapport between ESI healthcare staffs and policyholders and it also creates awareness about ESI medical services among the policyholders. Further in the periodical medical camps, the insured persons should be encouraged to make use of ESI dispensaries and hospitals for their medical treatment.
  3. According to the opinion of ESI policyholders, majority of them are not availing ESI benefits due to lengthy and complicated procedural formalities and they are dissatisfied with the cumbersome procedures associated with claiming ESI benefits. Hence ESI Corporation should take initiative to relax the eligibility conditions and simplify the procedural formalities to encourage ESI policyholders to avail maximum benefits under ESI scheme. The facility for submitting online application for claiming cash benefits through ESI website is to be supported. Instructions and application forms should be made available in a bilingual manner which must include both English and Malayalam. Audio description should be provided to help illiterate and blind insured persons. In addition to which Frequently Asked Questions with answers along with informative videos must be uploaded in the ESI website to support the

policyholders for claiming various ESI benefits. Guidance regarding procedural formalities should also be provided at ESI branch office by the staffs concerned.

4. It is recommended for the ESI Corporation to issue online sickness certificate from the dispensaries to reduce the procedural formalities associated with claiming sickness benefit. The period of service required for claiming sickness benefit is to be removed. So that the insured person will become eligible to claim sickness benefit from the day one of entering in to the insurable employment.
5. ESI policyholders have neutral level of satisfaction with regard to the accessibility of ESI services and the mean score of service quality perception regarding accessibility dimension is below average. Moreover, 'Accessibility' factor has the highest positive significant influence on the satisfaction level and sense of social security of ESI policyholders. Hence it is advisable for the ESI Corporation to make the timing of ESI dispensaries convenient to ESI policyholders. The working time of ESI dispensary and workers are almost same. So, the policyholders have to take leave from their organisation to consult doctors at the dispensary. Hence the timing of ESI dispensary should be extended and its service should be made available on Sundays and public holidays on a trial basis. If positive response is received from the policyholders, it can be regularised to satisfy the policyholders. Emergency services should be made available 24 hours a day. Starting of Dispensary Cum Branch Offices in the industrial area would help to increase the level of utilisation of ESI medical services.
6. ESI Corporation should establish and inform medical helpline number to its policyholders. It helps the insured persons to get details regarding the availability of doctors and also helps to get token number. Therefore, the waiting time at the dispensary/ hospital can be reduced. Further instead of general OPD, specialty wise OPDs such as medicine OPD, Ortho OPD, Neuro OPD etc. can be established to reduce the waiting time at the dispensary.
7. As per the opinion of ESI policyholders, specialist services are not available in ESI hospitals/ dispensaries. The Corporation should take necessary steps to

appoint specialist doctors in ESI hospital/ dispensary. The Corporation may also invite expert doctors in the private field to render their services at ESI hospitals/ dispensary as visiting doctors to provide expert advice or diagnosis.

8. The staff of ESI Corporation should be more responsive towards insured persons. They should direct and guide policyholders regarding various benefits and services and must be willing to help them. The staff should also provide prompt services to ESI policyholders.
9. It is recommended for the ESI Corporation to establish a dedicated customer support centre at each ESI branch office to help and welcome feedback from the policyholders. The feedbacks are to be analysed regularly to identify major service quality related issues and it must be reported to higher authorities for taking appropriate action.
10. ESI officials should be more courteous and sympathetic towards insured persons. Staff of ESI health care institutions should be caring and they must understand patients' concern. ESI staff should give individual attention to insured persons visiting ESI branch office/ hospital/ dispensary. The human approach and positive attitude of ESI staff encourage policyholders to avail more services of ESI Corporation. In this regard, ESI Corporation is advised to organise training to its employees so as to enable them to deal with the policyholders in a friendly and sympathetic manner. Training is required for changing their mechanic attitude to humane approach and for improving their interpersonal skills. Training should also be provided for enhancing their technical knowledge.
11. As per the opinion of ESI policyholders, the doctors are not giving adequate time to patients and spent less time on diagnosis. Hence, the Corporation should insist doctors in ESI healthcare institutions to give sufficient time to outpatients to express their concerns. The doctors should listen to patients and keep them informed about their health condition.

