

# **ANALYSIS OF ELDERLY BEQUESTS' AND CARE IN KERALA**

*Thesis submitted to the*  
**UNIVERSITY OF CALICUT**  
*for the Award of the Degree of*

***Doctor of Philosophy in Economics***

*By*

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**OCTOBER, 2024**



## **CERTIFICATE**

Certified that the thesis entitled, “**ANALYSIS OF ELDERLY BEQUESTS’ AND CARE IN KERALA**” is a record of bonafide research work done by Mrs. TWINKLE WILSON C in fulfilment of the degree of **Doctor of Philosophy**, Department of Economics, University of Calicut, Dr John Matthai Centre, Aranattukara, carried out by her under my guidance and supervision. The contents of this thesis, in full or in part, have not been submitted and will not be submitted to any other institute or University for the award of any degree or diploma, and associate fellowship or for, awarding other similar titles or recognition. Plagiarism is checked and found within the permitted limits.

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## ***DECLARATION***

I, Mrs. TWINKLE WILSON C, affirm that this thesis titled “**ANALYSIS OF ELDERLY BEQUESTS’ AND CARE IN KERALA**” submitted to the University of Calicut for the award of the degree of Doctor of Philosophy in Economics is a bonafide record of research done by me under the guidance of Dr. Zabeena Hameed P, Associate Professor of Economics, University of Calicut. I also declare that this thesis has not been submitted by me earlier for the award of any degree, diploma, fellowship or any other similar titles of recognition. The thesis is free from AI-generated content.



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*Twinkle Wilson C*

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## LIST OF ABBREVIATIONS

UN	: United Nations
UNDP	: United Nations Development Programme
UNFPA	: United Nations Population Fund
NSSO	: National Sample Survey Organisation
WHO	: World Health Organisation
WPA	: World Population Ageing
BKPAI	: Building a Knowledge base on Population Ageing India
LASI	: Longitudal Ageing Survey of India
NAS	: National Ageing Survey
KAS	: Kerala Ageing Survey
ZPG	: Zero Population Growth Rate
FHH	: Female Headed Household
INOCI	: Informal Old age Care Index
ISOCI	: Informal Social Old Age Care Index
IFINOCI	: Informal Financial Old Age Care Index
IEOCI	: Informal Esteem Old Age Care Index
IIOCI	: Informal Informational Old Age Care Index
IEMOCI	: Informal Emotional Old Age Care Index
FOCI	: Formal Old Age Care Index
IAFOC	: Index of Awareness of Formal Old age Care
IUFOC	: Index of Utilization of Formal Old Age Care
ISFOC	: Index of Satisfaction of Formal Old Age Care
OCI	: Old Age Care Index
OACG	: Old Age Care Gap
IOACG	: Informal Old Age Care Gap
FOACG	: Formal Old Age Care Gap
HMR	: Hierarchical Multiple Regression
NTA	: National Transfer Accounts
LCD	: Life Cycle Deficit

LCS	: Life Cycle Surplus
MWSC ACT	: Maintenance and Welfare of Parents and Senior Citizens ACT
EWS	: Economically Weaker Section
OBC	: Other Backward Classes
NCD	: Non-communicable diseases
CD	: Communicable diseases
DD	: Degenerative diseases
GC	: Grandchildren
GGC	: Great Grandchildren
NGOs	: Non-Governmental Organisations
OADR	: Old Age Dependency Ratio
60+	: Aged Sixty and Above
70+	: Aged Seventy and Above
80+	: Aged eighty and Above
PRS	: Private Rented Sector
OEC	: Other Eligible Communities
PRB	: Population Reference Bureau
IHDS	: India Human Development Survey
NFHS	: National Family Health Survey
ICT	: Information and Communications Technology
AAI	: Active Ageing Index
IMR	: Infant Mortality Rate
LFPR	: labour force participation rate
FHH	: Female headed household
HH	: Head of the Household

## *Abstract*

Kerala's elderly population is rapidly expanding. This is a by-product of the demographic transition and resultant low rates of mortality, fertility and significant improvement in the life expectancy. Elderly people need financial, physical, and emotional support due to increased health care costs, the effects of urbanisation and migration, changes in family size and structure, and other problems and the situation of the elderly can get worse in the coming years. On the one hand, older people save and set aside money and assets out of caution because they are uncertain about the remaining years of life, health expenditure and possible reasons of death. They also have implicit but typically unstated bequest motives that relate to receiving support from their families, neighbours, and community. On the other hand, depending on their hopes for bequests, the assistance offered by the elderly, and the costs associated with maintaining the household, children of the elderly may employ a range of caregiving strategies in addition to acts of generosity. While they struggle to keep up with the financial supplies for care, the elderly in this dynamic game face a variety of care-related vulnerabilities and may seek care for a variety of reasons.

The purpose of this study is to examine the relationship between elderly's desires to leave something to their descendants and the care that is given in return to them by the informal organisations in Kerala, across socio-economic classes and gender. The study also investigates the function of institutional care givers in the provision of old age care in Kerala. The study examines how financial security and capital accumulation play a vital role in the care of the elderly. The major data sources used are; Ageing report 2017 & 2019, Help age India 2014, BKPAI (Building a knowledge base on population ageing India) survey 2011, NSSO reports of 52nd, 42nd, 60th rounds, 1995-96, 1986-87 2004-05, Kerala Ageing Survey (2013, 2016, & 2019), Census Reports of India (2001-2011), Longitudal Ageing Survey of India (LASI-2018). The study also draws inferences from the case studies conducted in Kozhikode, Thiruvananthapuram and Ernakulam districts in Kerala. Based on the Census 2011, 383 eligible samples were selected through Multi-stage random sampling and the survey have conducted among elderly household of age 60 and above through interview schedule.

Low levels of formal care and medium levels of informal care resulted in low level of old age care and high level of old age care gap recipients. Depending upon the elderly's socioeconomic status, there are variations in the care received. Additionally, the formal versus informal care

disparity is large. The study finds no connection between formal and informal old age care. As a result, Kerala's aged care system heavily relies on informal old age care. Different people have different ideas about why people leave money to their children. When they get older, elders in both altruistic and social norms and tradition groups reduce their financial support for them. However, egotistic parents with a strategic goal are more likely to receive financial assistance from their offsprings in their last years. Age-related reasons for bequests are strongly correlated with socioeconomic levels. It includes information on one's social standing, such as employment, movable (land and houses) and immovable assets (jewellery, vessels), savings, investments, the total number of family members, region, marital status, NCD, CD, and DD, home ownership, income type, children who live with them, contribution to household expenses, remittance rendered, and social group. Transfers reflects the structural shift from altruistic to strategic character. Land passed down through inheritance, the senior population's salaries and wages, son remittances, income from animals, and the lack of degenerative diseases are the socioeconomic elements that determine how financially independent the elderly are. The study comes to the conclusion that the dynamic interaction between informal caregivers and elderly family members has helped the elderly become more financially independent, which has led to the comment that Kerala's elderly population will soon be "an asset, not a burden".

*Keywords: Elderly, Old Age Care, Bequest, Bequeath, Economic Independence*

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# CHAPTER I

## DESIGN OF THE STUDY

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## 1.1 Background

The ageing population and old age form an essential feature of many countries, especially the developed countries in the early 21<sup>st</sup> century. With development, many countries have experienced a substantial decline in birth and death rates accompanied by improved life expectancy and quality of life, which culminated in an increase in the proportion of the elderly population. It has been estimated by the United Nations (UN) that there is a gradual increase from 9.2 percent in 1990 to 11.70 percent in 2013 in the global share of older people. It is projected to grow by 21 percent of the world's total population by 2050 (UN, 2013). The United Nations Population Fund, India (UNFPA) assessed the decadal growth rate of the elderly population of India to be at 41 percent, and the percentage of elderly population in the country is projected to double to over 20 percent of the total population by 2050 (India Ageing Report, 2023). Among the Indian states, Kerala holds the highest elderly population (12.6 percent) as against the national average of 8.6 percent (Census, 2011). The proportion of the elderly in Kerala has increased steadily over the past decades.

Ageing<sup>1</sup> is the process of growing old in life's journey, along with several economic and financial decision-making, often inextricably mixed with care and support. The elderly need physical, mental and emotional support and care at their last 'Sanyasa ashrama'<sup>2</sup>. The process becomes more intuitive and worth introspective as socioeconomic differences across genders may exist. According to the Base Knowledge Population Ageing India Survey (BKPAI, 2011), the premier level of Kerala society is governed by socio-economic status, which influences the elderly at the grassroots level of their life.

The BKPAI (2011) observes that the primary source of income, especially for older men is still salary or wages. Overall, three-fourths of the elderly men and half of the elderly women report receiving personal income, but sharp gender differences can be observed

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<sup>1</sup>A shift in the distribution of a country's population towards older ages – known as population ageing (WHO- Ageing; Global Population, 2010)

<sup>2</sup>'Sanyasa ashrama' is the last phase of a person's life at which they disseminate the values of religion and truth, give up all material possessions, and become austere (Ashrama Theory of Ageing).

with respect to income distribution. Interestingly, 7 percent of elderly women and 27 percent of elderly men fall in the high-income category. Overall, 52 percent of the elderly reported that they contribute their personal income towards household expenditure and more men (69 percent) than women (39 percent) are found with this behaviour. Further, a little more than one-fourth of the elderly men reported that their contribution covers more than 80 percent of the household budget, whereas this proportion is only 6 percent in the case of women. Financial contribution by the elderly does not vary greatly across rural and urban areas. Hence, because of improvements in longevity, economic compulsion, and some other reasons for their own interest, the elderly are 'ready to work' (BKPAI survey, 2011).

Economic independence will occupy a prominent role in capturing care and support. In Kerala, two-thirds of the elderly own some asset, such as land, housing, jewellery or savings. Land and housing are two major assets owned by the elderly in Kerala, with more than half of the elderly (57 percent) owning land (either inherited or self-acquired) and another 45 percent owning houses. The percentage of elderly people who own other assets, such as gold, savings in banks and post offices, and so on, is comparatively lower. Asset ownership is generally higher among elderly men than elderly women, except for jewellery.

A bequest is an act of giving personal property or financial assets such as land, house, jewellery and cash to an individual or organization through the provisions of a will. Bequests can be made to family, friends, institutions or charities. The 'Maintenance and Welfare, Senior Citizens Act', 2007 (modified in 2019), points to the need for research on the bequests of the elderly and the care they receive. This seems more relevant in the care needed economy of Kerala in the context of the upcoming century known as "Ageing of the Aged". Article 41 of the Indian constitution guarantees social security for the old aged in India. The Directive Principles of State Policy of India states that "*the state shall, within the limits of its economic capacity and development, make effective provision for securing the right to work, to education and public assistance in case of unemployment, OLD AGE, sickness and disablement and other cases of undeserved want*". Further, Article 47 provides that the State shall regard raising the level of nutrition and the standard of living of its people and improving public health as among its primary

duties. Amendments of existing laws are yet to be initiated to ensure care and support to the elderly, which is yet to be researched.

## **1.2 Review of Literature**

This research purports to probe into the assets, bequests, and economic independence of the elderly populace in Kerala and the care and support they receive from a socio-economic and gender perspective. Several studies related to the elderly are being separately addressed here, in tandem, albeit empirically, theoretically and methodologically to the best of our knowledge. The statewide study of Kerala's elderly population is yet to determine its boundaries. This section deliberates on the multi-faceted dimensions of ageing listed below and aims to examine and trace the research gap in this area.

- A. Ageing and demographic transition
- B. Elderly populace and socio-economic status
- C. Elderly's bequest motives, bequeath and inheritance law
- D. Bequest Expectation of Children of the Elderly Populace
- E. Elderly population and informal care
- F. Elderly population and formal care
- G. Lifecycle Deficit (LCD) and elderly populace
- H. Economic independence and elderly populace.

These dimensions are further explored in detail in the subsequent sub-sections.

### **A) Ageing and Demographic Transition**

The societal transformations during the late 20<sup>th</sup> and early 21<sup>st</sup> century is marked by a progressive impact of population ageing (Tripathi, 2014; Rajagopalan, 2000). "Ageing is a continuous process that begins right at birth" (Sampathkumar et al., p.44, 2010). Demographers defined population ageing as a process of "alteration in the age structure of a population so that *elderly persons* [emphasis added] are increasingly represented within a country's overall age structure" (Shrestha, 2000, p. 204). Generally, ageing is a natural, universal, and inevitable process in the developmental phase of human life (Pankajam, 2004). At the same time, most of the researchers in Gerontology,

Demography, and Economics agreed that it is the outcome of declining fertility (Rukmini et al., 2022; Saumya, 2016; Lee & Mason, 2016; Pal & Palacois, 2011; Nair, 2010; Rajan, 2004; Rajan & Zachariah, 1997), and mortality (Giridhar et al., 2014; Thomas & James, 2014), and changes in mobility (Kyriazis, 2020; Rajan & Mishra, 2020; Sujathan, 2012; Zarinah, 2011; Gulati & Rajan, 1999) of the population in the surface of the earth (Caselli & Vallin, 1990). The economists narrate it through the stages of demographic transition (Bhagat & Kumar, 2011; Misra & Puri, 2001), which increase the population's life expectancy (Bose et al., 2008). This creates a generation with a large number of the elderly population who consider living in the dissaving life cycle period (Lakshmanasamy, 2012) and yet remain partially ambiguous, as they are uncertain about their life period and related requirements (Sanitha et al., 2019; Lakshmanasamy, 2012; Jappelli & Modigliani, 1998).

The demographic transition theory by F. W. Notestein (1945) explains three stages of transition. The first stage is with a high birth rate and high death rate, with low population growth, mainly seen in the less developed primitive agrarian / traditional economies. The second stage is with a high birth rate and low death rate, often accompanied by population explosion and the onset of the ageing process, typical in developing countries. Finally, the third stage has low birth and death rates. The last two stages paved the way for capital accumulation by the elderly populace due to extended life expectancy and a decline in the mortality rate (Pal & Palacois, 2011). From 1950 onwards, the world experienced the first stage of transition (Willekens, 2014), and India and Kerala experienced the first transition in the same period (Gulathi & Rajan, 1999; Zacharia, 1998). The year 1973 marked the second demographic transition, leading to females being more significant than males worldwide (Ogawa et al., 2009). India, with a sex ratio of 1.12 males for each female at birth, continued to be the highest in the world from 2005- 2010. Bloom observes this has created a “bulge” in the population pyramid of India (Bloom, 2011). In the second half of the 20th century, Kerala underwent the second stage transition with females greater than males, and an increased incidence of female widowhood was visible. The state experienced a ‘bulge’ in youth generation (Nair, 2010; Gulathi & Rajan, 1999). Then, the first half of the 21st century registered the third stage of demographic transition and continued with the outcome of female prominence to a greater extent (Nair, 2010; Rajan & Zachariah, 1997), with low birth rates, death rates and infant mortality rates

(Laisa, 2017) and forcefully emerged with the sporadic economically independent elderly populace (BKPAI Report, 2011). For 30 years, the world and Kerala have attained zero population growth (ZPG) rate, and India is gaining ‘population momentum’<sup>3</sup> towards this (Nair, 2010).

In this way, a rapid fertility transition took place at the global level in Asia than developed countries in the world, especially in the East and South East Asian countries like Japan, which has the oldest national population in the world, followed by Sweden and Italy (Ogawa et al., 2009; Bloom, 2011). Also, other East Asian countries like India experienced a fertility transition (Bloom, 2011), in which the state of Kerala was the first to undergo a rapid transition (Rajan et al., 2020; Nair, 2010). On the other hand, the OECD (1988) mentioned the declining trend of mortality as another reason for ageing in the world (Udhayakumar & Ilango, 2012), which is lower among women than men (Rahm & Tareque, 2009). Since 1950, India experienced ageing due to a 70 percent decline in Infant Mortality Rate (IMR) and the resultant increase in life expectancy by 4.5 years (Bloom, 2011). However, in Kerala, the total fertility rate (TFR) was well below the long-run replacement level of 2.1 children per woman against the national average of 2.7 children per woman and life expectancy at birth is 73 years (Bloom, 2011), which resembles the world Figure of 72.56 years (World Bank Data, 2018). Since the life expectancy of females is more than 70 years in Kerala, most women live 40 years with their children. These decades of joint survival make the distribution of care and time unaffordable for Keralites. (Gulathi & Rajan, 1999). It creates a “survivorship bias” in Kerala (Pal & Palacois, 2011; Nair, 2010), similar to the world (Permanyer & Scholl, 2019).

An important upshot of the demographic transition and ageing process is the elderly populace. Paul Wallace (1999) described “the greying population phenomenon as ‘Age Quake’”. World Population Ageing Report (WPAR, 2019) observes that most of the countries across the globe have accepted the chronological age of 65, except Africa, which considers 50- 65 years for an elderly populace. On the other side, the First World

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<sup>3</sup> Population momentum’ -The potential for population growth (or decline) that is inherent within a population’s age structure even when fertility is at a replacement level, mortality is constant, and net migration is zero (Rowland, Donald T: Demographic Methods and Concepts, 2003)

Assembly on Ageing (1982), namely “Vienna International Plan of Action on Ageing” and “United Nations International Conference on Ageing and Urbanization” (1991), defined the elderly populace as the population aged 60 years and above (Radha Devi et al., 2008; Gulati & Rajan, 1999). The Indian population census defined 60 years and above to denote the aged (Population Census, 2011). There exists a controversy between the chronological and economic calculation of the age fixation of an elderly person. The central government and other authorities consider age 60 as the retirement age from working life and provide a pension for social security (Visaria, 2001), though many are able to work after the age of sixty. The present research defines the elderly population as those aged 60 and above.

There has been an increase in the number and growth rate among the elderly populace throughout the years. Many economists have noticed and used the projected Figures to evaluate its impact on the economy and society. It has been estimated that the numbers are projected to grow to 324 million in 2050 (Help Age India, 2014; Reilly, 2007). Two-thirds (8 in 10) of the world’s older persons live in developing countries, where their numbers are growing faster than in developed countries (WPAR, 2017; William & Krakauer, 2012). In the case of developed countries, the ageing of the old population is more evident among the most developed countries, but ageing is heavily operating in the less developed countries (WPAR, 2017). In the world, the Asian continent represents the highest number of elderly populace (606 million). In the Asian continent, eastern and southeastern Asian countries are considered to significantly impact the ageing process (WPAR, 2019). Among the Asian countries, Japan had the highest proportion of the aged with 20.1 percent (Gulati & Rajan, 1999). According to a recent report, India is the most populated country of the world (State of World Population Report, 2023).

It is observed that the proportion of the elderly population in India has increased from 5.6 percent in 1961 to 8.6 percent in 2011. (Tripathi, 2014; Census of India, 2011; BKPAI, 2011; Visaria, 2001). In absolute numbers, there are 104 million elderly persons in India (Census, 2011), and UN (2013) observed that the number is expected to increase to 296.6 million, constituting 20 percent of the total population by 2050 (BKPAI, Kerala, 2011; Gulati & Rajan, 1999). Among the Indian states, Kerala has the most significant proportion of the elderly population, and the growth rate among the aged is increasing at

an increasing rate. The state of Kerala faces many challenges due to its colossal elderly population. In 1961, the elderly populace constituted 5.60 percent, which rose to 6.35 percent in 1991. In absolute numbers, while there were only 24 million elderly in 1961, there were 52.4 million in 1991 (Gulati & Rajan, 1999). Population projections predict that the elderly population in Kerala is expected to increase from 2.2 million in 1986 to 4.6 million in 2011 to 8.3 million in 2026 (Rajan, 1989). According to Census (2011), there are 7.4 million people above 60 in Kerala. Of these, 3.3 million are males, and 4.1 million are females (BKPAI- Kerala, 2011). In one fell swoop, “in some countries, the number of people aged 60–64 already exceeds the number of those aged 15–19” worldwide (UNPD, 2015). India was placed in this situation at the beginning of the 20th century. But, in Kerala, the rate of growth of the elderly population exceeds not only the growth rate of child population (0-14) but also the working population (15-64) (Economic Review, 2019).

## **B) Socio-Economic Status of Elderly Populace**

The elderly populace is a heterogeneous group, whose needs and problems vary according to their age, family background, health, economic status, living environment, and so on (Swaminathan, 1996). So Socio-economic status (SES) encompasses not only income but also educational attainment, occupational prestige, and subjective perceptions of social status and social class. Also, the quality-of-life attributes and opportunities afforded to people within society is a consistent predictor of a vast array of psychological outcomes (APA 7<sup>th</sup> ED., section 5.9). Kerala, often called as the God’s own country, holds a number of social groups (more than 40 in number) and each of them differ in their respective economic status based on their activities. The elderly populace has undergone social as well as economic hierarchy since birth in the land of Kerala as elsewhere. In the 21<sup>st</sup> century, an elderly person is forced to do their social as well as economic activities in their last spectrum of life cycle for getting support and care. The social status of elderly, mainly altered by gender differences and by other means, is defined in terms of religion, region, marital status, education, social level, health, migration, poverty, social dependency and technological dependency. Alternatively, their corresponding economic status is earmarked in terms of income, consumption, expenditure, saving- dissaving, investment, debt, tax payments- direct and indirect taxes,

asset, house type, land, employment activities, economic decision-making power, economic dependency and so on.

Demographers divide the elderly persons into three categories based on their age classification; viz. 60- 69 (young old) ,70-79 (middle -old), and age 80 and above (old -old) categories (Rajan et al., 2020). Majority of the elderly people fall into the young old category and relatively a smaller number of elderly is seen in the old- old category. However, a tremendous increase in the old - old category is expected in the near future in Kerala as well as the world than India (Rajan et. al., 2013). Its growth rate also mirrored the same pattern in the world data. It changed the structure of the care needed from children to the elderly, and created the necessity of increased old age care and support in Kerala.

During the second demographic transition, Kerala experienced unequal distribution in the colossal growth rate of genders across the populations. The old age sex ratio is in favour of men, except for two states,viz, Kerala and Haryana (Gulathi & Rajan, 1999). The sex ratio is in favour of men at the childhood ages, while the elderly female populace outnumbered males in all old age categories, especially among the old- old age group in Kerala. Both point to the enlarged existence of the old- old women category due to their long-life expectancy in Kerala.

In a patriarchal society, women come to own property with the deceased of their spouses/parents. The Kerala Women who are found living alone mainly include those women who may once have owned their homes with their husbands. Poverty is more acute for women with age because of predominant patriarchal societies where they lived (Lakshmanasamy, 2012). It resulted in vulnerability and marginalization of the elderly women for getting care and support.

Majority of elderly persons in Kerala belong to the religion Hinduism followed by Islam and Christianity (Census, 2011). De Jong (2011) explains that few accounts of Muslims in Central Kerala are described as a hybrid community of descendants of mixed unions of former Arabs and converts from the lowest Hindu castes. The Muslims of Kalamassery had little formal education, but they had assets, in particular, their houses and house plots were large; and migrated to the Gulf countries to make more money.

Aswathy (2017) discusses Kerala's tribal elderly who are unaware about their age as they experience a club sandwich or hanging generation. This is because the aged need to take care of their aged parents, grandchildren, and themselves, due to early marriage practices. They wish to hand over traditional trained methods of livelihood, culture, rituals, rites and folklore to the younger generation, who have migrated to modernity. Most of them are landless, ignorant, illiterate, and have inadequate income which creates poverty among them. Old age pension is not sufficient to meet their demands. They do not have time to spend with the peer group and many times borrow money from non -tribes which leads to exploitation and alienation of the tribal elderly. Their past and present jobs are entirely different. Children are not in contact with their aged parents. Aged grandparents are forced to work and take responsibilities that will affect their physical and psychological wellbeing. Aged provide education to their grandchildren. Health care has changed their traditional perspective to modernity. This creates debt among them. It also creates intergenerational conflict within the Kerala tribal population. Elderly from SC/ST families are more participating in the labour market. The SC/ST households received the lowest average yearly amount as remittances i.e. only Rs. 13,000 (Zachariah, 2016).

The Chronic Poverty Research Centre has proven that the elderly are likely to be vulnerable to chronic poverty (Rajan, 2004). Jamuna (1998) also reported that more than half of the elderly live in poverty and are dependent. Elderly living alone or with other elderly members have experienced more poverty, compared to those elderly living with non-elderly members in India (Srivastava & Mohanty, 2012).

Though married elderly couples are high as compared to other marital status groups in Kerala, the longevity of life for women raise the marginalized problem of widowhood compared to the widowers and adds to marginalisation of women. Later, when couples lost their faith in the institution of marriage and related customs, a group of divorced and separated women have emerged in Kerala. This led to the springing up of another marginalized group of elderly female headed households (FHH). The economic dependency/ independency of the elderly and the care and support received by them varies based on the different marital status of the elderly persons.

The wellbeing of the elderly is intimately linked to their education. Education apart from providing economic stability, also enables smooth adaptability towards the socio-economic transition in the society. Education is not a factor to indicate the activeness of elderly and most of them do more passive than active activities (Bardhan et al., 2014). In a comparison with the working age groups, the educational status is low for the oldest. However, the young old category is more educationally active in Kerala.

The World Health Organisation (WHO) dedicated its World Health Day in 2012 to ageing. The European Union (EU) designated 2012 as the year of “Active Ageing and Solidarity between Generations”. The United Nations (UN) General Assembly held a high-level meeting in September 2011 on preventing and controlling non-communicable diseases (NCDs), which is a threat to human health and the global economy that is strongly associated with ageing (Tripathi, 2014). Ogawa et. al. (2009) opines that there is a 4<sup>th</sup> epidemiological transition which delayed the degenerative diseases on account of improved medical facilities and increase in the cost of health care.

In the matter of health of the elderly populace in Kerala, it is observed that, as age increases, health decreases (James, 1994). Different dimensions of health like increased morbidity and declining mortality (Brunnett, 2001), Depression (Kauppinen, 2004), and cognitive decline (Wison, 2007) has been examined in the literature (see in Routray, S., 2017).

Prajna pani (2018) mentioned that 6 percent of the total mobile phone users in India are over 50 years and one percent among elderly are internet users. The elderly populace in Kerala is subject to high technological dependency which is calculated based on the technological knowledge, possession, usage and assistance needs of the elderly persons. The study observes that the elderly are technologically dependent on the members of social institutions in Kerala, even though states and NGOs provide a number of policies and programmes (Bardhan, 2015).

As much as elderly people are a segment of the society and probably weak, there is high, social dependency among them. Prakash (2004) points out that inadequate financial resources are a major problem of elderly. Thus, ageing has become a social challenge of the future. Also, vast resources will be required for the support, care, treatment and proper rehabilitation of the elderly populace (Gangadharan, 2005). As part of the national

policy, the government of Kerala disburses the old age pension, which is a ray of hope to most of the elderly and they depend on these pensions for their livelihood. But it is a reality that many are not covered under this umbrella and they are forced to depend upon the members of social institutions for getting the care and support. Exceptional cases of elderly persons who live alone independently are also seen and this can vary according to their health, wealth, positive attitude and desire to live.

Generally, it is a belief that more income is expected to provide more economic satisfaction. Rahm and Tareque (2009) mentioned the studies of Mason (2005) for the calculation of total income in gender terms. He finds that joint families for males and nuclear families for females provide economic satisfaction. Elderly have no independent income and their only source of help is their children (Chen, 1997). So far compared to the male elderly populace, elderly females do not get any income support from children due to the higher proportion of male headed households in our society. Also, as compared to the men, women's productive activities are carried out not in the formal economic sector. So financial security is enjoyed by the male than female elderly persons. It spectacles the gender inequality in the family and community life. Nandal et al. (1987) found that elderly in nuclear households had a feeling of helplessness because the aged are holding a burden of barely sustainable households in which every member contributes to family income. Sigh (2004) observes that most of the older people have no personal income. More than two-fifths of elderly population in India do not have any source of income. In the case of Kerala, it is calculated as 25 percent and 50 percent for elderly male and female respectively (BKPAI Report, 2011). Above all, greater longevity of life means that people have both more productive years and more years of suffering from NCDs, representing both economic contribution and economic cost (Tripathi, 2014). Help Age India (2014) defined that the money (income) of an elderly person is equal to "sum of past savings, current earnings, retired pension, and other types of pensions given by the government like old age pension, agriculture pension, etc.". Source of income can be divided into two general categories like factor income, which is earned by men and transfer income which is earned by women (Root & Tropmen, 1984). Income uncertainty effects differ from wealth effects in their direct test on precautionary saving behaviour (Lakshmanasamy, 2012). Rajan and Kumar (2003) prove that those elderly having no

substantial assets or a fairly good source of income and who are economically dependent find the attitude and behaviour of their family members unsatisfactory.

The awareness of investment and acquisition of assets differs across the different age groups. OECD (2005) remarked that at the age of 20 and above, people are unaware of investment in equities and bonds, general financial products, insurance, pensions, and taxes compared to the age 60 and above. Ogawa et al. (2009) observed that at the age of 60, the elderly hold two kinds of assets. One is an age-specific pattern of holding real assets, other is the financial assets like saving securities and investment opportunities. They found that the amount of public pension accumulated wealth is greater than that of real assets at a relatively early stage of retirement life, but later liquidation of real assets such as land and housing is crucial for every elderly person. Older persons focus on aspects of their living arrangements, property/financial management and ownership, etc. (for further details see Pal, 2007). Swaminathan et al. (2012) opines that a significant difference is seen in the amount and type of assets held by genders across the countries. In India, there are problems of earning from assets in old age (Pal, 2006). In contrast to the life cycle hypothesis, the wealth holdings of elderly households tend to increase with age” (Lakshmanasamy, 2012). A panel study by Alessie et. al. (1995) shows that a large number of 60 + people accumulate wealth and average households decumulate wealth. A person owning or inheriting assets in terms of land, plots, housing, jewels, savings, bonds and shares can generate their own source of income without involving much physical labour through rent, dividends and so on.

The assets not only generate income but also provide the elderly with a status and respectable position within the household. Around one-fourth and one-third of elderly persons do not own any sort of assets in India and Kerala respectively. Also, in the case of Kerala, asset ownership is higher among elderly men than elderly women except in the case of jewellery (BKPAI Report, 2011). Pant and Slack (1997) also noted the importance of wealth in the form of land to determine the status of the elderly in the family. Raut (1996) explains the role of parental wealth (Pal, 2006), which is the financial base of each asset holder especially for women. The increasing social security demands of the elderly person is visible due to 17 percent of women having a share in their spouse's property and 90 percent without independent income or property in Kerala (BKPAI

Report, 2011). Prakash (1989), Dreze, and Srinivasan (1995) remark that ownership of assets is strongly linked to women's marital status with a higher proportion of widowed women having immovable assets such as land and housing compared to married women. Unlike urban counterparts, much of the rural elderly population lacks financial assets or property and, hence, is susceptible to greater poverty and vulnerability (Pal & Palacois, 2011). Women elderly are financially weak, and men have liquid assets which are high among Christians and low among Hindus, but when approaching 80 years of age and above, both genders are financially weak (Goyal, 1997). Elderly women do not possess many assets. Yet they have some tangible assets like jewellery, which in effect is a dead investment. Most of the women also consider children as their asset. The male counterparts possess all economic assets like land and house because the titular rights of the land and house are being transferred to the male inheritors rather than the females. Also, after the death of the husband, it is transferred to the children, though he prepares a will of right to the wife (Zakariah, 2011). De Jong (2011) states that traditionally houses of Kerala were called 'Taravad', where the three generations of a family live together. 'Children are a real asset' and 'Children are the gift of God' are important idioms when preparations for well-being in old age are discussed. People who are more resourceful - socially, physically, psychologically, and financially are more engaged in pro-social or helping behaviours (Thoits & Hewitt, 2001) (Pandeys et al., 2017).

Ogawa et. al. (2009) talks about the decline in the household saving rate in Japan around 2000. It tends to increase the saving and dissaving rate of elderly masses in order to meet their future needs themselves. India as well as Kerala have tinged the same nature to an extent. Elderly households have precautionary saving motives to meet exigencies and uncertain income shocks (Lakshmanasamy, 2012; Leland, 1968). So, they accumulate and save for the purpose of liquidity at the time of financial crisis. Junji Kageyama (2003) by using the cross-country data, examined the effects on saving in the lifetime and confirmed that, there is a positive effect of an increase in life expectancy on various saving rates. With regard to saving for old age, 42 percent of the males and 32 percent of the females perceive saving as essential for the unproductive days in old age and such feeling is stronger among the literate ones in Kerala (James, 1994). Lakshmanasamy (2012) articulates that the saving rate of the elderly person is more than the saving rate of non- elderly households and he differentiates both saving and dissaving nature of

them, as 50 percent of savings and health care and food expenditure is considered to be dissaving. Davies (1981) and Hubbard et al. (1995) observed zero transfer life cycle model with life time uncertainty or life cycle model without bequest motives and explains uncertainty about future income and health expenditure, and shows low dissaving rate in the old age (Lakshmanasamy, 2012). In this way the author portrayed both the saving and dissaving culture of elderly populace in our society. The author divided the types of savings of the elderly into 8 and it includes; financial saving, physical saving, saving motive for consumption purposes, life- cycle savings, precautionary motive, saving for status and prestige motives, altruistic concerns and saving in the form of fixed assets. Hence, population aging may yield a second demographic dividend in the form of higher rates of saving and capital intensification of the economy (Mason, 2005). So Indian elderly are seen to increase saving to meet their requirements in old age (Sanitha et al, 2019). The same is observed in the case of elderly populace in Kerala. The individuals cannot deplete saving to zero at the time of death, which leads to intended accumulation. Also, it is used as an instrument to extract old age support services from children. Since death is uncertain, elderly households that saves for dissaving purpose in their later period of life will have to bequeath the accumulated assets to the next generation (Lakshmanasamy, 2012).

Ogawa et al. (2009) analysed the second demographic dividend or 'ageing with consumption and labour income' marked in Asian countries in the years 1999- 2001 based on UN 2004 (World Population Prospects, 2004). 'Elderly consumption' is a concept used in the economics of old age care to mean the final purchase of goods and services by aged individuals in the respective economies (Ogawa et al., 2009). Subramanyan and Deaton (1991) identified gender effects in elderly consumption patterns in India. Indian elderly consume more than they contribute, leading to drastically altered asset values and income trajectories. They will not outnumber the young for the next 4 decades. Hence ageing will not impede their economic growth (Bloom, 2011). In Kerala, the consumption patterns of the elderly population are explained by a group of gerontologists and economists (Rajan and James, 2007; Zaninotto et al., 2010; Sebastian & Sekhar, 2012). Lakshmanasamy (2012) observed that there is growth in aggregate spending by the elderly at the time of a decline in their labour productivity, which they make up with the help of public and private pensions or transfers. Strumpel. et al, (1972)

observes that the elderly are spending income rigidly for consumption, for getting care. Over the years, the requirements of the elderly are opposite to those of the youngsters and the elderly segments of consumers have been widened as people are enjoying longer and healthier lives (Urban & Star, 1991). Since the 1970's, changes in the consumption pattern of elderly in Kerala is visible mainly as consumer durables and luxury goods (Biju, 2004). Ashish Chandra and Karnitkar (2008) reveals that ageing can affect the value of life through an effect on planned life cycle consumption. Zakariah (2011) finds an association between the non-food consumption pattern (asset, ornament's etc.) of elderly women across their socio- economic status and suggests that the economic power of elderly women is underutilized in Kerala. If we bring it through gender equality lens, an unprecedented miracle in the economy can be observed.

Lee and Mason (2011) presented the international comparisons of labour income and aggregate consumption across developed, developing Asian and developing African countries. Their interesting findings include; labour income drops after age 60 in developed countries for various reasons including the incentives and opportunities provided by public sector pension programs. Population ageing in developed countries is particularly costly relative to developing countries because elderly individuals consume more and produce less and elderly consumption can be financed by various sources of non-labour income (Narayana, 2011). Hence, non-labour income and private transfers are dominant in elderly consumption. Ogawa et al. (2009) explains that Japan developed a 'corporate paternalism' due to unique lifetime employment practice and seniority- oriented wage system. Elderly labour force participation rate among men is 29 percent in Europe and 18 percent in the U.S.A in 2006. Population Reference Bureau (PRB, 2010) defines the elderly support ratio as "the number of working-age people between ages 15 to 64 divided by the number of persons 65 or older". In India it was 13 in 2010 which would decrease to 5 in 2050. The same change is noticed in the world as a whole and it is expected to decline from 9 to 4 (Mini, 2012). Kumar and Anand (2006) showed that nearly 90 percent of the total workforce is employed in the unorganized sector where no social and financial security is available after retirement. Sigh (2004) explains that unemployment adds financial backwardness to the life of elderly. The work participation rate among the elderly is around 40 percent and most of the 60-plus elderly are from rural areas and work in agriculture (Tripathi, 2014). The relatively high male

labour force participation could be due to having more financial responsibilities than women, even in the later part of their life (Sai et al., 2010). Most of the Indian elderly are working as self-employed or in informal sector jobs (Samordov, 1999; Chakraborty et al., 2015; Reddy, 2016). Sampath Kumar et al. (2010) analysed the re-employment status of elderly. The authors find out the reasons like health expenditure, interest, and good health additions, for the re-employment status of elderly persons. Also, majority of the re-employed are males and Hindus and more than half of elderly re-employed to the same job. Around 90 percent of the total elderly labour force is a part of the informal or unorganized economy (Srivastava & Mohanty, 2012; Narayana 2011) and benefits from public pension schemes are not adequate enough to meet their consumption needs (Narayana, 2011). Elderly work participation rate is lower (Guhan, 1993) as compared to the non-elderly labour force. But the growth rate is going upward as the elderly populace and their longevity of life is increasing and the resultant future requirements in our society is also changing.

There are different motives of investment by the elderly person. Some of them are done as an altruistic basis, while others are strategic for meeting the needs of their present and future requirements. Most of the time it is to satisfy their wish, which inspires them to live. Mainly before getting old the elderly spend / invest their physical capital (money) and human capital for satisfying the needs of their children and other family members. Lillard and Willis (1997) explains that it is mainly for the higher education and good health of their children, besides providing the basic needs. They remarked that this kind of financial transfers may include altruism of family members and returns to parental investment in education of young children (Pal, 2006). Sometimes it is treated as a strategic move in order to take care of them when they get old. When they are getting old, most of the elderly spend their retirement life to take care of the grandchildren in the absence of their children at home and are engaged with the household duties. Elderly females are found highly involved in the household chores than elderly males (BKPAI Report, 2011). Household chores are counted as the payment service as it is an altruistic duty of the elderly person at home (Pal, 2006). Above all, elderly are the wisdom bank of lifetime experience and knowledge which help the young generation to add to their journey of life. Likewise, an elderly person is an abundant resource of human capital. On the other hand, the elderly invest their accumulated wealth on land, house, jewellery,

bank deposits, share and bonds and so on for meeting the increasing health and household expenditure in the last spectrum of their life. In other words, these kinds of investments are used to receive support and care from the members of social institutions, especially from children. In this way, investment helps an elderly person to be an asset rather than burden.

Goldstein et al. (1960) studied the consumption pattern of the elderly. He found that the total amount spent by an aged in the family was constrained by income, as is the case of other age groups. Since the years of life are relatively short for the aged, it is difficult to borrow long term funds (debt) when compared with the youngsters. The elderly of Japan have two costs (medical and pension) in total elderly expenditure, which influenced the consumer price index (CPI). The government introduced reserve financing. But as the 65+ population increases, the reserve fund is reduced (Ogawa et al., 2009). Kotlikoff (1988) in his study on U.S found that 80 percent total asset transfers are intergenerational transfers and 5 percent are inter vivo's form against parent's demand for non- marketable filial services (Lakshmanasamy, 2012). Donations and gifts to charities and religious institutions are integral part of the growing religious beliefs. They also tend to contribute generously, in some cases though in small sums, to charities. Gifts, usually, take the form of small sums to grandchildren, grand nephews and nieces etc. Also expenditure on gifts and donations are determined by the level of income. Economic dependence or independence determines the amount spent in this category. As the elderly women progress in years data show that they spend less on gifts and donations. It is not because of the fact that they do not want to give such amounts, but to a greater degree, such gifts are not expected by those around them, once they are eighty plus. On the contrary, they get gifts and donations from others such as their children and grandchildren in Kerala (Zachariah, 2011).