12. Results showed that tangibility is a very important factor influencing the satisfaction level and sense of social security of ESI policyholders. Hence, improvement of medical facilities under ESI scheme is essential. Technically graded and up to date equipment must be used in ESI healthcare institutions. Medical accessories should be sufficiently provided in ESI hospitals/ dispensaries. Testing labs and diagnostic facilities with latest technology must be ensured in ESI healthcare institutions. More hospitals should be tied up under ESI scheme.
13. The level of ESI benefit utilisation is lesser in rural areas. Hence, more ESI dispensaries/ hospitals and branch offices should be set up in rural areas to help rural policyholders.
14. In order to enhance the level of utilisation of ESI benefits, ESI Corporation should focus on preventive healthcare programmes, which may be provided to the beneficiaries in their work place or residential area.
15. ESI Corporation must ensure that sufficient stock of medicines is available in the pharmacies of ESI hospitals/ dispensaries.
16. Sufficient number of staffs are to be appointed in ESI hospitals, dispensaries and branch offices to provide prompt services to the beneficiaries.
17. Intensive Care units and Ventilators should be made available in ESI dispensaries to handle medical emergencies. Ambulance services should also be provided in ESI hospitals/ dispensaries.
18. Occupational Disease Centers should be opened in all districts and ESI doctors should be given training in diagnosing and treating occupational diseases.
19. Queue management is a big issue in ESI dispensaries. So digital token system should be introduced for managing queues. In addition to which Ask An Appointment mobile app is to be promoted and popularised among ESI policyholders.

20. ESI Corporation can provide loan facility to policyholders on the security of ESI policy.
21. The amount of cash benefit should be revised each year in accordance with the average price index to meet the increased cost of living.
22. Information Technology integration in all the services of ESI Corporation will help to ensure transparency and effective e-governance. It also helps the Corporation to deliver its services in a prompt manner. Importance should also be given for creating literacy among the policyholders regarding how to use online services.
23. Wage ceiling for the coverage of ESI scheme should be enhanced from Rs. 21000 to Rs. 40000. The amount should be revised at regular intervals by considering the inflationary situations in the country.
24. Premium subsidies must be given to lower income workers to create more sense of social security among them.
25. ESI scheme should be made compulsory for all kinds of hazardous industries irrespective of the number of employees. The minimum number of employee requirement for other firms may be reduced from 10 to 5 and gradually this limit may be withdrawn. The scheme should also be extended to unorganised sector to achieve the goal of universalisation of social security.
26. Opt In/ Opt Out option may be provided to the employees of ESI registered units. So that only those employees who are interested in the ESI scheme may remain as an ESI policyholder and others can opt out of this scheme.
27. Performance Audit should be conducted in ESI Hospitals, dispensaries and Branch Offices for monitoring and improving performance.
28. State level ESI Board involving officials of ESI Corporation, State Government, International Labour Organisation, representatives of Employees, Employers and Medical Staff may be constituted for the effective supervision of ESI services at the state level. It will facilitate administration and reduces bureaucracy.

29. ESI insured persons are dissatisfied with the grievance redressal mechanism of ESI Corporation. Lack of response from the part of authorities and delay in the disposal of grievances are the major causes of dissatisfaction. Even though ESI Corporation is showing Suvidha Samagam in its records to solve the problems related to ESI scheme, it is not functioning systematically. Hence one official at each ESI branch office should be given charge for handling and redressing the grievances of the insured persons registered under the respective Branch Office. The official in charge of grievance redressal procedure must register and classify the complaints of policyholders and forward them to appropriate sections to take remedial action. There should be proper follow up action until the grievance is redressed to the satisfaction of the concerned policyholder. The information regarding online grievance redressal mechanism should be explained to insured persons and the procedure for online grievance filing should be demonstrated to them by the official in charge of grievance handling in each branch office.
30. More representation of ESI insured persons and employers in various committees and advisory boards of ESI Corporation is recommended. So, the opinion of employees and employers will be considered while framing policies and designing benefits. It is also desirable to convene the meeting of such committees and advisory boards in regular intervals.

### **10.2.2 Recommendations to ESI Policyholders**

1. Insured Persons are advised to attend all awareness campaigns, medical camps, workshops and seminars organised by the ESI Corporation to create awareness and knowledge about ESI services. It helps them to understand the benefits and services of ESI Corporation and procedural formalities associated with claiming various benefits and grievance redressal.
2. Insured persons must make maximum use of ESI services including the online services of ESI Corporation.
3. Insured persons are advised to identify the details of ESI hospitals, dispensaries and tie up hospitals in their area and are required to use ESI health care

institutions for their medical treatment as well as for the treatment of their dependent family members.

4. If the employees are residing at a place where ESI health care facilities are not available, they are advised to take treatment in a private hospital and can apply for the reimbursement of medical bill.
5. Complaints regarding the services of ESI Corporation, if any, must be reported under the grievance redressal mechanism.
6. ESI policyholders are advised to actively participate in various review meetings organised by ESI Corporation and make use of all available channels to give feedback and suggestions for the improvement of service quality of ESI Corporation.

### **10.2.3 Recommendations to Employers**

1. Employer should provide training to new employees about the benefits and procedure for claiming various benefits and services of ESI Corporation.
2. Employer must make sure that all the eligible employees of the organisation are registered under ESI scheme and obtained ESI Pehchan card.
3. It is desirable for the employer to designate a staff to support and guide all ESI registered employees in their organisation throughout the process of availing ESI benefits.

### **10.2.4 Recommendations to Government/ Policymakers**

1. The Central Government should grant financial assistance to ESI Corporation to meet its capital and administration expenses. So, the entire amount collected from employees and employers can be utilised exclusively for providing services to ESI beneficiaries.
2. As per ESI records, ESI Corporation has huge amount of unutilised reserve. The government should grant permission to the Corporation to invest a portion of this unutilised reserve in some profitable securities in the stock market. It will

generate additional income to the Corporation, which can be used for the benefit of its policyholders. Qualified fund managers may be appointed for this purpose. Further the government may constitute an investment committee comprising of the representatives of the government and experts in Public Finance and Investment Management to advise the Corporation in this matter.

3. The Central Government should allocate more fund in the budget for the infrastructure and technology upgradation of ESI Corporation.

### **10.3 Implications**

This study has both theoretical and practical implications.

#### **10.3.1 Theoretical Implications**

The study contributes to service quality literature in the field of social insurance. The modified SERVPERF scale developed in the study has good reliability and validity. This service quality scale based on eight dimensions can be used for analysing the service quality of social insurance programmes in other countries also.

The conceptual model developed in the study established strong relationship among Awareness, Knowledge, Service Quality, Satisfaction and Sense of Social Security. This finding reinforces many theoretical models developed in the previous studies which shows that awareness and knowledge significantly influence the satisfaction level and service quality perception leads to satisfaction and positive behavioural outcomes. The mediating effect of satisfaction between service quality and positive behavioural outcomes established in the previous studies are also proved in the current study.

#### **10.3.2 Practical Implications**

This study has some practical implications for different sections of the society such as ESI Corporation, ESI policyholders, Government/ Policymakers and the future researchers which are explained below

As per the results of the study, service quality is an important antecedent of policyholders' satisfaction and it also creates a sense of social security among them. The study also shows that the awareness and knowledge significantly influence the satisfaction level. The Corporation can improve the satisfaction level and sense of social security of policyholders by improving the awareness and knowledge level about ESI services and its service quality. But as per the findings, the level of awareness and knowledge about ESI services is below average and the level of service quality, satisfaction and sense of social security among the policyholders is only on an average level. The study helps ESI Corporation by pointing out the areas of service quality which needs improvement. It also highlights the urgency for well organised awareness programmes and educational intervention among policyholders especially among illiterate, less experienced and the policyholders living in rural areas.

The study also draws attention to the areas in which the policyholders are dissatisfied. It suggests the Corporation to shift from bureaucratic procedure to more policyholder centric service procedure and to relax the eligibility conditions for claiming its various benefits. It also advises the Corporation to improve its grievance handling mechanism and communication strategies used to inform the policyholders. The study also underlines the importance of giving training to ESI staffs for improving the Responsiveness and Understanding dimensions of service quality. The study further emphasises the importance of improving its infrastructure and diagnostic facilities and digital transformation. It also suggests the way to make its services more accessible to policyholders.

The study points out some amount of inefficiency in the execution and monitoring of ESI scheme which calls for government intervention. The findings prompt the government to restructure the eligibility conditions and claim processing system to ensure high sense of social security to ESI policyholders. The study also emphasises the need for government policies which integrates awareness and knowledge building measures as a major component of ESI scheme. The study also encourages the policymakers to design and enforce minimum service quality standards for ESI

Corporation and to make performance audit compulsory for each ESI Branch Office, Dispensaries and Hospitals.

The study has implications for the policyholders also. It encourages the policyholders to actively participate in the awareness programmes and to actively claim all the eligible benefits. It also advises them to give feedback and suggestions to ESI Corporation for improving its service delivery mechanism. The study also helps future researchers by highlighting the areas which merit further investigation in this field.