During the 1960's economists began to focus attention on the economic decision making within the household (Becker, 1965) of an elderly person. The term 'economic dependence' is coined by the Pal (2006). Alwan et. al. (2007) observes that economic dependence and lack of income security have important implications on the health outcomes of the aged. Various studies have shown a strong correlation between income support by the elderly and health outcomes of the aged. Intuitively, there appears to be a

close link between income security and economic independence and the health outcomes of the aged, as the latter is always a function of the former (Tripathi, 2014).

### **C) Elderly's Bequest Motives, Bequeath and Inheritance Law**

Generally, an individual accumulates the human capital requirements mostly from the past generations and from the institutions formed for affirmative action. Altogether with physical capital, it acts as a wealth or assets when they get old. The studies regarding human capital are less as compared with the physical capital creation of the old. Becker (1964, 1993) linked the expenditure with the capital as human capital, because people cannot be separated from their knowledge, skills, health, or values in the way they can be separated from their financial and physical assets. Later in the twentieth century, human capital was defined as the aggregation of investments in such areas as education, health, on-job training and migration that enhance an individual's productivity in the labour market and also in non-market activities (Sharpe, 2011). Walker (2002) mentioned that the beauty of active ageing strategy is that it is good for everyone, for citizens of all ages as an ageing individual maximizes their potential and quality of life, through to society as a whole, by getting the best from human capital, which avoids intergenerational conflicts and creates a fair and more inclusive society. A middle-aged person invests two-thirds of their income upon the creation of human capital for their beloved children, expecting they will take care of them when they get old. De Jong (2011) in his study observed that all the elderly informants were dependent on the income of their children, in particular of sons, for their everyday needs, then daughters. For urban Indian households, physical and human capital formation is a two-way process. In one way, wealth is transferred from parents to children and on the other way, care and support are transferred from children to the parents (Lakshmanasamy, 2012).

By the beginning of this century, the need for the accumulation of physical capital in the life of elderly has become more prominent. The advancement of science and technology ensures long life expectancy and this urges them to have accumulated physical capital like land, house, income, jewellery and other valuable assets. In Japan, Ogawa et al. (2009) noticed that the fifty percent of decline in TFR leads to a shift of personal resource allocation away from child rearing and induced a rapid accumulation of physical capital.

Hence, the first demographic dividend, i.e., young specialized in utilization and the second, i.e., elderly specialize in capital accumulation; and both influence the steady growth path of the economy (Ogawa et al., 2009). Pandey et al. (2017) concludes that those who have more intellectual, physical and material resources are found to have more social capital. To add with this, Lakshmanasamy (2012) observed that, it is a repayment of implicit parental loans, where children took human- capital investment when they are young. In other words, the role of parental income or housing prices (Da vanzo & Chan, 1994). Sarmistha Pal (2006), finds that elderly co - residency with children is a social convention in India till today and Average Propensity to Consumption Expenditure (APCE) is higher for elderly household co- residing with children. But this expenditure has not been a case for availing old age insurance. Also lack of care, mainly for females and no spouse category was observed. And lack of health, wealth, or both in society with virtual absence of extra familial welfare institutions, which is the reverse of her primary analysis. Jellal and Wolff (2002) found that parents were more likely to help their children if they received bequests from their parents; who were their children's grandparents.

The increasing trend of the older population poses unprecedented challenges to the modern society; particularly concerning older adults' bequest motives (Chuan, 2015). James (1994) claimed that the prime means of subsistence of elderly populace is reported to be co-residence with children. Again, he stated that, the means of subsistence reported in Kerala elderly are current work, financial support by children, savings from the past work and pension, and so on. Heller (2007) summarizes the macroeconomic strategies to meet long run challenges of population ageing in the context of Asian economies including India. These strategies include increasing aggregate income, distributing income across generations, increasing the willingness of younger generations to support elderly individuals and creating political viability for institutional mechanisms chosen to intermediate intergenerational transfers. Therefore, wealth transfers or to leave a significant bequest to their children might be based on single bequest motive or mixed bequest motives (Scaife, & McDonald, 2012; Yin, 2011) like a combination of altruism model and exchange theory (Schwarz, 2006). Chuan (2015) found that older adults in Malaysia are more conforming to altruism, selfish life-cycle, and social norms and tradition models. He also discovered that financial satisfaction and resource transfers

play more roles in determining the bequest motives of older adults. Older adults with stronger financial satisfaction are more likely to receive time resource transfers from their children than financial assistance or vice versa. In general, there are three bequest clusters from older adults' bequest motives; indifferent norms bequest, authoritarian self-centred bequest and domineering philanthropic bequest. In addition, the effect of bequests is significant in an economic sense and it could act as a crucial component in policy prescriptions related to wealth, savings behaviour among older adults, retirement policies, taxation, charity and estate planning as well as promoting the goodwill of leaving inheritances while comprehending the bequest motives and distribution of older adults. Lastly, the findings might bring positive inputs for businesses towards older adults' bequest behaviour in Malaysia (Chuan, 2015).

De Jong (2011) in his study discerned that, to become the owner of a house, inheritance and dowry transactions played an important role in the Kerala society. In terms of inheritance, most Asian countries were skewed towards matrilineal principles and expressed very about the integrity of the family property (Platteau & Baland, 2001). In the post-independence period, the Hindu Succession Act was passed in 1956, to deal with successions (Pylee, 1979). It gave a woman full ownership in the property, inherited or acquired by her. De Jong (2005) points that women inherit property equally with men now. In certain cases, a son or a daughter who was better off even renounced his or her share in favour of a poorer sibling. This was also practiced among the Nair families in Kerala. Generally, sons inherit two thirds and daughters inherit one third of the property of the father. The property of the mother is equally divided among her children (Agnes, 2000). Though, as per the law all the children are to receive equal shares, it is often neglected. There is no uniform law of family and marriage for all religious groups. There is enormous social and cultural diversity and hence, the gap between law and custom exists within each religious group (Sonwat, 2001). Patriarchal families continue to be patrilineal and patrilocal; and the lineage is based on the father's family. The Hindu Code Bill of 1954-1956 (Pylee, 1979) has introduced a few changes in this system by allowing some share of the property to the daughter. According to Kureishi and Wakabayashi (2007), the easiest way for parents to attract their children to stay with them voluntarily was with the promise to transfer the house ownership to them through a will. Several studies found that the financial status of parents was positively related to time resource

transfers from children to parents (Alessie, et. al., 2014; Chong, et. al., 2011; Koh & MacDonald, 2006; Lillard & Willis, 1997) and negatively related to money transfers from children to parents (Chong, et. al., 2011). Culturally, it is already stipulated in Muslim law that women can own and bequeath property, and additionally there exists a marked normative idea that men should care for the well-being of their wife, sisters and daughters (Agnes, 2000). Gulathi and Rajan (1999) observed that ageing resulted in a rapid change in the social behaviour and institutions in Kerala, particularly for the care and well-being of the elderly. In the feudal system, the landless elderly families depended on wage and work power, where elderly control is less as compared to land owned family. A change to this system creates, traditionally three groups of family organizations based on decent work and inheritance. One is matrilineal system, where lineage and property were handed down through the female side of the family, who do not change their residence after marriage. A common line of authority and undivided inheritance make elderly women secure. Second one is patrilineal and the third, a combination of the two, where elderly men have the power and is the opposite of first system. Later, it changes to nuclear family and loss of multigenerational family life in Kerala.

Radha devi et. al. (2008) revealed that elderly persons might implicitly trade bequests for care from children or other beneficiaries, in return for assurance that care would be provided (can also see, Jones 1990). Ogawa et. al. (2009) Asian countries experience private (familial) transfers from children, and between households. OECD define the 'intra household transfers as the process by which resources (include income and consumption goods, tasks, leisure and investment in human capital) are allocated among individuals and outcome of many processes. Lakshmanasamy (2012) argued that intended transfers from parents to children to receive care are liquidity constrained because the transfer amount should be negatively related to the children transitory income but positively related to the permanent income. In return, majority expect food and medical support from children as these involve substantial spending. He concludes that, from parent to children is a voluntary transfer which influence their household saving. Gulathi and Rajan (1999) remarked that, elderly widows got very little or no support from their late husband's family. It was daughters or sisters who stood with them for the material and emotional support. It happened in the case of elderly widows who lived with economically inactive sons. Also, elderly widows without much access to

income are found totally dependent on the family members for support. Zachariah (2011), points out the facts and Figures based on the primary survey, and finds that 93 percent of the elderly provide time related services to children, 98 percent do not bargain with their children for transfer of wealth and 94 percent are willing to transfer their asset early to children. He finds that 88 percent children provide best care to their parents. Also, he added that the elderly women bequeath to religious and charitable institutions as her share of donations and gift vivo in Kerala. When husbands register house and land in the name of their wives it is an important strategy to provide her security and power in the old age. Also, it is mentioned that their fathers and brothers bestow them high dowries, and their mothers and siblings give them high share in inherited property if they are in a special vulnerable situation as widows. It is not advisable for a widow and house owner to divide property too early because that can lead to a situation of neglect (De Jong, 2011). He continues to argue that, the care and respect for elderly women, particularly widows, from kin and gender relationships resulted in creation of house ownership for women in the Muslim community. But owing property is less among them. Governmental and civil provisions play an enabling or supplementary role in it. Furthermore, Husbands often register the house in the name of the wife, mostly to record her share in the form of dowry received from members of her natal family. The dowry-share configurations make up ageing in this Muslim community an ambivalent experience of both hardships and pleasures in the 20<sup>th</sup> century (De Jong, 2011). Ogawa et. al. (2009) noted that in the earlier times, Europe abolished the requirements for providing care needed to the parents. But Japan took care of it through the passing of a civil code. Traditional civil code based on Confucian beliefs, stated that the head of the family to transfer the power to eldest son along with debt and duties as in the patrilocal household. Later, this was to incorporate the reshaped more modern social structure. The social structure of family organization that existed in Japan were of have holds with three generations which then registered a decline in the trend of multi-generational households, followed by an alarming rate of intensive nursing, constant age- sex distribution of female care givers, emergence of long-term care insurance and institutions, changing attitude of married women, increased demand of female labour and resultant negative informal old age care, and the government forced to after long term care for the elderly. In the matter of financial support from adult children to elderly parents (Kochar, 2000),

wealthy parents get greater assistance from children (Hoddinott, 1992). Singh and Narayana (2011) observed that the elderly use their asset income to finance substantial proportion of the expenditure for adults and children at the aggregate level. Jana et al. (2017) finds there is a monetary tie between the rural elderly and young households. The young transfer cash or income and the elderly transfer the land ownership. Pal (2006) reviewed that uncertainty of expected transfers from children (can also see, Jellal and Wolff, 2002). She discusses the aspects of the intergenerational transfers which involves both financial and non-financial exchanges of services between elderly parents and co-resident adult children of rural India, using the 52<sup>nd</sup> NSS data (Pal, 2006). Non-financial assistance / services are provided by children in old age, but more importantly, the reverse flow of services (both financial and non-financial) from elderly parents to their adult children are seen well into their old age (Pal, 2006).

#### **D) Bequest Expectations of Children of the Elderly Populace**

At present, on the one side, the elderly's children and other members of the social institutions expect different kinds of resource transfers in return for the services for the support and care rendered by them. While some others expect it without providing anything. On the other side, there are children who transfer money, care and support, and so on and are altruistic in nature.

Generally, each of the adult children's:

family resource transfers can be classified into two groups; which are time and financial resource transfers (Grundy & Henretta, 2006; Hayhoe & Stevenson, 2007; Kohli & Albertini, 2006; Mehdi & Laily, 2011). There are two different points of view among researchers regarding time and financial resource transfers from children to parents. Firstly, resource transfers between families were possibly due to altruistic preferences (Becker & Tomes, 1986; Caputo, 2002; Loury, 1981; Schwarz, 2006). Secondly, children's time resource transfers such as providing health care services, sharing of information, interaction, and exchanging opinions can be construed as a time-help repayment due to parental investment (Maruyama, & Nakamura, 2014; Leopold & Raab, 2011) (Chong S.C, 2015, P. 35).

Lakshmanasamy (2012) observed that 7.1 percent of adult children have financial transfers to their parents (Garry & Schoeni, 1997) and it is related to the parent's wealth (Lucas & Stark, 1985). On the other hand, elderly's financial transfers are used to relieve children from financial problems who are having credit burdens. Dake and Sharma (1987) in their study indicated that the headship in the households used to be transferred to the next eldest member after a certain age was attained (Lakshmanasamy, 2012). But, property transfer via bequest by elderly parents affects not only children's behaviour in supporting their parents, but also affect these children's family members on account of disputes and quarrels over these bequests (Jiang et. al., 2016).

The younger generation treated aged as a treasure house of care, knowledge and authority (Udhayakumar & Ilango, 2012). From the perspective of the younger generations, the elderly should 'do some job' in the household (De Jong, 2011). The study conducted by Bardhan et. al. (2014) noted that the older people are contributors of social care and child care for grandchildren in Kolkata. In this way, Yadava et al (1996) finds that economically active older adults are more favourably treated by their family members and is a well-recognized phenomenon in day-to-day life. Also, filial responsibility is conceptualized as a social attitude with regard to the duty of adult children to meet the needs of their ageing parents (Seel & Bach 1981, Walker et al 1990). Lakshmanasamy (2012) finds that 88 percent of children provide best care to their parents. In this regard, Madhava Rao (2006) opines that the old age care is not demanded one, it is acquired one (Udhayakumar & Ilango, 2012).

### **E) Life Cycle Deficit (LCD) of the Elderly Population**

Narayana (2011) Studied the nature and magnitude of public support of the elderly in India (IHDS, 2004-05) using the NTA model. Its objective was to recognize the co-existence of the private and public inter-generational transfers in India. Especially the role of private transfers in financing elderly consumption and studying the absence of public pensions. It is computed with life cycle deficit (LCD), based on labour income and consumption, and public age reallocations based on pension and asset-based reallocations. He finds that, firstly, the LCD of the elderly population is about 34 percent of the LCD of all ages or 3.74 percent of GNP. Net public transfers to the elderly

individuals are strongly negative. Asset-based allocations are financed by dissaving because the taxes paid by the elderly population substantially exceed the benefits they receive. They pay interest on previously accumulated public debt and pay off that debt. Secondly, the heavy burden on the elderly is partly attributable to India's tax system. Thirdly, the public transfer outflow of the elderly is reduced through intergenerational transfers to reduce the LCD of non-elderly dependent age groups. Finally, direct taxes, in general, and asset-based direct taxes, explain the most significant public transfer outflows for the elderly individuals. This indicates that the elderly individuals hold ownership of taxable assets. Indirect taxes are presumed to be a substantial outflow because of their largest share in total tax revenue. Ogawa et al. (2009) proclaimed that all these create a positive life cycle deficit beyond age 60. But its degree differs between the young old and the oldest old. Again, Asian countries experience inter vivo transfers of bequest among elderly consumption, income or finance. However, most countries oppose the character of a bequest nature. Narayana (2011) concludes that age groups with a deficit (surplus) support their surplus (deficit) consumption by generating age reallocation inflows (outflows). Ogawa et al. (2009) assert that national transfer accounts (NTA) measure economic flows across age groups. These flows arise from the dependent and independent population (consumer and producer). The reallocating of resources from surplus to deficit ages is expressed through public and private transfers (familial transfers or bequests), labour income, and income from assets (National Transfer Account Model). Ogawa et al. (2009) explains that familial transfers include transfers from other family members of the same or different households. Net transfers composed of bequest and inter vivo transfers. Also, private transfers we added in the familial one.

#### **F) Old Age Informal Care**

Socio-economic and political institutions, like family, government, and markets, are the sources of direct and indirect economic support systems for elderly individuals (Narayana, 2011). So, the old age informal caregivers are family, community, neighbourhood, and friends (kinship group). Altogether, they continue contributing to the psychological and social well-being of the elderly (Sonwat, 2001).

Among them, family is the prior one. In 2007, Ogawa et al. (2009) mentioned that the Japan government shifted the old age social security to families due to careless handling

of pension records and reduced national income. They defined the family support ratio related to the female population ages 40-59 to the total population 65-84, which is expected to decline. Aged societies in European countries are the reason for the migration from India, and Indian women are the traditional caregivers of the aged (Vaidyanathan, 2003; Bali, 1999). Bloom (2011) opines that aging is a challenge for India, given the reliance on private family networks to provide the elderly with care, companionship, and financial support. As Guhan (1993) mentioned earlier, informal familial care for the elderly is under strain and hence, state action for social security becomes essential.

In Kerala, as elsewhere in India, old age benefits are highly skewed in favouring government employees and workers in the organized employment sector. Other than this, the need for old-age care differs between the genders. James (1994) proved that preparation for old age was conceived concerning finance and health among males. In contrast, female participants indicated that a sound kith and kin relationship was another life-preparatory measure. Hence, caregiving is essential to family life (Prakash, 2001). The elderly may not be satisfied and happy due to their age boundaries (Pandeys et al., 2017). Women are the traditional caregivers in Indian families, especially in rural communities (Sharma, 2003; Chakrabarti, 1999). On the other hand, caregivers face many challenges in providing old-age care. Due to the longevity of life of females, one-third of the women lost their mothers before the birth of their first child, and half of them lost at least one of their parents, as revealed by Gulathi and Rajan (1999). Leela Gulati and Rajan (1999) remarked that young couples are torn between their responsibilities to their elders and the desire to educate and invest more in the development of their children. Increasingly, younger people migrate and remit funds for the support of the elderly, but rather loneliness and insufficient emotional support which is a matter of concern. Also, higher age at marriage and higher educational attainment have resulted in women achieving greater equality in the marriage partnership. Moreover, women are becoming more financially independent. Therefore, older family members are less able to enforce stringent social controls on the behaviour of young couples, especially on the women caregivers (Guhan, 1993). The unmet need for old-age care provision depends on different concepts, positive and negative. Economic support is given prime importance, but emotional support very much in need. The reduction in the ability as an economically

productive member, resulting exclusion from much of the social life. Thus, age is nonproductive and a burden (Routray, 2017).

The income and assets of the elderly ensure proper care for them. Udhayakumar and Ilango (2012) find that saving in banks or assets is more likely to receive proper care and support from caregivers. According to Nayar (2000), the first requirement for one in old age is to have control over one's income, be more independent, and be better taken care of than those with income controlled by their kin. Employment helps them to ensure their physical protection and regain love and respect in the family. The heterogeneous ageing population is debarred from economic wage entitlement (Routray, 2017). The National Aging Survey (NAS) indicates that with an increase in age, work participation among the elderly declines. There is a greater degree of disparity in work status between sexes, with more than half of the elderly males reported working as against 28 percent of females. Among the surveyed working elderly, around 80 percent have been contributing to household expenses (James, 1994). The elderly are withdrawn from the labour market, voluntarily or involuntarily, implying falling income and depreciation of assets, combined with rising health expenditure. "In India, where over 90 percent of the total workforce is employed in the informal sector, social security offered by pension schemes is only available to the 10 percent retiring from the organized sector" (Anand & Kumar, 2014, p.19). Consequently, their chances of being dependent on others rise with age. There is a sudden fall in income once a person retires or withdraws from the labour force. Formal retirement is associated with the organized sector in India. However, even in the unorganized sector, which is growing phenomenally, there is a withdrawal for various reasons, with morbidity being the most important (Tripathi, 2014).

Health expenditure is high among the elderly populace in Kerala as it is the age of diseases, mainly NCD and CD. Health expenditure, both, public and private is important for elderly individuals. In particular, the share of private health expenditure (14.15 percent) is higher than public health expenditure (8.90 percent). It is not separated from durability and food expenditure (Narayana, 2011). Among Asian countries, total health spending and public spending on health increased per capita for people aged 60 and above (holding constant 2009 income per capita). If these relationships hold in the years ahead, as the World Bank (2009 & 2050) mentioned, population projections in average

public spending on health per head is expected to increase (Bloom et al., 2015). These growing elderly population will place an enormous burden on the health care infrastructure, as there is a sharp rise in out-of-pocket expenditure of households on health in India (Tripathi & Kumar, 2010). Privatization and mismatched expenditure in the health sector have led to mounting treatment costs (Tripathi, 2014). Health insurance at an early age has been put forward as a solution by the data sources, viz, NFHS, NSSO, on health outcomes of the population. The National Family Health Survey (NFHS) mainly deals with adult men and women and family health issues. The other comprises the 42nd, 52nd, and 60th rounds of the NSSO, the WHO's Study on Global Ageing and Adult Health (SAGE), which has completed two rounds. These data sets are precious, but their utilization has been very limited in the Indian context. Kerala has also stood out among Indian states for its exceptional record in reducing poverty, whether we use the headcount or human poverty index (Drèze & Sen, 2002). Pal and Palacios (2011) studied the elderly poverty rate in India, which is higher than the non-elderly population in Kerala except in other states, based on the 52nd and 60th rounds of NSSO. The study suggests that households with targeted elderly members do not necessarily have higher poverty rates than non-elderly households. Further analysis suggests that there is an expenditure-mortality link so that the poor tend to die younger and are, therefore, under represented among those aged 60 in most states. Also, it analyses inter-state disparity in elderly poverty rates. Results of the analysis highlight that except in Kerala and, to some extent, Maharashtra and Tamil Nadu, there is no evidence that households with elderly members are more likely to be poorer than those with non-elderly members. The authors explain the poverty-mortality link as mortality will be higher and poverty will be lower amount.