#### **10.4 Scope for Further Research**

This study provides very fruitful contributions and recommendations. However, there are many topics related to this area which remain unexplored. Such topics are listed below.

1. The impact of digitalisation of ESI services on the Satisfaction level of ESI policyholders.
2. Fund management of ESI Corporation.
3. Employer's attitude towards the functioning of ESI Corporation.
4. Issues associated with the extension of ESI scheme to unorganised sector.
5. Moderating effect of ESI Awareness and Knowledge in the relationship between the service quality of ESI Corporation and Satisfaction level of ESI policyholders.
6. Functioning of Employees' Insurance Court in Kerala.
7. Infrastructural problems faced by ESI healthcare institutions in Kerala.
8. Influence of ESI coverage on the occupational mobility of policyholders.
9. Administration of ESI medical benefits - Comparative study among different states in India.

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# APPENDIX

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# Questionnaire

**Dear Respondents,**

The prime motive behind this research endeavour is to study the service quality of ESI Corporation in Kerala. The response rendered by you would be of immense value to derive the logical conclusion of this research work. I hereby declare that the information provided by you shall be kept completely confidential and shall be used only for the purpose of this study. Your identity and information will be kept confidential.

Sincerely,

**Jincy V K,**  
Research Scholar,  
P G and Research Dept. of Commerce,  
Farook College (Autonomous), Calicut

## **Part A: General Information**

1. Gender :  Male  
 Female  
 Third Gender
2. Age in years :  Up to 25 years  
 26-35 years  
 36 – 45 years  
 46-55 years  
 Above 55 years
3. Marital status :  Married  
 Unmarried  
 Others
4. Educational Qualification :  SSLC & below  
 Plus-Two/ Pre degree  
 Degree/ Diploma  
 Post Graduation  
 Professional & Others  
 (Specify: .....)



5. State your level of awareness and knowledge regarding the following Factors relating to ESI services.

| Sl. No.  | Factors                                                                    | Un aware | Slightly Aware | Moderately Aware | Very Aware | Extremely Aware |
|----------|----------------------------------------------------------------------------|----------|----------------|------------------|------------|-----------------|
| <b>A</b> | <b>Awareness</b>                                                           |          |                |                  |            |                 |
| 1        | Amount of Premium contribution                                             |          |                |                  |            |                 |
| 2        | Wage/ Salary limit for ESI coverage                                        |          |                |                  |            |                 |
| 3        | Medical Benefits                                                           |          |                |                  |            |                 |
| 4        | Sickness Benefit                                                           |          |                |                  |            |                 |
| 5        | Maternity Benefit                                                          |          |                |                  |            |                 |
| 6        | Dependent Benefit                                                          |          |                |                  |            |                 |
| 7        | Disablement Benefit                                                        |          |                |                  |            |                 |
| 8        | Payment of confinement Expenses                                            |          |                |                  |            |                 |
| 9        | Payment of Funeral Expenses                                                |          |                |                  |            |                 |
| 10       | Old age Medical Care                                                       |          |                |                  |            |                 |
| 11       | Unemployment Allowance under Rajiv Gandhi Shramik Kalyan Yojana (RGSKY)    |          |                |                  |            |                 |
| 12       | Availability of AYUSH (Ayurveda, Yoga, Unani, Siddha, Homeopathy) facility |          |                |                  |            |                 |
| 13       | Ask an appointment mobile app                                              |          |                |                  |            |                 |
| 14       | ESI medical help line number                                               |          |                |                  |            |                 |
| 15       | Benefits available to family members                                       |          |                |                  |            |                 |

| <b>B</b> | <b>Knowledge</b>                                                      |  |  |  |  |  |
|----------|-----------------------------------------------------------------------|--|--|--|--|--|
|          |                                                                       |  |  |  |  |  |
| 1        | Medical Services/ facilities available in ESI hospitals/ dispensaries |  |  |  |  |  |
| 2        | Procedure for claiming cash benefit                                   |  |  |  |  |  |
| 3        | Procedure for reimbursement of medical bill                           |  |  |  |  |  |
| 4        | List of empanelled hospitals for super speciality services            |  |  |  |  |  |
| 5        | Procedure for checking claim status of ESI Scheme online              |  |  |  |  |  |
| 6        | Procedure for grievance redressal                                     |  |  |  |  |  |
| 7        | Services of ESI court                                                 |  |  |  |  |  |