Information and Communications Technology (ICT) facilitates the economic development of the poor and marginalized by improving their access to education, health care, and financial services (Waverman et al., 2005; O'Riain, 2004; Steinmuller, 2001). The technological divide (Binstock, 2006) created a fundamental gap between the generations, especially among the elderly generation. Shilpa (2010) reviewed that the quality of care is increasing when senior citizens adopt new technology (Czaja et al., 2015). Maintaining independence is the priority of the aged. The factors determining adopting new technology are attitude, expectation, technology usage, and desire to maintain independence. It is influenced by gender, age, health status, education,

occupation, socio-economic status, life history, social environment, exposure and comfort level to new technology, past experiences, race, ethnicity, and expense to use it. The study finds that new technology can be beneficial than traditional methods of care (Shilpa, 2010). Chakrabarti et al. (2015) find that ICT will help them in the future, especially in health care (telecare), and technology can assist with their normal daily activities when they are alone at home. ICT helps to prevent the aged communities soon by delivering health and social care (Chakrabarti et al., 2015). Social media aims to connect generations through the community of active elders. At present, digital literacy and connectedness are essential for life skills. Moreover, the image of the elderly as technologically weak by the young generation is mainly due to the elderly being scared to use technology, though they are knowledge providers to the younger generation (Bardhan et al., 2014). The authors find out that providing social media platforms via ICT will empower the elderly in society. ICT elderly users are more productively active than the non-users or it is another way of social inclusion (Bardhan et al., 2014). The first HDR (1990) highlighted that a country's income does not automatically produce human well-being if measured by indicators of quality of life such as knowledge and a long and healthy life (Joseph, 2010). Nandal et al. (1987) found that most elderly suffer from diseases (Tripathi, 2014). Dandekar (1996) revealed that about five percent of old persons in rural and urban India were physically immobile. By 2030, the old aged will bear nearly half of the total disease burden in India (Chatterji et al., 2008).

In Kerala, health care for the aged population is considered one of the biggest challenges in the next millennium (Shanmukhadas, 1999). Some common health problems among the elderly are diabetes, hypertension, cardiovascular problems, gastrointestinal problems, kidney problems, and arthritis (Sreelakshmi, 2005). Udhayakumar and Ilango (2012) find that Most of the elderly are illiterate and need care. Kumar's (1996) study showed that the traditional value system of taking care of the elderly by the family and younger generations continues to persist in the country, though demographic transition and cultural norms appear to be the same in the two demographically divergent states. Udhayakumar and Ilango (2012) find that intense cultural pressure makes families take care of the elderly. James (1994) observes that the rural male elderly seem to be quite frustrated with the breaking down the joint family system. The rural elderly are against the chronological cut-off point of age 60 for treating one as old. 'For us, only one

retirement, not from work but from this world,' says them. The wealthy urban elites strongly felt that emotional suffering is the prime problem at later ages because they lose most of their near and dear ones, friends, and close associates' day by day. Unlike their urban counterparts, many rural elderly lack financial assets and property (Pal, 2006). Jana et al. (2017) find that rural elderly households keep social networks with neighbours, kin, children, and friends as their survival strategy due to their ignorance and illiteracy. Elderly households keep ties with children inside the village, outside the caste, and vice versa. Inside the village, neighbours give them much support. There is also a growing migration trend from rural to urban areas, leaving many older people without familial support (HelpAge India, 2009), which leaves many rural elderly uncared.

The family has been the traditional social institution for the support and care of the elderly. In ancient India, the elderly enjoyed care and had a high status as decision-makers in the joint family system. The concept of living arrangement refers to the familial system of support and care for the elderly (Rajan & Kumar, 2003). Sonwat (2001) states that the family has been recognized as a basic unit of society and is a link between the individual and the community. The structure of the family continues to be patriarchal. There is definitely a change in the basic system of the family, especially in the role of elderly persons. A relative increase is noticed in divorce cases in urban areas. The family in India is often understood as an ideal homogenous unit with solid coping mechanisms. It is an essential, cohesive, and integral unit of the larger social systems. Most Hindu castes practice the patrilineal family system, although in the southwestern state of Kerala, the Nair's and a few other castes practice, by tradition, the matrilineal family system. Each community has its laws in maintenance, inheritance, and succession, which cover personal relations and family practices. Family may be broadly be defined as a unit of two or more persons united by marriage, blood, adoption, or consensual union, generally consulting a single household, interacting and communicating with each other (Desai, 1994). Patriarchal structure – roles, responsibility, control, and distribution of resources within the family are strictly determined by age, gender, and generation (Sonwat, 2001). In India, elderly people live with their families, and family is the most essential supporting institution for elderly people in their advanced age (Gupta, 2009; Sebastian & Sekhar, 2012; Bloom et al., 2011). James (1994) pointed out that there is no alternative to family to solve the problems of the elder. Nandal et al. (1987) found that the elderly

in the nuclear households felt helpless. Shah (1993) found that satisfactory intra-family relations of urban elderly were somewhat higher among widows than widowers and somewhat lower among those living in joint families compared with those living in nuclear families. The elders in nuclear families lack informal care and need proper care and support due to industrialization and urbanization (Udhayakumar & Ilango, 2012). In the Indian scenario, the problems of the elderly, as remarked by (Sarala & Kusuma, 2003), are the beginning of the degeneration of the joint family system and the dislocation of cultural and familial bonds. James (1994) mention about Krishna Kumara point to be noted that the main problem of the elderly is loneliness, which is associated with economic problems. Gulathi and Rajan (1999) assert that marital status is prime for the family care and support of an elderly female. Because, in a joint family, she is discriminated and seldom receives respect and care from the family. The currently married status reduces the probability of the elderly's co-residence with children, and having more children increases the chances of co-residence (see Rajan & Kumar, 2003). The care and respect for elderly women, particularly widows, result from kin and gender relationships with a strong emphasis on creating house ownership for women in the Muslim community (De Jong, 2011).

Traditionally, Kerala has a joint family system, and usually, the elderly stay with their adult children. This traditional pattern of living arrangement places the responsibility for the care of elderly members (Gulati & Rajan, 1999) on the adult children. Such a living arrangement usually provides the elderly with emotional and economic support (Rajan & Kumar, 2003). James (1994) reported that ageing is a natural and blessing phenomenon. The need of the hour is to educate children from a very young age to respect and honour old people. According to Lakshmi N Menon, the former Minister of State for External Affairs. Gender determines children's provision of support to their parents (Jiang et al., 2016). James (1994) says the parents proclaimed that they benefit more from their daughters than sons and would like to stay with their daughters in old age, even in a son-preferred traditional rural society of India. The younger generation's decline in respect towards the elderly is evident (Rajan, 2018). Most people prefer to stay with their children or family members when they are old (Nandal et al., 1987). James (1994) exclaimed that 'children are the main support in old age,' with a preference to stay with sons rather than daughters. However, elderly people have bitter experiences in living

with children due to loneliness. Some of the participants boldly proclaimed that they get more benefits from daughters than sons, though they spend more money on sons compared to daughters. In the family, rural male elderly people are informed that they have done enough for their children, but they are not reciprocated with any benefits. Normatively, the eldest or the youngest son has the task of caring for the elderly parents in India (Dube, 1998, p. 91), who has the right to inherit the house (De Jong, 2011). He finds that 88 percent of children provide the best care to their parents (Lakshmanasamy, 2012). He finds that by keeping some traditional values, we can protect the elderly in the future, but if it is left to the market forces, it will worsen the situation soon (Tripathi, 2014). The insignificant relationship between age, monthly income, number of elders, and quality of informal care received by the elders in the families is also observed (Udhayakumar & Ilango, 2012). Dependent elderly persons who are members of clubs often meet their friends and relatives and often talk with their neighbours, declaring a higher satisfaction level than the rest (Mini, 2012). Peer group participation in urban India in old age homes (can also see Sugan Bhatia, 2008). The National Sample Survey (1991) found loneliness to be one of the major problems among the aged in India. Their resilience depends upon their ability to adapt to stressful events. It is to maintain positive self-esteem and self-efficacy (Pandeys et al., 2017; Kobasa et al., 1982). Personality is the primary factor determining wellbeing (Dubey, 2011). Spiritual reminiscence is another component of well-being navigating the latter stages of life's journey. It is also observed that altruism and spirituality are more positive among the elderly living with their families than in old age homes (Pandeys et al., 2017).

### **G) Elderly Population and Formal Old Age Care**

The formal care providers of the elderly populace are institutional caregivers like the government, NGOs, private ownership companies, and individuals. Tennstedt et al. (1989) says that the formal care is a substitution when the hierarchical model of care is not available, which is popular in the help-seeking process among the elderly. They are the secondary caregivers to supplement the primary ones (Udhayakumar & Ilango, 2012).

The government is the authoritative institutional caregiver of old age. Since the mid-1990s, many developing countries in Asia, Africa, and Latin America have adopted social pensions for the elderly as an integral part of poverty alleviation programs (Pal & Palacois, 2011). In Japan, Ogawa et al. (2009) depicted the trend of increase in public transfers and slight decline of private transfers from the productive population to the elderly. This means that the elderly depend on the government more than familial transfers, because of the unclear pattern of asset reallocation between the first (working age) and second (elderly) demographic dividends. The elderly get a positive asset reallocation, where people receive returns from investing their assets. However, a negative for young people is when they invest in public facilities but do not get any proportional returns. But at the beginning of the 21st era, the wind blew reversely, resulting in the return of elderly care to the hands of family.

Since 1995, cash transfers to the poor elderly or 'social pensions' have been one of the most important anti-poverty programmes for the older people in India. In 2007, the benefits provided by the central government would be more than doubled from 75 (about \$2) to 200 rupees (about \$5) per month (Pal & Palacois, 2011). India's public support for elderly individuals takes several forms. First, pension payments for retired government employees in the Central and state governments, including defence personnel. Second, it contributes to the social security schemes of employees in the public sector enterprises and unorganized sectors. Third, expenditure on social security and welfare includes old age pensions for civilians and programs of affirmative action for socially backward and economically weaker sections of society through NOAPS, the National Family Benefit Scheme, the National Maternity Benefit Scheme, and the Annapurna Scheme. The size and coverage of direct public expenditure on aged people are negligible in India (Narayana, 2011). In more developed countries, social security provision by the state is an essential part of their living standards (Kulkarni et al., 2014). It is based on the monographic study of Leela Gulati. In 1985-86, out of 1.9 million agricultural workers in Kerala, nearly 0.3 million or 15 percent benefited from old-age pensions, indicating, in fact, more than complete coverage of the likely proportion of the elderly in this occupational group. In 1987, the quantum of an agricultural worker's monthly old age pension was Rs 60 (Guhan, 1993).

State governments would be asked to provide an additional 200 rupees, bringing the total to about 8.5 percent of the rural poverty line (Pal & Palacois, 2011). The state of Kerala offered loans to people with limited economic means through the municipality. This was part of its housing policy since the 1970s, after the land reforms of the 1960s (De Jong, 2011). Social pensions differ across the ages and genders (Pal & Palacois, 2011). James (1994) discriminates against providing pensions only to those widows who have no sons. Jana et al. (2017) find that rural elderly households are unaware of formal help as they are ignorant and illiterate. UN (1986) asserts that factors of changing values have mined the position of the elderly, growing individualism, a smaller number of children, the migration of the young to cities in search of employment, housing shortages in urban areas, the increasing participation of women in the labour market, and the devolution of the knowledge and experience of the elderly (Ambika & Lakshmi, 2018). Gulathi and Rajan (1999) assert that traditionally, there are no legal requirements to care for the elderly. Inclusive social security encompasses individuals' and groups' discursive, ideational, and practical efforts to overcome insecurities related to basic needs in times of personal crises such as unemployment, illness, or old age (Von Benda-Beckmann, 2004). This approach considers that social security can only be achieved through the conversion of economic resources in social interactions and that receivers of provisions can simultaneously act as givers of (other) provisions. 'Shifting circles of support' in South Asia (Palriwala & Risseeuw, 1996; Risseeuw & Ganesh, 1998).

In addition to the government provisions, several NGOs provide free health care, technological care, food and nutrition, communication, and so on. The largest NGO in this field is Help Age International. Certain basic healthcare facilities were provided for free by a local Christian NGO (De Jong, 2011). The NGOs also focus on their concept of ageing healthy ageing to provide for their unmet needs and wants. Private ownership companies and individuals preferred to provide old-age care. Community well-being refers to an optimal quality of healthy community life, which is the ultimate goal of all the various processes and strategies endeavouring to meet the needs of people living together in communities. It benefits the elderly by enhancing socialization, stimulating learning, increasing emotional support, improve health. The reasons for enhancing community well-being are the elderly and youth as a resource, generation gap, and care

gap explained by (Chandha & Malik, 2017). Informal or community care is a normative or voluntary interpersonal association (Litwin & Auslander, 1990).

To conclude, the inadequate provision of social security for the elderly has left the majority without any economic support and the resultant need to continue working in their old age (Reddy, 2016). Maintaining independence is the priority of the aged. The economic well-being of the elderly is the summation of their monetary sources (income), nonmonetary sources (one's ability to perform tasks that generate earnings), and their economic condition at present (Rahm & Tareque, 2009). Hence, the Elderly are not a burden, and caring for them is a social obligation (Suresh, 2010).

Several economists and demographers explain the Linkages between Informal and Formal Care of the elderly. Kerala has the maximum number of old age homes in the country. However, the elderly prefer that their family care for them during old age (Alam et al., 2012). Chapel and Blandford (1991) stated that the relationship between informal and formal elderly care is like substitution and complementarily (Udhayakumar & Ilango, 2012). Hierarchical substitution is the spouse as the primary caregiver, then unmarried daughters, married daughters, sons, close kin, and friends as supportive helpers (Cantor, 1983). Kerala is an example for the other states to follow in the country. Some features of Kerala's social security system are worth mentioning. Remove the creamy layer from the total number, and the policies should aim mainly at economically poor sections, among them opined by Alaka Basu about the magnitude of elderly pension (James, 1994). James (1994) suggested that the government of India should introduce an identity card for the elderly to be 'part of the social security system. The Census of India should seriously consider preparing special tables for aged persons as they do for scheduled castes and tribes. As of 1991, India has 54 million old people, and they need special care like scheduled castes and tribes. Moreover, an income tax exemption exists for those who stay with the elderly. Udhayakumar and Ilango (2012) recommended giving training to the youth and geriatric care included in the curriculum of schools. A legal provision allows the old person to claim maintenance from his/her children if he/she has no resources of his/her own (Section 125 of the Code of Criminal Procedure, 1973, as cited in Diwan & Kumar, 1984). However, few parents go to court to claim maintenance from their children. The Constitution of India recognizes the duty

of the State towards the elderly. “The State shall, within the limits of economic capacity and development, make effective provision for securing the right to work, to education, and public assistance in case of unemployment, old age, sickness, and disablement and other cases of undeserved want” (Constitution of India, Article 41, as cited in Pylee, 1979, p. 471).

Pal (2006) Suggests that co residence with children cannot be regarded as sufficient means of old age insurance. In particular, these results highlight the lack of care for disadvantaged elderly persons who are older, have the wrong gender (i.e., female), have no spouse, and lack health, wealth, or both in a society with the virtual absence of extra-familial welfare institutions. The elderly may not be satisfied and happy due to their age foundations (Pandeys et al., 2017). Older women are more vulnerable in the matter of the right of ownership of property. Also, older men are more vulnerable in social networks, utilizing their skills and experience, and are forced to accept and live in financially insufficient conditions (Routray, 2017). Public policy has not considered the living arrangements of elders, which is an essential determinant of their health status. Widowhood is a significant factor contributing to the vulnerability of elderly women. (Tripathi, 2014). It has been found that elderly females are more abused than males (Dudley, 1983). Pagelow (1981, p.437) defined family violence as “any act of commission or commission by family members and any condition resulting from such acts and inaction which deprive other family members of equal rights and opportunities and interfere with their optimal development and freedom of choice.” One among them is elderly abuse (Sonwat, 2001). The 'support given to the elderly' and 'taking care of the elderly' are two different concepts. While support for the elderly is defined as providing financial assistance (pensions and social security), care is defined as extending emotional support, which can be provided only by family members or those with whom the elderly live. Although the nature of support and care are defined differently, both are essential for the well-being of the elderly (Rajan & Kumar, 2003).

Ambika and Lakshmi (2018) explain the economic, social, and psychological well-being of the elderly in India. Its social and psychological well-being is higher in females than males because of their high socializing behaviour and adjusting capabilities. They found a significant difference between different kinds of well-being: males are good at physical

and economic well-being, and females are good at social and psychological well-being. Also, those aged with family and economically independent are better off than those alone and dependent on their well-being; at the same time, those aged at home get more well-being than those in old age homes. Personality significantly determines well-being (Pandeys et al., 2017). Problems with ADL were closely related to subjective well-being, gender, and social support, apart from economic variables and age (Tripathi, 2014; Prakash, 2013).

#### **H) Economic Independence and the Elderly Populace**

In the earlier time, the colossal growth of the elderly population was considered as a debt to the economy due to increased out pocket expenditure for care and support in the dissaving period of their life (Loutfi, 2018; State Finance of Kerala, 2017, P.25). Later, WHO (2002) developed the concept of “active ageing” which gave a positive outlook to the ageing problem. It was measured in terms of health, participation and security. The Active Ageing Index (AAI) scored the highest value in Kerala in southern India (Kaushik, 2011). This positive outlook paved the way for the present study of economic dependence and independence of the elderly population in the 21<sup>st</sup> century in Kerala.

In the former era, the incidence of the elderly population was measured through median age, index of ageing, and old age dependency ratio (OADR) (World Population Ageing Report, 2019). Formerly, the emergence of the elderly populace weighed through the colossal growth rate of median age (Nair, 2010), considered the next generation of the elderly populace in the upcoming years. Then, the demographers calculated it using the ageing index, the proportion of persons aged 60 years and above per hundred persons under age 15. India’s rank was 94th in terms of the world's ageing index. It will be 1.88 times more extensive in 2025 and more than four times more prominent in 2050 compared to 2007 (Narayana, 2011). Specifically, Kerala is grouped into the faster ageing index group among the Indian states (Chandran, 2020). In 2008, the United Nations (UN) defined the Old Age Dependency Ratio (OADR), as the ratio of the population above 60 years of age to the population in working age (15 to 59 years). It is 32 for India, projected to increase to more than double (33.9 percent) in 2050. The rising dependency ratio means that a more significant percentage of the aged depend on others for their consumption needs. For the elderly, an increase in the crime rate leads to

increased insecurity and, in turn, structural dependency (Routry, 2017). In Kerala, the OADR shows an enlarged path of progress. At the same time, the young age dependency ratio has gone down the descent path due to the colossal growth rate of the elderly populace, outdoing the working-age and children age groups (Population Census, 2011). In the Posterior era, the economy developed a new measure of ageing, Economic OADR, under consideration of the importance of the concept in the economy. A group of economically independent elderly people emerged in the world, which will continue in the future (WPA, 2019). Globally, forty percent (40 percent) of the elderly are now living independently. This is more common in developed countries (United Nations, 2013). ILO (2008) claims that Compared to South Asian countries like Bangladesh, Pakistan and Nepal, India has a lower economic dependency on the elderly. Rajan (2005 and 2006) says that 69.4 percent of the population is economically dependent because of poverty and insufficient income security (Mini, 2012). This means that the other 30.6 percent of the elderly are economically independent in a state like Kerala. As expected, more women (69 percent) than men are dependent on others economically (39 percent). Only 10 percent of the elderly women and 23 percent of the elderly men are economically independent in Kerala (BKPAI, 2011).

Economic studies on independent elderly are scarce in Kerala. As the decades passed, the colossal increase in the elderly population was considered an asset at the beginning of the 21st century due to the emergence of an economically independent elderly population. At present, the increased number of elderly people is considered to be an asset in many countries in the world. Economists and demographers have proven this fact in many of their studies. Ogawa et al. (2009) explains that in earlier times, Japan considered the elderly to be in debt but are currently an asset for economic growth. Nayar (2000) found that the old want to be economically independent and wish to provide resources and social insurance rather than burden their children. Also, Rita Rani (2004) points out that economically independent grandparents have good relations with grandchildren as they are expected to fulfil the demands of grandchildren. In India, Bandhyopadhyay and Mandal (2014) prove that the elderly are not a burden or issue; instead, the elderly are an asset to the economy. Also, in the case of Kerala, the economically independent elderly population played a substantial role in the financial decision-making of families, thereby bringing economic growth (BKPAI, 2011).

The elderly are assets in terms of per capita income (PCI) and contributes on the economic growth of Kerala. Kerala is an economy with a high development pattern with control over the social sectors. Compared to the other states of India, Kerala exhibits a paradox of high social development, reflect as high life expectancy, high sex ratio, high literacy, low IMR and low birth rate, as against relatively low economic performance (Joseph, 2010). Since 1950, population economists have noticed the ageing phenomenon with low economic growth in terms of PCI in Kerala's economy. Later, in the mid-60s, India has stagnant growth against Kerala's lower growth due to increased population growth, especially the growth of the ageing population. However, with the decline in population growth (Guhan, 1993) and the increase in the elderly, Kerala is out of danger of a low growth rate in the 1970s. This period is remarked for migration (mobility), one of the upshots of ageing, which leads to a reduction in PCI consumption in rural areas and an increase in saving and export rates in the economy. It tinged the way of incremental economic growth due to ageing in Kerala. The post-reform period it marked a negative growth with a steep decline in population growth with increased elderly growth and low-wage category employment (Guhan, 1993). In 1991, evident with economic reforms of liberalisation, privatisation, and globalisation (LPG), Kerala's PCI was more significant than the national growth rate, owing to the sharp decline of both the population and the elderly growth rate. This continued with an unprecedented increase in the elderly population at the end of the 20th century and the beginning of the 21st century. It is to be noticed that the concept of an economically independent elderly population paved the way for economic growth surplus in Kerala. Again, there is the paradox of 'missing elderly' in the Kerala economy. Earlier n Kerala, the poverty rate was high compared to the other Indian states, as the proportion of elderly is high. However, from the 1970s onwards, there was a high remittance from migrants, which shows the reduction in the poverty of households in Kerala, particularly of the elderly households. This is the paradox of 'missing elderly', where the elderly are missed in the poverty ratio in Kerala (Pal & Palacios, 2011). In this manner, economic growth is abrupt with the ageing populace.

Ageing is the result of demographic transition in the economy. One of the critical linkages between demographic transformations and economic growth is the role of demographic dividends in economic development (Mason & Lee, 2005). The elderly are

called the 'second demographic dividend' (Ogawa et al., 2009). The demographic dividend is defined by the United Nations Population Fund (UNFPA, 2016) "as the economic growth potential that can result from shifts in a population's age structure, mainly when the share of the working-age population is larger than the share of the non-working population". The first demographic dividend is the working-age population in the economy, which is inherently transitory (Mason, 2005). So, the second demographic dividend (not transitional in nature, opined by Mason) arises from the increase in adult longevity, which causes individuals to save more as preparation for old age. This increase in saving can thus contribute to capital accumulation and economic growth. In East Asia's high-performing economies, ageing provides a powerful incentive to accumulate wealth (Ogawa et al., 2009). Its presence is seen in the Kerala economy (Economic Reviews, 2010-2019). Generally, the second demographic dividend results from 'the survivorship bias (Pal & Palacios, 2011) of the Kerala's elderly population. This is because of the long-life expectancy, higher growth rate of the elderly population, lack of family care and support, and weak public transfers, which resulted in the accumulation of wealth for meeting the expected high consumption expenditure by the elderly. As the demographic dividend is directly inference to the per capita income, it direct by contributes to the economic growth of a state (Mason, 2005). Hence, at the beginning of the 21st century, the elderly are considered an asset instead of a burden in developed economies, including the Kerala economy.

Employment opportunities groom the elderly as assets. James (1994) noticed that most workers among the elderly (90 percent) work in the agricultural sector, where the concept of retirement is even unheard of. The work participation of the elderly was the highest in Madhya Pradesh and the lowest in Kerala. The initial status of a poor agrarian society (Joseph, 2010). Later, old people in increasing proportion, coupled with declining trend of family care and economic support for the elderly (Gulati & Rajan, 1999; Rajan & Kumar, 2003; Pal & Palacios, 2011) resulted in the treatment of elderly as a burden (Kaur et al., 2015). There are changes in Kerala's economy, which have led to a structural transformation, giving it a non-agrarian character in income and employment (Kannan & Raveendran, 2012). The elderly have to continue working in their old age when the older generation loses the support of their children (Sonawat, 2001). Also, the amount provided by the social security schemes is too small to meet the needs and consumption

expenditure of the elderly, and the coverage of the schemes has been modest (Narayana, 2011). They are forced to work for their unmet needs (BKPAI, 2011). Once they stop working, they become dependent on their children or relatives (Sanitha et al., 2019). Also, the probability of participating in the labour force decreased significantly with increasing age (Sanghi et al., 2015). Sanitha et al. (2019) studied the elderly labour force participation rate (LFPR) of Kerala, derived from the NSSO data from 1983-2012, and found that the elderly LFPR is high in Kerala compared to other states of India, embarked on structural transformation from agriculture to non-agriculture (service sector), where less amount of physical work is needed. However, it is less than the national average. It is determined by factors like lack of social security, poverty, change in the family structure, urbanisation, migration, longevity of life, rate of unemployment and so on. The study assumes that the states which are turning to an elderly society will have higher elderly LFPR, and the elderly LFPR will decline with an improved level of economic development. The majority of the elderly are self-employed. Among elderly females, 80 percent are out of the labour force. They are dependent on their spouse or children. However, in the case of the 60+ age group, three of the male elderly are still in the labour force. They may be working to supplement family income or to make themselves independent. It consists of the economically active population in a particular age group as a percentage of that same age group (United Nations, 2013). In industrialised nations, the rise in the ratio of elderly to those in the workforce will be particularly steep and begin at a higher level (Bloom et al., 2015). The elderly are considered an asset to the Kerala economy.

The elderly headed household (HH), especially the emerging group of elderly females headed household (FHH), is added to the picture of asset accumulation in the Kerala economy. Population census of India defines a household as basically a person on whom the chief responsibility for the economic maintenance of the family is vested (Gulathi & Rajan, 1999). A panel study by Alessie et al. 1999 shows that 60-plus people accumulate wealth, and average households accumulate wealth (see. Lakshmanasamy, 2012). To ascertain the economic contribution of the elderly, elderly men and women who reported receiving a personal income were asked whether they contribute financially to the household's total expenditure. Overall, 52 percent of the elderly reported that they contribute their income towards household expenditure – more men (69 percent) than

women (39 percent) (BKPAI, 2011). Also, Muthwa (1994) defined FHH as the woman who became legally the head of the household when there is no permanent male partner due to death, desertion, divorce, separation or single motherhood (see. Mishel et al., 2010). The elderly FHH, especially widows, accumulate assets for their future dissaving period. Mencher's (1983) study of female households/female-supported households in rural Kerala found that several females often live alone. Some belong to landowning households or households with other assets, who do not come into the category of the poorest poor. Most of them are elderly widows with grown sons. On the other hand, if they do not own land, they are subject to public derision as they try to survive by gleaning, begging and doing occasional errands. James (1994), through the NAS (National Ageing Survey), indicates a high proportion of female elderly living in single-member households, and the headship status seems to be showing a declining proportion with the increasing age of the respondents. Also, 51 percent of widowed females reported as head of the household, which indicates that females take over the headship after their husbands' death. Thus, he finds that his husband's absence makes them independent in their course of life. Gulathi and Rajan (1999) explained that the main reasons for the emergence of FHH in Kerala are matrilineal traditions, greater access of women to property and regular work, large-scale male migration, ageing and widowhood. Especially in the case of the elderly, FHH is created by widowhood. Kerala's elderly population have many widowed women (Guhan, 1993). Asset accumulation pattern and quantity differs across places and religions in Kerala. Gulathi and Rajan (1999) opined that the sheer size of widowhood is because of the substantial age difference between marriage partners, the gender gap in life expectancy and the differing proportion of old women and old men who remarry. Gowri. et al. (2003) added that ageing results from widowhood among women in Kerala. By the beginning of the 21<sup>st</sup> century, the outcomes of the ageing processes among the Muslims changed and the asset ownership is enhanced, particularly concerning the house. Elderly women, particularly widows, benefit from less gendered property relationships with a strong emphasis on creating house ownership for women in this Muslim community in Kerala. Husbands often register the house in the wife's name, based on a dowry share the wife has received from members of her natal family. The house dowry-share configurations make up ageing in this Muslim community an ambivalent experience of both hardships and pleasures. The

Muslims in Central Kerala are slightly better off (De Jong, 2011). When husbands register house and land in the name of their wives, this is an important strategy to provide for her security and power in old age; also, earlier in the life of these women, their fathers and brothers bestow them high dowries, and by their mothers and siblings who give them more significant inheritance shares if they are widows (De Jong, 2011). They have intangible assets like jewellery (dead investment) (Zakariah, 2011). Against the life cycle hypothesis, Mirer, 1979 & Menchik and David 1983 show that the wealth holdings of the elderly households tend to increase with age (see in. Lakshmanasamy, 2012)

The elderly are considered as assets to the economy in terms of their physical capital and acceptable amount of human capital like health, education, skills, knowledge, life experiences, etc. Becker (1964, 1993) linked the expenditure with capital as human capital because people cannot be separated from their knowledge, skills, health, or values in the way they can be separated from their financial and physical assets. In the twentieth century, human capital was defined as the aggregation of investments in education, health, on-the-job training and migration that enhance an individual's productivity in the labour market and non-market activities (Sharpe, 2001). So, educated elderly are less likely to continue in the labour market since high levels of human capital help them save enough to meet their old age requirements (Nasir et al., 2000; Alam & Mitra, 2012). Kerala is widely regarded by development experts as a "success story" in the Global South for the relatively high achievements in the general quality of life and social well-being as measured by the UN Development Program (UNDP) indicators of human development (HD), such as significant improvements in education, health, and general social security. The study uses the human development (HD) approach to measure the development by human well-being rather than wealth or economic growth in Kerala. The first HDR (1990) highlighted that a country's income does not automatically produce human well-being if measured by quality-of-life indicators such as knowledge and a long and healthy life. In sharp contrast to the Indian record, the male-female gap in HD indicators is relatively tiny in Kerala - a fact that makes the gap between women in Kerala and India even more significant in terms of HD and a favourable sex ratio of 1,058 females per 1,000 males (Joseph, 2010). The parents support their children during their life course, from practical and financial to emotional and spiritual experiences, especially when they get older (De Jong, 2011). Hence, they spur economic growth, while others

value non-market activities more than market activities (O'Neil & Bilgin, 2013). Specific skills may decline with age (Lang, 2016). Bowlus et al. (2016) evaluate development of older workers' human capital, using a multidimensional skills/tasks approach. They separate skills into three basic categories: "cognitive-analytic," "fine motor," and "strength-related," all of which demonstrate distinct relationships with age; the latter two are particularly sensitive to the effects of ageing. Their results suggest that older workers adjust their skill use, maintenance, and development to uphold a sufficient level of productivity as they age. Bloom et al. (2015) observes that human capital changes throughout life and mentions the role that health and skill play in this process. A workshop on "Human Capital & Aging" was convened at the Harvard T.H. Chan School of Public Health in April 2015. Bloom finds that informed policy must play a role in enabling older individuals to activate their full productive potential. Weil (2016) questions the assumption that a unit of investment spending will produce equal quantities of productive human capital, irrespective of whether the spending is on health or education and takes place in a rich or a poor country. Also, the NTA model demonstrates that human capital investments associated with fertility decline substantially boost economic growth, especially during the second face of demographic transition, in which individuals and families begin to acquire more wealth. Literature shows that the higher investment in human capital during this period at least partly offsets the relative decline in the working population (Mason et al., 2016). Thus, Posner (1995) pointed out that those with more intellectual, physical, and material resources have more social capital (Pandeys et al., 2017).

Again, the elderly are valuable if we consider household chores, such as non-economic activities, as an economic course of action. James (1994) mentioned that though beggary is considered a disgraceful activity, it is a gainful activity for the beggar, and the beggar gets returns without any investment. Non-workers, those doing household duties, beggars, and rentier pensioners cannot be considered dependent on their economic productivity. There are more male elderly beggars than females. Recent newspaper reports substantiate that elderly beggars are economically productive in Kerala. In 2009, Abdul Ghali, the 70-year-old rich beggar in Kerala, begged his way to become a millionaire, netting over Rs 13 lakhs worth of deposits besides Rs 80,000 in cash in a "career" spanning nearly 30 years. In 2004, he deposited Rs 4.50 lakh, including Rs one

lakh in Indira Vikas Patra. In five years, his income trebled (July 12, 2009, Hindustan Times). Among the proportion of beggars, elderly beggars are more significant than children and of working-age in Kerala (Population Census, 2011). According to Vellarada police, a beggar used to begin and around the suburbs and sleep at the bus stand at Marthandam, located on the Kerala-Tamil Nadu border. He used to send money, collected through begging via a bank, to his family and would save some amount of money to take lottery tickets every month (Apr 01, 2016, Zee news). As per official data from the Registrar General of India, Kerala has 3,715 beggars on its streets, and among them, 1,533, 41.3 percent are literate. The statistics noted that 1,115 are literate but below matriculation level. While 198 are below graduate, 16 have technical diplomas or certificates not equal to a degree, and 24 are graduates. Five persons hold technical degrees, and one among them is a female. A social worker of Kochi, said that some choose beggary to earn the kind of money that a daily job cannot fetch them. However, educated beggars do not come under this category,” he said. According to the data, a beggar earns Rs 200 to Rs 2,000 daily. (20th January 2017, The New India Express). A beggar in Gujarat's Mehsana has donated Rs 5,000 to rehabilitate Kerala flood victims. Also, Khimji Prajapati, who is battling cancer, is known for his philanthropy, having donated all his alms towards social causes. He donated Rs 5,000 to Kerala flood relief (Sept. 04, 2018, The Economic Times). In a bid to rehabilitate beggars and improve the ease of their lives, the local municipal corporation has decided to give them employment based on their educational qualifications (July 07, 2019, Zee News). Beggars are economically productive by engaging in the practice of money lending in Kerala. Several traders have borrowed money from beggars. Though they do not charge a huge interest, it is their way of keeping money safe by lending. Some do not even charge an interest. Last year, when beggars were caught, ATM cards and smartphones were found from them. Initially, they were suspected of being stolen, but later, they were found to own them (May 25 2020. Malayala Manorama). In the case of household duties, around 42 percent of men and 25 percent of women among non-workers are reported to be engaged in household duties in the ‘grey state, Kerala ‘in India (James, 1994).

Elderly people experience a stage of transition from independence to interdependence and then to total dependence, which produces tension for all generations (Steinmetz, 1988). At the same time, Lakshmi N Menon, former Minister of State for External

Affairs, protested against society's attitude towards the elderly, considering their liabilities to society (James, 1994). James (1994) sums up that along with god's grace, life preparation at younger ages, such as education, health and finance, commitment, self-discipline, clean habits, self-confidence, and hard work, can make one's old age happy and charming and become an asset to the household and society. Optimism was visible in all faces in the society. Results of the analysis highlight that except in Kerala, there is no evidence that households with elderly members are more likely to be poorer than those with non-elderly members (Pal & Palacois, 2011). The elderly population in Kerala shows a sharp increase. Also, egalitarian social policies reduced their mortality rate, resulting in survivorship biases. It means paradoxically, the elderly have higher survival rates, i.e. long-life expectancy.' which leads to the increased need for consumption expenditure. On the other hand, government. It cannot absorb the needs of the exponentially growing elderly population. This leads to the elderly accumulating wealth for meeting their needs (Pal & Palacois, 2011), and in these ways, the second demographic dividend happened in Kerala. In short, Kerala economy is the need to absorb the bulging economically active elderly population. These assets must be utilised carefully to reap this window of opportunity.

Methodologically, the economically independent and dependent elderly population is measured differently by economists. In 2013, the KAS (Kerala Ageing Survey) questionnaire measured here through a question section 7.19, simply asking, 'What is your current state of economic dependence?' In 2019, the NTA model measured a person's economic independence to examine at what age he produces more than he consumes. This means that if the difference between income and expenditure is positive; the elderly are economically independent, and the negative means that the elderly are economically dependent (WPA, 2019).

### **1.3 Research Gap**

It is observed from the literature at the international and national level that demographers and economists of the 21<sup>st</sup> century, particularly from 1980's onwards researched different aspects of the elderly like population ageing, socio-economic activities of the elderly, bequest motives of the elderly, the attitude of the youth towards the elderly, old age informal care, institutional caregivers and the effect of intergenerational transfers on the

human and physical capital of elderly populace. Kerala holds the highest percentage share of elderly among Indian states and is on the edge of a great transition from child care to old age care. Studies on the elderly in Kerala have focused only on the trend in the population of the elderly and their socio-economic status. From the literature review, it is observed that there is a dearth of studies on the elderly that focus on the nexus between the elderly's assets, bequests, and care in Kerala. This study attempts to fill this gap. Hence, the present study probes into the bequest motives of the elderly, and the care provided to the elderly by formal and informal institutions across socio-economic groups and gender in Kerala.

#### **1.4 Research Questions**

- Are the elderly getting care?
- Where does the elderly get care from?
- Do the elderly have a bequest motive? If yes, what bequest motive do they have?
- What are the contributions of the elderly towards meeting the expenses of the elderly and towards the household expenditure?
- Is there any relationship between the bequest motive of the elderly and the care provided by the informal institutions?
- What is the role of institutional caregivers in providing old age care?
- Are the elderly becoming economically independent? In what socio-economic activities are the elderly engaged in society?

#### **1.5 Statement of the Problem**

Kerala experienced rapid expansion in the growth rate of the dependent aged population and it is estimated that the 60+ in absolute numbers will double by 2022 (Rajan, 2018). This is the byproduct of the demographic transition and the resultant low level of mortality and fertility rates and significant improvements in life expectancy. The elderly need financial, physical, and emotional care on account of increased health expenditure, urbanization and migration effects, and changes in the family structure and size; which can intensify in the coming years. On account of uncertainty about the remaining years of life and casualties, the elderly as a precaution, set apart income and assets and have bequest motives, which are not always explicitly spelled out, but implied for getting care

from the family, neighbourhood, and community. The elderly make contributions for their own and household-related expenditures, apart from the bequeaths. The elderly experience different kinds of care-related vulnerabilities and may have different motives to get care, as they find it difficult to cope up with the provision of care in the economy. Hence, this study purports to analyse the nexus between the bequest motive of the elderly, and the level of care provided to them by informal institutions across socio-economic groups and gender in Kerala. Also, the study examines the role of institutional caregivers in providing old-age care in Kerala.

### 1.6 Objectives

- To assess the informal and formal care for the elderly and the old age care gap in Kerala.
- To trace the pattern of bequest motives of the elderly across socio-economic groups.
- To discern the nexus between the bequest motives of the elderly and the level of informal care received.
- To analyze the economic independence of the elderly population.

### 1.7 Hypothesis

The goal of this research is to examine the interrelationships between the bequest motives of the elderly and the care and support provided by the members of social institutions. More specifically, the researcher tests the hypothesis: *The bequest motive of the elderly and care received by the elderly from social institutions are altruistic in nature*. In this hypothesis, researcher argue that the elderly in Kerala are keeping a precautionary motive for their future unmet needs. They need care and support from the family, especially from social institutions. For that, structuring a strategic bequest motive is claimed from the primary observation of the study (Bernheim, 1985). In spite of that, a kind of altruistic attitude is prevalent among elderly who wish for the well-being of their children. At the same time children who gave the informal care also express their altruistic well-being towards their elderly parents (Yarri, 1965). The same sounds as in the case of the rest of the social institutions. Greying population of Kerala is starving for care for their well-being. Even though informal care is essential for their well-being, formal care provided

by the institutional caregivers reduces the gap of provision of care and support to an extent.