### Measurement of Service Quality

1. Mark your level of agreement regarding the following statements showing perceived service quality (**SA- Strongly Agree, A- Agree, N- Neutral, D- disagree, SD- Strongly Disagree**)

| <b>Sl. No.</b> | <b>Dimen- sions</b> | <b>Variables (Items/Statements)</b>                                             | <b>SA</b> | <b>A</b> | <b>N</b> | <b>D</b> | <b>SD</b> |
|----------------|---------------------|---------------------------------------------------------------------------------|-----------|----------|----------|----------|-----------|
| <b>1</b>       | <b>Reliability</b>  | ESI Corporation fulfils promises in a timely manner                             |           |          |          |          |           |
|                |                     | Staff of ESI Corporation is dependable in handling customers' problems          |           |          |          |          |           |
|                |                     | ESI Corporation provides hassle free claim settlement process                   |           |          |          |          |           |
|                |                     | ESI hospitals/ Dispensaries ensure correctness of medical reports and documents |           |          |          |          |           |
|                |                     | ESI premises are corruption free                                                |           |          |          |          |           |

| Sl. No. | Dimensions  | Variables (Items/Statements)                                                                  | SA | A | N | D | SD |
|---------|-------------|-----------------------------------------------------------------------------------------------|----|---|---|---|----|
| 2       | Tangibility | ESI healthcare facilities have technically graded and up to date equipments                   |    |   |   |   |    |
|         |             | ESI Corporation has adequate number of branch offices for customer service                    |    |   |   |   |    |
|         |             | There are sufficient staffs in ESI premises                                                   |    |   |   |   |    |
|         |             | The staff of ESI Corporation has neat and professional appearance                             |    |   |   |   |    |
|         |             | Sanitation and cleanliness in ESI Healthcare facilities are good                              |    |   |   |   |    |
|         |             | Adequate bed facilities are available in ESI Healthcare institutions                          |    |   |   |   |    |
|         |             | Medical accessories are sufficiently provided in ESI Healthcare institutions                  |    |   |   |   |    |
|         |             | Standard medicines are provided in ESI Healthcare facilities.                                 |    |   |   |   |    |
| 3       | Assurance   | The staff of ESI Corporation has the knowledge and expertise to answer policyholders' queries |    |   |   |   |    |
|         |             | The behaviour of ESI staffs creates confidence in policyholders                               |    |   |   |   |    |
|         |             | ESI staff always treat customers with courtesy                                                |    |   |   |   |    |
|         |             | ESI staffs are competent in redressing customers' grievances                                  |    |   |   |   |    |
|         |             | ESI Corporation maintains confidentiality of policyholders' information                       |    |   |   |   |    |
|         |             | ESI doctors and nurses are professionally prepared to treat the patients                      |    |   |   |   |    |
|         |             | It is safe to enter the ESI hospital/ dispensary premises to access healthcare                |    |   |   |   |    |

| Sl. No. | Dimen-sions                    | Variables (Items/Statements)                                                                        | SA | A | N | D | SD |
|---------|--------------------------------|-----------------------------------------------------------------------------------------------------|----|---|---|---|----|
| 4       | Accessibility                  | It is easy to access ESI Healthcare facilities                                                      |    |   |   |   |    |
|         |                                | Branch offices are conveniently located                                                             |    |   |   |   |    |
|         |                                | Branch offices has operating hours convenient to all policyholders                                  |    |   |   |   |    |
|         |                                | Timing of ESI dispensaries are convenient                                                           |    |   |   |   |    |
|         |                                | Specialists' services are available in ESI Healthcare institutions                                  |    |   |   |   |    |
|         |                                | ESI scheme offers emergency health care services                                                    |    |   |   |   |    |
| 5       | Communication                  | ESI Corporation provides accurate and updated information about its benefits and services           |    |   |   |   |    |
|         |                                | ESI Corporation provides information in a language understandable to policyholders                  |    |   |   |   |    |
|         |                                | ESI Corporation regularly organises awareness campaign                                              |    |   |   |   |    |
|         |                                | ESI doctors listen to the patients and keep them informed about their health conditions             |    |   |   |   |    |
| 6       | Understanding of policyholders | ESI officials give me personal attention                                                            |    |   |   |   |    |
|         |                                | Service providers at ESI Healthcare facilities are caring and understands patient concern.          |    |   |   |   |    |
|         |                                | ESI Corporation has the policyholders' best interest at heart                                       |    |   |   |   |    |
|         |                                | ESI Corporation offers reimbursement facility for medicines which are not available in ESI pharmacy |    |   |   |   |    |
| 7       | Responsiveness                 | ESI Corporation keeps customers informed about when services will be performed                      |    |   |   |   |    |
|         |                                | I receive prompt services from ESI Healthcare institutions                                          |    |   |   |   |    |
|         |                                | ESI Corporation welcomes feedback from policyholders                                                |    |   |   |   |    |

| Sl. No. | Dimensions   | Variables (Items/Statements)                                                     | SA | A | N | D | SD |
|---------|--------------|----------------------------------------------------------------------------------|----|---|---|---|----|
|         |              | ESI officials guide the policyholders regarding benefits and services            |    |   |   |   |    |
|         |              | ESI staffs are always willing to help policyholders.                             |    |   |   |   |    |
| 8       | E-governance | ESI Corporation provides proactive information through SMS/e-mail                |    |   |   |   |    |
|         |              | The procedure for submitting online leave claim is simple                        |    |   |   |   |    |
|         |              | It is possible to check claim status under ESI Scheme online                     |    |   |   |   |    |
|         |              | Cash benefits are directly transferred to the bank account of ESI beneficiaries. |    |   |   |   |    |
|         |              | ESI Corporation has a well - structured informative website                      |    |   |   |   |    |
|         |              | ESI Corporation offers an effective online public grievance redressal mechanism  |    |   |   |   |    |

### Measurement of Policy holders' Satisfaction

2. Rate your level of satisfaction regarding the following factors of ESI on a five-point scale

(HS- Highly Satisfied, S-Satisfied, N-Neutral, D-Dissatisfied, HD-Highly Dissatisfied)

| Factors                                         | HS | S | N | D | HD |
|-------------------------------------------------|----|---|---|---|----|
| Communication of Information by ESI Corporation |    |   |   |   |    |
| Infrastructure and diagnostic facilities        |    |   |   |   |    |
| Procedural formalities                          |    |   |   |   |    |
| Behaviour of ESI staffs                         |    |   |   |   |    |
| Accessibility of the services                   |    |   |   |   |    |
| Medical services                                |    |   |   |   |    |
| Adequacy of cash benefits                       |    |   |   |   |    |
| Online services of ESI Corporation              |    |   |   |   |    |
| Grievance handling mechanism                    |    |   |   |   |    |
| Premium contribution                            |    |   |   |   |    |

### Measurement of Sense of Social Security

3. What is your opinion regarding the following statements?

(SA- Strongly Agree, A- Agree, N- Neutral, D- disagree, SD- Strongly Disagree)

| Sl. No. | Dimensions (Constructs)      | Variables (Items/Statements)                                                                                                  | SA | A | N | D | SD |
|---------|------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----|---|---|---|----|
| 1       | Health protection            | ESI scheme ensures free access to healthcare services                                                                         |    |   |   |   |    |
|         |                              | ESI scheme protects my family from the rising cost of healthcare                                                              |    |   |   |   |    |
|         |                              | ESI scheme offers better healthcare facilities                                                                                |    |   |   |   |    |
|         |                              | I have peaceful mind knowing the medical bill reimbursement facility under ESI scheme                                         |    |   |   |   |    |
| 2       | Provision of income security | Because of ESI coverage, I am not worried too much about unexpected financial loss arising from job related accident/ disease |    |   |   |   |    |
|         |                              | ESI policy coverage positively impacts my quality of life                                                                     |    |   |   |   |    |
|         |                              | Payment of ESI contribution is not a financial burden for the working poor                                                    |    |   |   |   |    |
|         |                              | ESI benefits prevent extreme financial hardship                                                                               |    |   |   |   |    |
| 3       | Risk Coverage                | ESI policy reduces the stress; I may have about financial risks impacting my quality of life                                  |    |   |   |   |    |
|         |                              | I feel I can handle emergencies better due to my ESI coverage                                                                 |    |   |   |   |    |
|         |                              | ESI scheme will meet my old age needs                                                                                         |    |   |   |   |    |
|         |                              | ESI policy gives me confidence that I will be supported in crisis                                                             |    |   |   |   |    |
|         |                              | ESI policy protects the social usefulness of productive workforce                                                             |    |   |   |   |    |

4. Give your suggestions for improving the service quality of ESI Corporation.

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*Thank you for your co-operation*