## **1.8 Research Methodology**

The study employs both primary and secondary data. The major sources of secondary data are:

- World Population Ageing Report (2017& 2019)
- HelpAge India (2014)
- Building a Knowledge Base on Population Ageing India (BKPAI) Survey (2011)
- NSSO reports of 52<sup>nd</sup> round (1995-1996), 42<sup>nd</sup> round (1986-1987), and 60th round (2004-05)
- Kerala Ageing Survey (KAS) (2013,2016, & 2019)
- Census Reports of India (2001 & 2011)
- Longitudinal Ageing Survey of India (LASI) (2018)

The target sample of this research was those aged 60 years and above, also residing within the state of Kerala, India. The areas for sampling in this research were chosen based on probability proportional to the population size at the sub-district level in order to achieve a representative sample of elderly households. Within each sub-district, the locations were selected to provide adequate representation of ethnicity in the urban and rural areas within the state of Kerala. Based on the Census 2011, multi -stage random sampling was employed and 383 eligible samples for this survey were selected. To ensure representative sample selection, the study was carried out through four -stage multi random sampling. A total of 383 samples were selected based on the probability proportionate to population size at 5 percent significance level, which is proportionately divided across the 3 districts. Based on the geographical entity, 14 districts of Kerala are divided into three major regions; North, Central, and South. To study the pattern of the relationship between bequest and care, the percentage distribution of the elderly populace quotient to the total Kerala elderly population among the three districts are taken, viz, Kozhikode, Ernakulum and Thiruvananthapuram. To apprehend the variations between the urban and rural locations of each district, the next stage was to continue to the ward level and finally to the household level. As the economic and non-economic activities of

the elderly belonging to different socio-economic classes were to be identified, a multi-stage sampling was adopted for the study. The respondents comprised of elderly of sample households and data was collected using an interview schedule. All those aged 60 and above in the sample households are the respondents who are interviewed and any usual resident or non-resident member above age 15 years is considered as an informal caregiver.

**Table 1.1 Geographical Distribution of the Population Aged 60 years and above by Districts of Kerala, 2011.**

<b>Regions</b>	<b>Districts</b>	<b>Total Number of Elderly Populaces</b>	<b>Percentage of the Elderly Populace to Total Elderly Population in Kerala</b>
North	Kasaragod	127814	5
	Kannur	316238	8
	Wayanad	78062	2
	<b>Kozhikode</b>	360880	<b>9</b>
	Malappuram	341779	8
Central	Palakkad	333511	8
	Thrissur	428595	10
	<b>Ernakulum</b>	450794	<b>11</b>
South	Idukki	128559	3
	Kottayam	312089	7
	Alappuzha	322246	8
	Pathanamthitta	213383	5
	Kollam	350012	8
	<b>Thiruvananthapuram</b>	429431	<b>10</b>
Kerala		4193393	100

Source: Calculated by the Researcher based on Census, 2011.

### **1.8.1 Methods Used**

To measure informal old age care and formal old age care, the researcher created two indices, viz, Informal Old Age Care Index (INOI) and Formal Old Age Care Index (FOCI) based on the UNDP methodology, 2013. To examine the interrelationship between both kinds of care, Karl Pearson's correlation coefficient was used. Multiple Regression analysis was employed to identify whether old age care is the outcome of mutually inclusive factors of old age care. The elderly's bequest motives are spread over the sample data. In other words, an elderly person's bequest motive is not only confined

to one particular motive but also mixed up with the other motives. Hence, the researcher employed mean score values to derive the magnitude, size, and characteristics in which the bequests were allocated across the socio-economic status of the society. To identify it, the researcher used the Independent 't' test for grouping variable two and; one-way ANOVA for grouping variables more than two. To measure and identify the economic independence/ dependence of Kerala's elderly populace, the researcher employed the National Transfer Account (NTA) Model of Life Cycle Deficit (LCD). Also, exercised Binary Logistic Regression analysis to identify the factors responsible for the elderly's economic independence. To address the nexus between the elderly's informal old age care which they received from informal caregivers, a Multiple Linear Regression analysis is applied. Finally, to investigate the factors that influence the interrelationship between informal old age care and bequest motives of the elderly, the Hierarchical Linear Regression Model was employed.

Secondary data was analysed with the help of methods like exponential growth rate estimation and projection, economic Old Age Dependency Ratio (OADR) estimation, percentage and proportional analysis, construction of population (age- sex) pyramid, pie diagrams, bar chart, bivariate and multivariate tables.

## **1.9 Concepts**

- **Elderly Household:** An elderly household is composed of one or more persons at least one of whom is 60 years of age or older at the time of initial occupancy (U.S Department of Housing and Urban Development)
- **WILL** is a legal declaration of a person's wishes regarding the disposal of his or her property after death (Merriam Webster)
- **Bequest Motive** refers to the incentives behind the desire for a person or persons to pass along their assets when they pass away to heirs such as children or other family members (Annuity digest, 2011).
- **Altruism** is doing something for others without a motive of self-interest or self-gain and one does not have a stake in the outcome of the act (Kumar and Dixit, 2017)

- Strategic Bequest Motive is that the parents leave assets to children to compensate them for help, care or other services (Bernheim et al., 1985).
- Old age Care is the activities undertaken by others to ensure that people with or at risk of a significant ongoing loss of intrinsic capacity can maintain a level of functional ability consistent with their basic rights, fundamental freedoms, and human dignity (WHO, 2015).
- Formal Caregiver – a provider associated with a formal service system, whether a paid worker or a volunteer. (Family Caregiver Alliance (FCA))
- Family (Informal) Caregiver – any relative, partner, friend or neighbor who has a significant personal relationship with, and provides a broad range of assistance for, an older person or an adult with a chronic or disabling condition. These individuals may be primary or secondary caregivers and live with, or separately from, the person receiving care. (Family Caregiver Alliance (FCA))

### **1.10 Organisation of the Study**

The composition of this research comprises eight chapters. The following summarises each chapter as a point of reference.

Chapter one is the premature composition of the present study including background, literature review, research gap, statement of the problem, research questions, objectives, methodology, concepts, and organisation of the study.

Chapter two touches on a theoretical and analytical background. This chapter explains both the theoretical and analytical framework of the study. It also includes the process of how the research was carried out such as the hypothesis of the target sample.

Chapter three provides an overview of the elderly populace in international as well as national, especially the state of Kerala. Also focus on the available secondary data collected about the aspects of bequeath nature and old age care.

Chapter four explains old age care, which coin sides as informal as well as formal. The informal care index and formal care index and old age care index were constructed based on the UNDP methodology (2013), using the details collected from the respondents on the Likert scale, and the interrelationship was tested with Karl Pearson's correlation

coefficient. Multiple regression is used to analyse whether old age care comprises the factors of both informal and formal old age care components. To finish it with the measurement of the old age care gap.

Chapter five provides the bequeath nature of the Kerala elderly populace across the heterogeneous socio- economic milieus of the society. A Mean score around values is taken while bequest motives are spilled over each one person. To identify this effect over different socio-economic status is identified with an independent 't' test and one-way ANOVA. To sum it up the percentage analysis of bequeath distribution impacts on society.

Chapter six discussed the interrelation between informal care and the bequest motives of the elderly populace. This chapter illustrates the game operated between the elderly populace and informal caregivers; especially children, analysed with Multiple Linear Regression Analysis. The HMR Model is used to analyse socio-economic status which influences the stated relationship earlier that is the nature of reality between both the bequeath motive and informal old age care

Chapter Seven torch eyesight towards the increasing at increasing rate of economically independent elderly communities in Kerala. The NTA model of Life Cycle Deficit is uploaded to the measured economically independent elderly community. Also, Binary Logistic Regression is employed to derive the responsible factors of the emerged state of mind setup. Again, percentage analysis helps to determine the interrelation of economic dependent/independent status with informal old age care, old age care, and old age care gap.

Finally, chapter eight elaborates on the overall findings of the collected data, discusses the important outputs and implications of the thesis, and compares research findings with other studies and policy implications, poses future research gaps as well as limitations of the study.

# CHAPTER II

## THEORETICAL AND ANALYTICAL BACKGROUND

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## 2.1 Introduction

An extensive literature review on the theme care and bequest of the elderly indicated that there are few studies related to old age care and bequests of the elderly and it can be seen that these studies have treated old age care and bequest independently. From the literature review, it is observed that research which address the nexus and intricacies between elderly care and bequests together are little explored and is either scanty or unavailable. The study overtures to respond the research questions mentioned in the chapter one.

A combination of both quantitative research and qualitative research (Remenyi, 2012; Stokes, 2011; Tewksbury, 2009) is employed for the study. The quantitative part consists of comprehensive empirical research of social phenomena through statistical and mathematical techniques (Given, 2008; Kinnear & Gray, 2011; Neuman, 2007; Remenyi, 2012), and it is generally assumed as a scientific approach in social science research (Tewksbury, 2009). The main purpose of quantitative study is to formulate the models, hypotheses and theories that are significant to the social phenomena. Moreover, this type of research is used to identify precise measurement for specific things, and generally the schedule forms will focus questions like how many, how much and how often (Cooper & Schindler, 2006).

The qualitative part of understanding human behaviour in wide range explores why they should behave in such a manner. Altogether, the qualitative research is seeking answers as to why, when, what, and how (Crowther & Lancaster, 2009; Kinnear & Gray, 2011; Remenyi, 2012; Stokes, 2011). Moreover, some of the researchers agreed that the qualitative research can overcome the weaknesses of the quantitative research (Cooper & Schindler, 2006; Kinnear & Gray, 2011; Neuman, 2007). Yet, both quantitative and qualitative researches are based on systematic methods and aspire to gather a good quality of information (Neuman, 2007). However, both quantitative and qualitative studies are greatly different in styles of research and data as well as approaches (Remenyi, 2012).

On the basis of research questions and objectives of this study, quantitative research is more applicable for the present study. This is because research objectives are attained through the hypothesis tests. Moreover, quantitative research brings a wide-ranging and

heightened respect in the discipline of predictive advantages (Worrall, 2000). That is, the ability to make right predictions is considered to be the most exceptional characteristics of quantitative research. In addition, quantitative approach is enough efficient and more economical, especially when the research is constrained by time and resources (Collis & Hussey, 2013; Zawawi, 2007).

## **2.2 Research Design**

Research design is referred to the guideline, common rules or blueprint for the researcher on how to conduct studies in order to attain or answer the aims, questions and hypotheses of the research in the most effective way (Cameron, 2009; Collis & Hussey, 2013; Hair, Money, Samouel & Page, 2007; Neuman, 2007). To make it clear, a research design enables a researcher to identify the most suitable research methodology and research methods that are appropriate for data collection and its final analysis to achieve a good conclusion (Collis & Hussey, 2013). Collis and Hussey (2013) classified the research design into four types; exploratory, descriptive, explanatory and predictive researches. In order to justify the research design of the present study, understanding the nature and characteristics of the research along with the objectives of the study are important. The main purpose of the present study is to explore elderly' informal care by identifying the bequest motives and distribution. In addition, this study intends to investigate the relationship between bequest motives and old age care received by the elderly populace as well as their respective relationship with the informal old age care. To explore this, seven research questions are formulated in this study.

Exploratory research can be applicable if the researcher has limited knowledge or understanding about the nature of a problem and issue (Collis & Hussey, 2013; Hair, et al., 2007; Neuman, 2007; Zikmund, 2003). To explain more, exploratory research is to inspect a new phenomenon in terms of knowledge and understanding in order to demonstrate precise research questions for future research to answer the 'what' question (Neuman, 2007). Moreover, the element of exploratory research design can be easily examined from the initial stage of the study. The existence of consecutive theories and concepts can be used to solve the research problem (Collis & Hussey, 2013). From the nature of exploratory research, the first and the fourth research questions of this study

falls under exploratory research. In the present study, the first research question looks to answer the ‘what’ question and intends to find out what are the socio-economic activities in which the elderly populace in Kerala is engaged. On the basis of answers, the fourth question helps to find out the expectations of children as a bequest and this question also answers to the ‘what’ question.

Descriptive research receives data that explains the existing phenomena (Collis & Hussey, 2013; Neuman, 2007) and is applied to obtain data on the characteristics of specific issue or problem. On the contrary, Explanatory research deals with the queries on ‘why’ or ‘how’ of something that is happening (Collis & Hussey, 2013; Neuman, 2007). The most significant element of explanatory research design is to identify the relevant variables in the research activities. Moreover, explanatory research often uses quantitative research methodology and tools such as regression analysis for survey data and hypotheses tests to measure the relationship between variables (Cameron, 2009; Neuman, 2007; Saunders, Lewis, & Thornhill, 2007). From the nature and characteristics, the seventh question is matched, which identified the economically independent elderly populace in Kerala. Predictive research is designed to forecast or predict which variable should be revised in order to make an improvement in predictivity levels in the near future. Predictive research is employed by the researcher to arrive at the exponential growth rate of the elderly population. The economic independence of the elderly at the global level is also predicted.

To sum up, the research framework of the present study is developed based on mixed methods combined with micro approach, exploratory approach, and explanatory approach administered using schedule, having both quantitative as well as qualitative approaches.

### **2.3 Sample Design**

The world’s population is in great transition and is in the era of the ‘Ageing of the Aged’. To understand about the characteristics of the elderly population, the present research was carried out with the target sample of persons aged 60 years and above (as defined by Census of India, 2011), and residing within the state of Kerala. Based on the geographical entity, 14 districts of Kerala are divided into three major regions; North, Central and

South. To study the pattern of the relationship between bequest and care, the percentage distribution of the elderly populace of Kerala from the three districts, viz, Kozhikode, Ernakulum and Thiruvananthapuram were taken as depicted in table 2.1.

**Table 2.1 Distribution of the Sample by Districts of Kerala.**

District	Panchayath/ Municipality	Place of residence	Total No. Elderly Households	No. of Households Selected	Name of the Wards	No. of Sample Selected from the Ward
Kozhikode	Ramanattukara	Urban	359	26	Sevamandhiram	9
					Thottungal	5
					Vydhirangadi north	6
					Ramanattukara east	6
	Mavoor	Rural	434	85	Mecherikunnu (North)	22
					Valayanoor	20
					Kalpally	23
Mavoor					20	
Ernakulum	Angamaly	Urban	4894	39	Kothakulangara east	10
					Vengoor north	11
					Paliyekkara	9
					Railway station	9
	Paigattore	Rural	2851	100	Ayyankara	31
					Ottankandam	25
					Puthakulam	21
					Kadavoor south	23
Thiruvananthapuram	Attingal	Urban	7421	40	Kochuvilla	12
					L M S	11
					Attakkkulam	8
					Palace	9
	Vembhayam	Rural	6450	93	Theepukal	23
					Cheeranikara	24
					Perumkoor	25
					Vattavila	21

Source: Sample frame Calculated based on Voter's List, June 2020.

To ensure representative sample selection, the study was carried out through four - stage multi random sampling. A total of 383 samples were selected based on the probability proportionate to population size at 5 percent significance level, which is proportionately divided across the 3 districts, viz, Kozhikode, Ernakulum and Thiruvananthapuram. To apprehend the variations between the urban and rural locations of each district, the researcher randomly selected Ramanattukara, Angamaly, and Attingal Municipalities, and Mavoor, Paigattore, and Vembhayam Panchayaths respectively. For true representation of the sample, four wards are randomly selected from the north, south, east and west sides of each location identified. From the current local self-government voters list, January 2020<sup>4</sup>, the sample of the elderly populace from each side was determined by a randomisation process (simple random sampling) using Excel (2013 Version).

## **2.4 Theoretical Framework**

Age structural transition is a process and consequence of shifting age structure from a young aged population to an old aged population. This is an integral part of demographic transition and the trajectories are determined by the timing and speed of fertility and mortality change. According to Sax, during the early stages of demographic transition, both fertility and mortality rates are high, resulting in a more or less constant age structure. In the next stage, when mortality declines and fertility remains the same, a large share of the country's population becomes young with a high dependency ratio. Later, when fertility starts declining, cohorts of high fertility regime move into the working age leading to a decline in dependency ratio, contributing to a temporary demographic dividend. In the final stage, both fertility and mortality reach the lowest level and the share of the old age population increases. Proportionally, there is also an increase in the dependency ratio. However, as life expectancy increases along with the population stabilisation process, the elderly have a tendency to become economically independent, leading to a second demographic dividend (Karl Sax, 1948). The present study relied on two sets of theories. The first set includes the theories related to ageing

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<sup>4</sup><http://www.lsgelection.kerala.gov.in>

and the second set consists of the theories related to life cycle model of bequest motive and provision of informal care.

#### **2.4.1 Theories of Ageing**

The Role Theory of Ageing developed by Philips (1957) and Cottrell (1947) explains how the elderly populace adjusts to the changes and lose their social roles. This theory assumes the existence of social roles in an individual's life cycle and how their role changes when they get old. This role changes and the adjusting nature of elderly to the changed roles is the most determining variable to successful ageing. The theory propagates that people 'suffer more from role loss as they become old'. This theory is substantiated by several studies especially those related with widowhood and retirement from employment and registers a decline in their status (Cavan, 1952). In the 21<sup>st</sup> century, due to the high life expectancy and inadequate old age care, the elderly understand their roles thoroughly and adapts to it, which prompted them to be economically independent and is christened as the "second demographic dividend".

The Disengagement Theory of ageing (Cumming and Henry, 1961) assumes that disengagement is a lifelong process and an inevitable one. The study conducted in Kansas City, United States of America found that the social interaction is reduced among the elderly aged 70+ which led to the inevitable withdrawal or disengagement of the elderly from the society. While this withdrawal of the elderly permits the young generation to switch over the roles that has to be filled, disengagement becomes a mechanism for ensuring equilibrium within the society and the transition of social power across generations. The authors observe that the degree of life satisfaction of the elderly depends on the degree of their disengagement and on the importance of their roles in the society that leads to successful ageing. It is noteworthy that ageing is a biological process whereas disengagement is a social process and it is not ageing that determines disengagement, but a combination of factors such as poor health conditions, widowhood, financial requirements and so on. In order to minimize the effect of disengagement, holding the assets by the elderly themselves till death is observed as a decisive factor in minimizing the effect of disengagement.

Havinghurst (1963) in his Activity Theory of Ageing points out that activity and engagement are the effective factors for successful ageing. That is, productive activities which are informal in nature (Knapp, 1977, Longino & Kart, 1982) and involvement in the social network is well connected to the wellbeing and life satisfaction of the elderly. The theory argues that morale and life satisfaction are positively related with successful ageing, whereas widowhood and retirement have an effect on social integration.

Atchley's Continuity Theory of Ageing explains that the past experiences, decisions and behaviour of the elderly parents will form the foundation of successful ageing. Continuity theory has two dimensions. Internal continuity deals with one's past life and how the past supports building a new self during old age. External continuity deals with maintaining social relationships, roles and environment. The theory postulates that the endowment of the elderly positively influence the resources of the next generation. Their ability to continue in social roles ultimately leads to the decline of social structure. Another assumption is that people with more rewarding social roles have the tendency to surrender their roles (Onega & Tripp-Reimer, 1997).

Conflict Theory of Ageing of Turner (1998) explains that the concentration of economic power with the young generation often leads to marginalisation of the aged, resulting in social conflict and deterioration of the status of the aged. The Age Stratification theory explains the relationship of social change on ageing, which has been defined as a special type of people's mobility from one age stratum to the next. On the other hand, Rose's Subculture Theory of Ageing showcases how the old people form a subculture based on the similarity of experiences, lifestyles, values and behaviour empowers themselves during old age. This is possible only with their interaction abilities, which is more than the younger generations.

Modernization Theory of Ageing of Simmon (1945) connects the status of the aged and the process of modernization on the basis of technological differences. Durkeim (1964), a follower of Simmon's theory, links marginalisation of the elderly to modernization based on the advanced modern health care facilities. Palmore and Manton (1974) also observed a 'U' shaped relationship between the status of the elderly and modernization, in which he demonstrated that though the elderly status was low at the beginning of

modernization, it may improve as the economic development proceeds. Rhoads (1984) had connected culture as the intervening factor of modernisation and Hassen (2007) had stated that the process of modernisation in families and societies still play a crucial role in determining old age care. Hendrik (1982) has identified the structural imperatives to shape the control over potential resources for upgrading the quality of elderly life.

#### **2.4.2 Theories of Bequest Motive and Old Age Care**

The term 'bequest motive' pertains to the bequest's behaviour at the individual level (Alma'amn, 2009), and deals with the inter-generational asset transfer behaviour at the household level. In other words, it means transfer of wealth from elderly parents to children (Alma'amun, 2010, Tin 2010). The elderly have bequest motives and their children may have expectations about bequeaths, which in turn can interfere with the old age care provided by the children and received by the elderly. Hence, bequest transfers have its own importance on the wealth distribution policies such as pension and retirement system, taxation, education of juniors, saving behaviour of the youth and cash flow for young generation in economic researches (Kopczuk& Lupton, 2007). In the present study bequest motive is referred to as inter- generational transfer of assets or bequest at the social level, which means asset transfer from elderly populace to either their own children or other informal care givers like neighbours, friends and relatives with or without any expectations in making bequest decisions.

On account of the significant improvements in life expectancy, the elderly populace accumulate asset for their future consumption or to meet their own unforeseen expenditure in the fag end of life, which is uncertain (Belke et al, 2014, Lockwood, 2011). Hence, they have been called as the 'second demographic dividend' (Ogawa et. al, 2009). Elderly people transfer the accumulated assets to their informal caregivers for better old age care services with or without any bequest pretentions. In the middle ages, most of the elderly populace spend both their physical capital (earnings) and human capital (their services) altruistically for the education and betterment of their children rather than as bequests (Mc Donald & Zhang, 2012). In developing countries like India, social norms and traditions play a pivotal role within the cultural level which results in an unequal inflow of both kinds of capital to their son's education rather than daughter's

(Lee, 2010). On the other hand, parents without children accumulate and transfer their assets to the informal caregivers directly.

Theoretically, there are four life cycle models of bequest behaviour explaining the nature of elderly bequeath that the researchers used in the field of economics; viz, altruistic, strategic, accidental and social norms and tradition. All these theoretical models have their own implications on the elderly individual's bequest motive and in the provision of old age care in return. A comparison of these four bequest models is shown in the table 2.2

**Table 2.2 Comparison of Life Cycle Models of Bequest motives.**

<b>Life Cycle Models</b>	<b>Bequest motive</b>	<b>Provision of old age care</b>
Altruistic	Elderly leave larger bequests as possible as to the caregivers without any expectation or motive of being provided care by them.	There is no close relation between bequest and care. Traditionally, the elderly consider it as their duty to distribute their assets equally to all children. But children may or may not take care of the elderly in the future. Most of the Children like this kind of attitude from their elderly parents.
Strategic	Do not leave any bequests because of the life span uncertainty. Leave bequests when parents and children have an agreement like the will of right, verbal assurance, settlement deed, release deed, gift deed, and sale deed.	The unequal distribution of bequests depends on the care provided by the children. Here, the elderly and children mutually agree to exchange bequests for care.
Social norms and Tradition	Leave more bequests or whole bequests to the caregiver, a co-resident with the elderly. It is a kind of strategy in which most of the time the more bequests preferably goes to the youngest son.	In Kerala tradition, daughters are obliged to marry and leave the elderly, whereas all the responsibilities of the elderly parents are supposed to rest upon the sons rather than daughters.
Accidental	Elderly are risk averse and save to meet their requirements and unforeseen expenses. They do not transfer assets to the next generation when they are alive.	Elderly would get little or no utility from the actual bequest. The elderly can still use his bequest to induce caregiver (children) to provide care or compensate those that are less well off.

Sources: Wakabayashi and Horioka, 2009; Horioka, 2002 (can also see Chung, 201

### 2.4.2. a, Altruistic theory of Bequest Motive and Old Age Care

The term 'Altruism' is referred to sincerity, ethics and to comprehend the individual's needs (Gantt & Burton, 2012). From the psychological angle, the principle of altruism is the case, particularly given for the welfare of a third party such as feeling, perception, cooperation, assistance, sympathy, support, generosity, and kindness (Lakshmi, 2013). Furthermore, the term is used to denote the attitude towards filial obligations such as adult children providing care and support to their elderly parents (Noelker et al, 1998). Also, how the elderly feels about the children's care and support and whether it meets the elderly parent's expectation also come under the term 'altruism' (Lecovich & Larikri, 2002).

According to the bequest motive model of Barro (1974) and Becker (1974), elderly parents and children play a two-stage game. In the first stage, children take action ( $\alpha_k$ ) which affect their own income ( $Y_k$ ) as well as the income of their parent ( $Y_p$ ). In the second- phase, the elderly parents make transfer of assets to each child through their bequests. The elderly parents value their own consumption and the utility of their children, whereas children are greedy and only consider their own consumption.

Child k solves

$$\text{Max}_{\alpha_k} U_k (C_k)$$

$$\text{Where } Y_k = f_k(\alpha_k), Y_p = f_p(\alpha_1, \alpha_2, \dots, \alpha_k)$$

$$\text{Parent solves Max } c_1 \dots c_k, c_p \quad U_p (C_p, U_k(c_1) \dots \dots U_k(c_k))$$

$$C_p = \sum_k C_k = Y_p + \sum_k Y_k$$

In the second phase, the elderly parent is able to adjust the consumption of each child using the bequest and each child's consumption will be increasing in the total income for the elderly household. Thus, each child will do actions to maximize their share of total income for maximizing their own consumption. This will eventually lead to a Pareto optimum. In addition to their actions, if parents consider their children equally, they will use their bequests to make consumption even among their children by giving more to those children who earn less. In fact, the parents are not obliged to divide the bequest strategically.

This theory predicts that the needy children should receive larger portions of the bequests than children who are better off. Some economists like Mc Garry and Schoeni (1997, 1995) had found this consistent behaviour of elderly parents, but some others like Cox (1992, 1987) and Altonji (1997) had reached to the opposite end. At the same time, economists like Wilhelm (1996) could not find any empirical evidence to support this prediction.

The altruism model pertains to a person who is cared for with their lifelong consumption and at the same time provides care and support to the next generation (Barro, 1974). Thus, inter-generational transfers occur from elderly parents to their children (Hayashi, 1992; Kotlikoff, 1988). Parents altruistically leave their bequests in the form of cash, house, land, vehicle, jewellery, and other valuables to the next generation without any expectation or motive (Yin, 2012, 2010). Also, parents altruistically leave their bequests as services and monetary benefits (Altonji et al, 1992). On the other hand, most of parents tend to provide financial assistance to their children who have little resources and with greater needs; children who have low levels of education, children who are earning less, children with many offsprings and in poor health conditions (Chang & Luo, 2014; Suitor et al, 2007; Hurd & Smith, 2002; Mc Garry & Schoeni, 1995).

The crux of this theory is that the elderly parents leave their bequests to their children with the thought that they care about their children's well-being. This has an implication that the elderly parent's motive of distributing their bequests according to their children's capability of making earnings (the more a child earns for himself, the less is his chance for getting his parent's assets as compared to the child who earns less by himself) might lead to selfishness among children for maximizing their assets.

#### **2.4.2. b, Strategic Theory of Bequest Motive and Old Age Care**

The Strategic Life Cycle model explains the behaviour of a person who is merely concerned about his/ her affairs only and not at all concerned with the feelings of a third party. Strategic people do not have any intention of leaving their bequests to their children. They leave bequests, only because of life span uncertainty (Yin, 2012, 2010; Lee & Harioka, 2004) or they are expecting assistance, care, and support from their children in return (Bernheim et al., 1985).

Strategic individuals create a protocol where their children have to supply informal care to the elderly during old age and in return, they assign a significant portion of bequests to their children who have consented to provide informal care to them (Yin, 2012; Leopold & Raab, 2011; Lee & Xiao, 1998;). There are two reasons why the elderly make mutual agreements with their caregivers (Cox, 1987). Firstly, informal care services are not easily accessible in the market. Secondly, even if informal care services are available in the market, the cost of these services is exorbitant. Thirdly, the quality of care received is a concern. The elderly parents, irrespective of care received/ expected have a soft corner towards their children and grandchildren. Consequently, the elderly tend to be strategic because they need informal care services during their old age and wish to live with their children to receive better care and support from the children (Johar et al., 2014; Yamada, 2006). This bequest transfer from elderly parents to children is, in a way, a payment for all informal care services. The total transfers depend on the quality and quantity of informal care services received from children, given the resource endowments at the hands of the elderly (Alessie et al., 2014). To ensure elderly life satisfaction during old age, Chang (2009) recommended that the elderly could transfer their bequests part by part to their children and children render care and support to the elderly. In a case study in Israel, the grandparents usually offered gifts in the form of a swap for the informal care such as emotional support that the grandchildren rendered to them (Even- Zohar & Sharlin, 2009).

When fair annuities are not found, the elderly often establish implicit annuity contracts/ veiled annuity contract with their informal caregivers with a hidden motive that they will receive care and support during their old age (Yin, 2012; Kotlikoff & Spivak, 1981). This action addressed lifespan uncertainty, the risk that the elderly allocate all bequests to the informal caregivers when they die (Laferrere & Wolff, 2006; Bernheim et al, 1985). In Sri Lanka, purchasing and having micro life insurance is found to have a positive influence on the motivation to take care of lower-income households. However, it was taken to avoid unforeseen medical expenses and as bequests to the informal caregivers (Thankom et al., 2012). To address the life span uncertainty and unforeseen medical expenses, low-income families shared the uncertainty risk with the insurance company because their children were equally poor (Mulholland et al, 2013).

Bernheim et al. (1985) posit that an elderly bequest is a compensation given to the informal caregivers for the help, care, and other services that they render to the elderly during old age. This theory does not focus on the bequest allocation equilibrium but rather on a large class of reasonable parental and child utility functions. This theory implies a positive correlation between services rendered and bequest shares within the family. These care and services might be physical assistance in daily activities or simply making frequent phone calls and visits to the elderly parents. Bernheim et al. (1985) had modified the Becker model in two ways. Firstly, the amount of care and service provided by the informal caregivers is not correlated with their share of bequest in equilibrium, because the elderly parents cannot incentivize the informal caregivers to provide more care and service than they strategically want to provide. Secondly, in the case of elderly parents with poor health conditions, the informal caregivers are ought to provide both physical assistance and financial assistance. If the elderly have liquidity constraints, the informal caregiver believes us that he/she will be rewarded with a share of the bequest when the elderly parents die. In this model, the elderly parents with more bequeathable assets will receive more attention from their informal caregivers than those who do not, since they have more bargaining power. He further showed that in the equilibrium allocation of the strategic bequest motive game, the optional allocation of the strategic bequest motive game and the optimal allocation of a related single-agent decision problem are the same.

To sum up, the model shows that altruistic parent care is directly related to the level of attention supplied by the informal caregiver, which has an impact on the parent's marginal rate of substitution between the consumption of the informal caregiver and his own consumption. On the contrary, strategic bequest parents need more care and attention and; to be supplied by the informal caretaker. In this case, the level of attention induced by automatic incentives is less than the parent's global optimum, eventually leading to Pareto- improvement. In addition to this, children who provide financial care are also more likely to receive a more than equal share of the elderly parents' planned bequests. In this case, parents may favour children who are most eligible to manage their assets (Baker & Miceli, 2005)

#### **2.4.2.c, Social Norms and Tradition theory of Bequest Motive and Old Age Care**

Social norms and tradition refer to the common regulations/ practice and standards of expected behaviour inside a society (Coon & Mitterer, 2010; Sakudo, 2007; Mangen et al., 1988). From a psychological angle, social norms and tradition are significant areas to explain the most important values of a culture (Stankov, 2011; Stankov & Knezevic, 2005). Therefore, culture has a significant impact on shared godliness, social norms and tradition, and the common behaviour of people (Lai et al, 2010; Lustig & Koester, 2003).

In Japan, the eldest son is obliged to stay with their elderly parents (Wakabayashi & Harioka, 2009; Sakudo, 2007; Harioka, 2002; Martin & Tsuya, 1991) and progressively take over their elderly parents' business or family business (Wakabayashi & Harioka, 2009), even though the elderly parents do not leave them any bequests (Sakudo, 2007). That is, if the possession of a house is in their elderly parents' ownership, the house will ultimately be a bequest for the eldest son (Wakabayashi & Harioka, 2009)

In the United States, since daughters leave the house after marriage, whereas sons take over the family business, household as well as their elderly parents; most of the American parents provided trousseau to their daughters and leave bequests to their sons (Botticini & Siow, 2003). In the case of inheritance, most Asian countries are skewed towards matriarchal principles and are very cautious about the integrity of the family assets (Platteau & Baland, 2001). According to social norms and tradition, children who live with their elderly parents are looking for future bequests from their elderly parents in return for the care given (Magnani et al., 2012). However, at the same time, those parents who received bequests from their own parents often help their children (Jellal & Wolff, 2002).

#### **2.4.2.d, Accidental Theory of Bequest Motive and Old Age Care**

The Accidental Theory of Bequest Motive, first developed by Yarri (1965) and championed by Hurd (1989, 1987), states that elderly people are risk-averse and that they die with assets that were saved, if they lived longer than expected or had large unexpected expenses. According to this theory, the majority of the elderly people would get little or no utility from the actual bequests. That is, the elderly use their assets to induce the

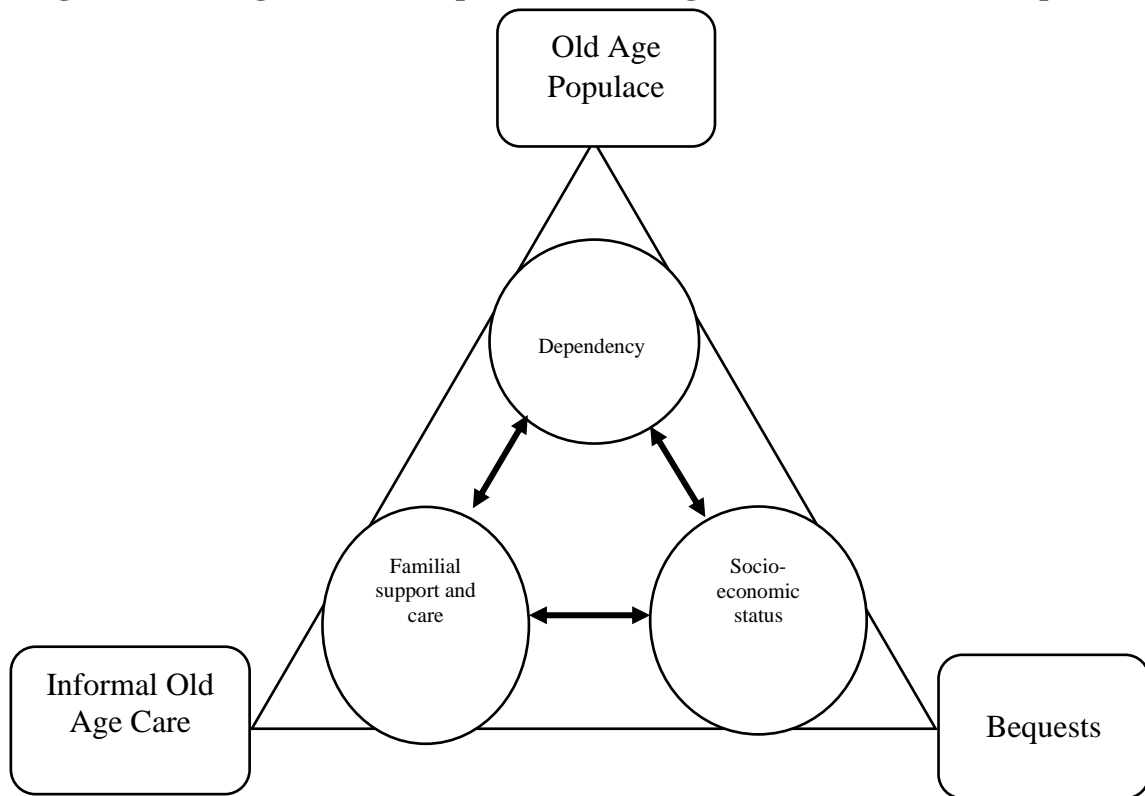
informal caregivers to provide care and services or compensate those who are less well-off. In this regard, this theory is incompatible with the other two theories as an individual's expected bequest is positive.

Elderly people who are selfish often tend to leave bequests to their family members after death due to lifespan uncertainty (Yin, 2010, 2012; Horioka, 2002) and is called accidental bequests (Feigenbaum et al, 2013; Friedman & Warshawsky, 1990; Davies, 1981). That is, people with an accidental bequest motive, ordinarily reserve significant assets for themselves during old age. But, due to lifespan uncertainty, they ended up leaving their assets to their family members (Cremer et al, 2012; Davies, 1981; Levhari & Mirman, 1977). If equitable annuities were available, selfish elderly people would not leave any bequests till their death. In the case of people who die at a fairly young age, they will definitely leave a significant accidental bequest to their children. On the other hand, accidental bequests could occur when the fathomless medical expenses and nursing care costs are not readily available for the elderly from their children during their old age. Consequently, the elderly will try to accumulate as much as possible in order to meet their medical and nursing expenses when the definite expenses incurred are lesser than what was anticipated, which results in unplanned bequests (Kotlikoff & Morris, 1989).

## **2.5 Development of Research Model and Framework**

The present research on old age, informal care, and the bequest motives of the elderly is developed and the research model and framework are explained as a triangular relationship between the three as depicted in Figure 2.1

**Figure 2.1 Triangle Relationship between Old Age, Informal Care and Bequests.**



Source: Constructed by the researcher

Based on the mortality, fertility and mobility rates, the age structure of the population changes with demographic transition. At the same time, people who live in the midst of a demographic transition experience the impact of modernization, urbanization, and industrialisation. The demographers mentioned the stages of demographic transition, where they have identified the existence of the elderly population in Kerala. Demographic transition coupled with advanced medical facilities, better living conditions, high levels of education, and a better socio-economic environment has contributed significantly to the greying of the population of Kerala. Low mortality and low fertility rates are the peculiarities of this stage of transition, where the elderly exist. According to Modigliani, the elderly population are living in the ‘dissaving period’ and higher consumption period of life, where the average propensity to consume (APC) is higher than the marginal propensity to consume (MPC). It is because of the relatively high burden of diseases, mainly NCD than CD, lifestyle and vector-borne diseases which takes huge amount of assets/ income for health expenditure. This situation, eventually, creates many unmet needs and wants among the elderly. To satisfy their requirements of old age, they are being forced to depend on others physically and financially, which can

be otherwise termed as old age dependency. In other words, old age dependency is the proxy variable that showcases the demand for old age care in the economy.

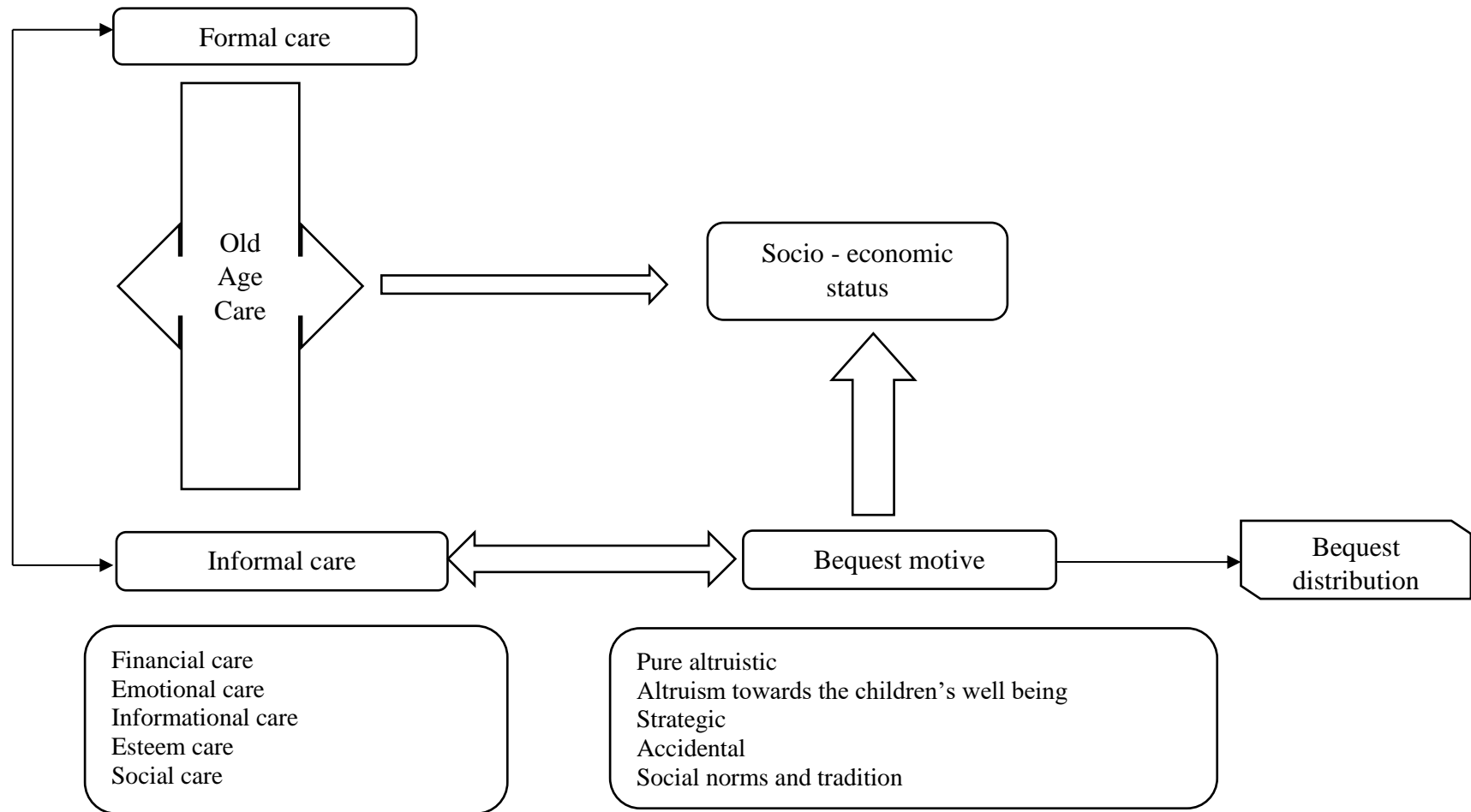
In all the elderly cases, the supply of old age care is being provided by both formal and informal caregivers in Kerala society, and these variables have been placed in the other two corners of the triangle, as shown in Figure 2.1, which are mutually applicable. The formal old age care provided by institutional caregivers like the government, NGOs, and private individuals and companies, are not sufficient enough to cover the unmet needs and wants of the elderly populace. This is due to the inadequate and inappropriate public policies and schemes that had been introduced by the government and the low absorbing capacity of the formal old age care, systems. Also, the needs and wants of the elderly populace cannot be fully absorbed by formal old age care, because of their exponential growth pattern. This paves the way for the importance of informal old age care given by the members of social institutions like family, relatives, friends, and neighbourhood. Although the elderly populace is very much satisfied with informal old age care, they receive this care and support partially or due to the social changes that are happening in and around us. The broken joint family structure, fewer number of children, migrated children, advancement of science and technology, and so on, are some of the reasons for it. In this way, the growing grey population raises their hands for care at the fag end of their life. In other words, familial care and support are the proxy variables of informal care. Hence, the old-age populace and their informal care are interlinked.

Together with the social changes, the elderly populace is changing their attitude or motive in order to satisfy their needs. That is, they developed a precautionary motive to satisfy their future needs and wants. According to Keynes (1936), 'precautionary motive means the desire for security as to the future cash equivalent of a certain proportion of total resources. With this precautionary motive, elderly people tend to accumulate huge wealth in the form of various assets like land, houses, jewellery, and in other forms. Also, they transfer these assets to the informal caregivers with the intention that they will be reciprocated with care and support. This kind of transfer of assets from the elderly is termed 'bequests', and their motive or attitude of transfer is named as 'bequest motive', which differs with the socio-economic status. These bequest motives as explained in section 2.4.2 can be altruistic, strategic, accidental, and social norms and tradition. In

addition to these diverse theoretical perceptions of bequest motives, this research observes that altruism towards children's well-being is another important influence on bequest motives (Chuan, 2015), and hence incorporated into the research frame.

In Figure 2.1 which explains the triangular relationship between old age, bequest motives, and informal care; bequest motive occupies the adjacent side of demand for and supply of old age care. In this way, socio-economic status becomes the proxy variable of the bequest motive, which is inter-linked with both old-age dependency and informal familial care and support. In nutshell, the present research explains the triangle relationship that exists between the old age populace, informal care, and bequest motive with the proxy variables like old age dependency, familial care and support, and socio-economic status respectively. The above-stated relationship varies across socioeconomic and demographic characteristics, particularly with their ages, gender, and place of residence. This study also assumes that the provision of old age care by informal caregivers plays an important role in influencing the elderly's bequest motives directly and them bequeath decisions indirectly.

**Figure 2.2 The Analytical Model of Old Age Care and Bequest Motive among Elderly Populace, Kerala.**



Source: Constructed by the researcher.

Firstly, this research framework has adopted the old age economic dependency as a proxy variable to measure the provision of old age care. To measure economic dependency, the National Transfer of Accounts (NTA) model of Life Cycle Deficit has been used (World Population Ageing Report, 2019), rather than the prevailing question-answers pattern (Kerala Ageing Survey, 2013).

Secondly, in order to better understand old age care, this study treats informal old age care with substitution possibilities and formal old age care as complementary or supplementary to the primary one (Tetal 1989; Cantor 1979; Chapel & Bandford 1991). In other words, informal care is considered as the primary source of care. The demographers have noticed an exponential growth for people above 50, who are going to be old in the near future. This has been demonstrated by the cylindrical shape of the population pyramid of Kerala (chapter 3). As their growth is vast, the formal caregivers found it a burden that they couldn't afford the ends and means for the provision of old-age care (Narayana, 2007). Consequently, old age care and support rests at the hands of informal caregivers like children, relatives, friends and neighbours.

Finally, in the present study, life cycle bequest models are five types; altruistic towards children's wellbeing, pure altruism, strategic, accidental and social norms and tradition, each model with its own unique motive. The elderly populace, who have high levels of assets, are expected to transfer the bequest to their caregivers (Nodblom & Ohlsson, 2011). Hence, bequests depend on the assets of the elderly populace and the expectation of care from the caregivers, whether they are altruistic, strategic, accidental and social norms and tradition. This is applicable across the socio- economic status in the heterogeneous society of Kerala.

Lastly, this study takes into consideration that different groups of older adults might have differences in the old age care gap, bequest motives and bequest distribution.

## **2.6 Hypotheses**

The life cycle models of bequest motive are used to provide theoretical exposition for the hypothesised relationship between informal and formal old age care, old age dependency, elderly's bequest motives as well as their bequest distribution to develop a conceptual

framework (Figure 2.2). In addition, the hypotheses are formulated based on the theoretical explication, pre-observational findings and literature review of the present study. The study has formulated the research hypothesis as follows:

**H<sub>0</sub>: *The bequest motive of the elderly and the care received by the elderly from social institutions are altruistic in nature.***

Old age dependency is adopted in this research as a proxy variable to measure old age care. Providing formal care is not the only provision that is completely represented in the actual old age care. Hence, informal old age care becomes an integral part of old age care to influence their bequest motives; namely pure altruism, altruism towards children's well-being, strategic life cycle, accidental and, social norms and tradition. The research hypothesis has been split into five sub-hypotheses. In order to study the relationship of old age care on formal as well as informal care, hypothesis H<sub>1</sub> is proposed as below:

**H<sub>1</sub>: *Old age care depends on formal as well as informal care.***

Old age care is the amalgamation of both formal and informal care, in which formal care is the same for all categories, whereas informal care is different according to the socio-economic status and demographic characteristics of the elderly in the hierarchical society. In order to determine the relationship between formal as well as informal old age care, the hypothesis H<sub>2</sub> is formulated:

**H<sub>2</sub>: *There is a significant relationship between formal and informal old age care.***

In terms of formal care often facilitated by the informal caregivers to the elderly, this research hypothesizes that both formal and informal old age care are related to each other, depending on the preferences of elderly households such as their needs and shortage of public resources (Narayana, 2011). To find out the relationship between bequest motives of the elderly and old age care from informal caregivers to the elderly households, hypothesis H<sub>3</sub> is formulated as:

**H<sub>3</sub>: *Informal old age care and bequest motive of elderly are interrelated.***

When formal old age care is not sufficient to support the elderly is necessities, informal care gains prominence and it has its own effect on the bequest motives of the elderly

populace. This study has identified five bequest motives namely pure altruism, altruism towards children's well-being, strategic life-cycle, accidental and social norms, and tradition. Each bequest motive might require a different level of informal care from caregivers controlled by the socio-economic conditions of the elderly. To study the informal care from caregivers upon the bequest motive of elderly which is influenced by the socio-economic conditions of the elderly household, H<sub>4</sub> is formulated as:

*H<sub>4</sub>: The socio-economic status of the elderly has a significant influence on the relationship between the bequest motive of the elderly and informal old age care received.*

Finally, the socio-economic conditions of the elderly determines the economic dependency of the elderly (the proxy variable of old age care). In other words, if the elderly are economically independent, they may enjoy a higher level of informal care from the caregivers and vice versa. To examine the influence of socio-economic factors on the elderly's economic dependence/ independence, H<sub>5</sub> is formulated as:

*H<sub>5</sub>: The socio - economic conditions of the elderly influence the economic dependence/ independence of the elderly in Kerala.*

# **CHAPTER III**

## **ELDERLY POPULATION, BEQUEATHS AND OLD AGE CARE: AN OVERVIEW**

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### **3.1 Introduction**

This attempts to trace the facts and factors responsible for bequeaths of the elderly population and care that they receive, using the secondary data available the context of Kerala. This chapter is arranged into three sections. The first section examines the spatial growth of elderly population and the characteristics of elderly population. Based on Kerala Ageing Survey (KAS), the second part of this chapter attempts to identify the factors that influence bequest opinions by socio- economic status. This section also examines the old age consumption and bequeaths (resource transfers) using secondary data sources. The third section gives an overview of old age care, which includes both formal and informal care.

### **3.2 Elderly Population**

Ageing is the process of growing old in the journey of life with a number of transitions. The Twentieth century is often known as the “Age of Ageing”. It has many manifestations in the present century like the social transformation of all sectors of the economy, especially demography, social security as well as intergenerational ties and old age care. In the coming decades, many countries and states will confront fiscal, economic and political pressures on account of ageing related. Virtually the phenomenon of ageing is quite common across the world with respect to the stage of development. Ageing of the planet’s population will play out differently in the developed nations and less affluent developing ones. Elderly population is the upshot of population ageing in the economy.

Most developed countries of world have accepted the chronological age of 65 years, for elderly except Africa which accepted 50- 65 years. The first World Assembly on Ageing in 1982 namely the “Vienna International Plan of Action on Ageing” and United Nations International Conference on Ageing and Urbanisation in 1991, defined the elderly as the population aged 60 years and above. Population Census of India has adopted the criteria of 60 years and above for the purpose of classifying a person as ‘elderly’.

The UN has declared 1999 as the International Year of Older Persons and October 1<sup>st</sup> is celebrated as elderly people’s day every year. It has been estimated by the UN that there is a gradual increase from 9.2 percentage in 1990 to 11.70 percentage in 2013 in the global share of old people and is projected to continue to grow by 21 percentage of the

total population of the world by 2050 (UN, 2013). According to Census 2011, there are 104 million elderly people (aged 60 and above) in India, of which 53 million are females and 51 million are males and the size and share of the elderly population has increased over time, from 5.6 percentage in 1961 to 8.6 percentage in 2011.

From 1950's onwards, demographers began to focus on ageing. Dr. Paul Nash (2014) says "ageing is integral to everything in economic society.". Among the Indian states, Kerala is holding the maximum proportion of elderly in its population (12.6 percentage) which is followed by Goa (11.2 percentage) and Tamil Nadu (10.4 percentage) and this proportion is estimated to be the least in Dadra and Nagar Haveli (4 percentage) Census 2011. Policies related to population ageing namely social security, health care provision and financing, bequest of assets to intergenerations and long - term care inevitable subjects of public debate in Kerala. Eventually, the age- structure profiles, longevity of life and the living conditions of the aged influence the state of the economy of Kerala.

### 3.2.1 Elderly Population across the Globe: An Overview

Geographically, the number, growth and characteristics of the elderly population are different in the world; both region wise and country wise. Here, an attempt is made to explore the characteristics of elderly population using the data on their absolute numbers, and computations are made from it, viz. exponential growth rate, population pyramid, Old Age Dependency Ratio (OADR) and Economic OADR (EOADR).

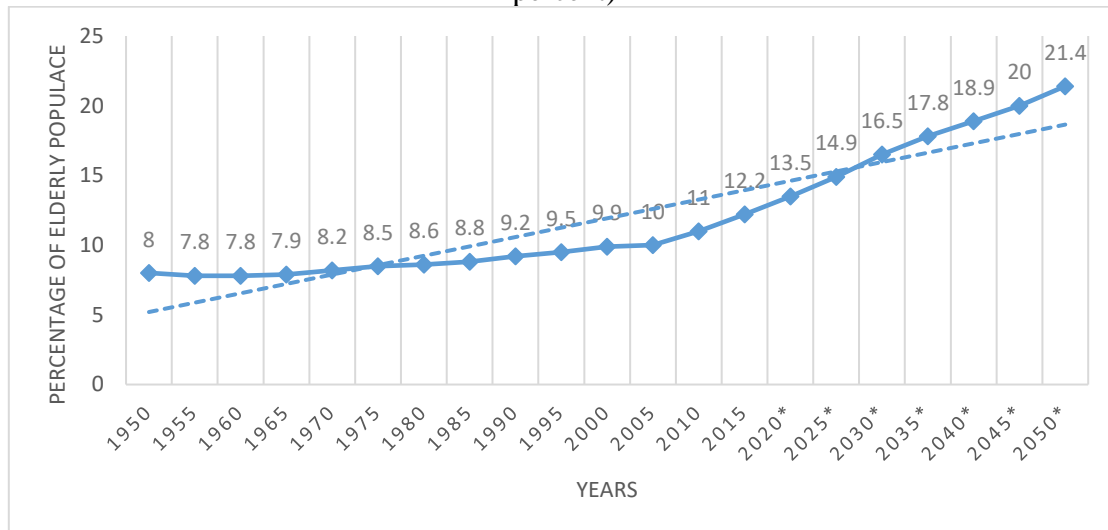
**Table 3.1 Trend in World Population and Elderly Populace, 1950- 2050 (in Millions)**

Years	Total population	Elderly populace (60+)	Years	Total population	Elderly populace (60+)
1950	2 536 .431	202.158	2005	6541.907	670.649
1955	2773.020	216.901	2010	6956.824	763.929
1960	3034.950	236.514	2015	7379.797	901.597
1965	3339.584	265.209	2020	7794.799	1049.748
1970	3700.437	304.054	2025*	8184.437	1220.615
1975	4079.480	345.879	2030*	8548.487	1407.237
1980	4458.003	382.273	2035*	8887.524	1586.022
1985	4870.922	429.783	2040*	9198.847	1738.043
1990	5327.231	487.945	2045*	9481.803	1898.538
1995	5744.213	546.374	2050*	9735.034	2079.639
2000	6143.494	610.886			

Source: Estimated by the researcher based on United Nations's World Population Prospects, 2019., note: \*Projected Value

Since 1950's, demographers have paid attention towards the ageing process in the world. An increasing growth in the number of elderly occurred throughout the years and shows a steady and continuous increase instead of a fall in its percentage. In 2045, world experience birth higher than death (Economic Review, 2010)

**Figure 3.1 Share of Elderly Population in World Population: 1950-2050 (In percent)**

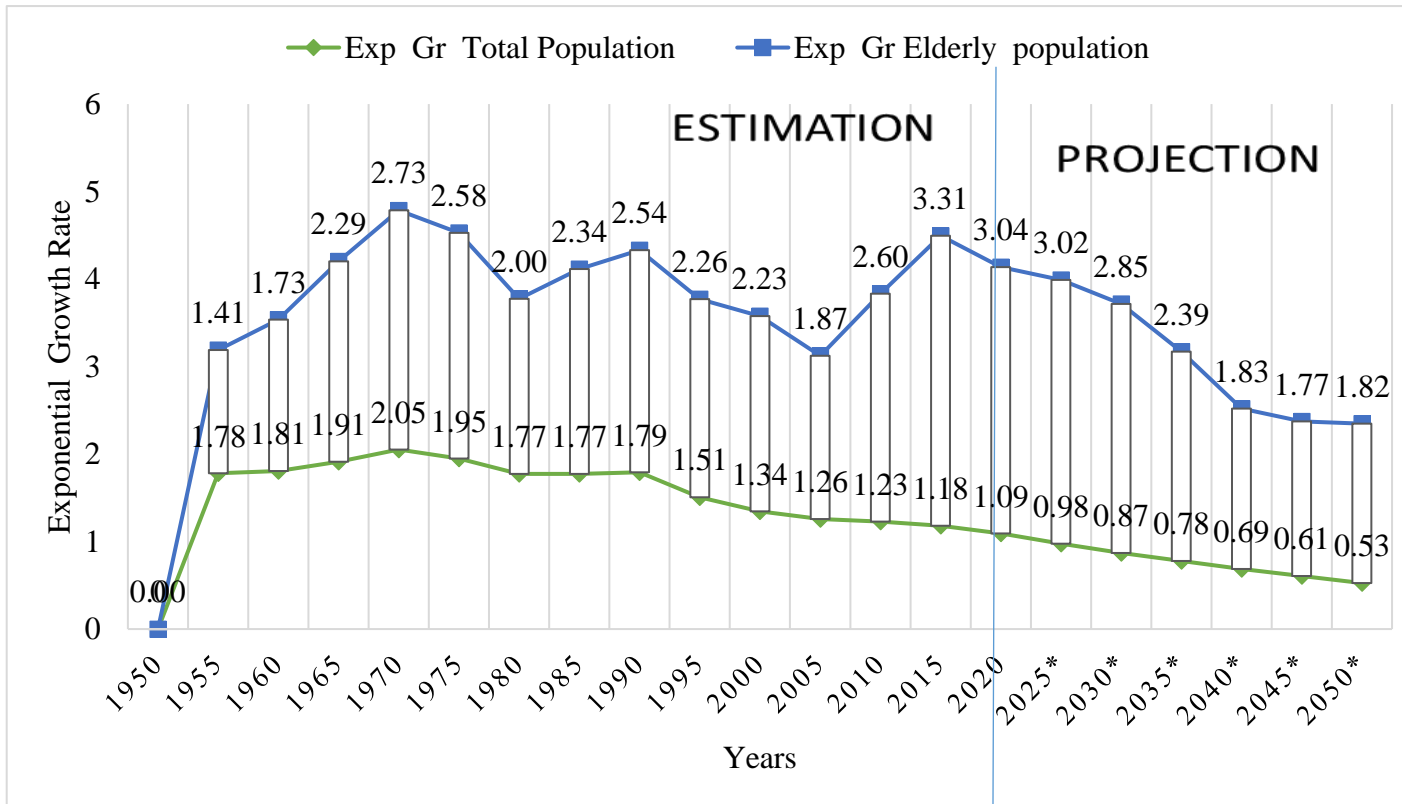


Source: Estimated and constructed by the researcher based on World Population Prospects, 2019.

Note: \*Projected value

The share of the elderly population in the world population shows a declining trend. The researcher's calculations in the projected years reveal that the share of the elderly falls under the trend line. From 1975 to the projected year 2030 there is a relatively decreasing trend in the share of the elderly populace in the total population. This is because of the slow growth rate of the elderly populace in underdeveloped countries. But from 2030 onwards it reflected a relatively increasing trend.

**Figure 3.2 Exponential Growth Rate of World Population and Elderly Population, 1950-2050.**



Source: Estimated by the Researcher based on the World Population Prospects, 2019

Note: \*Projected value

As the elderly population is large enough, it is better to employ an exponential growth rate (EGR) for comparison with the total population. Both the total population and elderly population was increasing at an exponential growth rate. It is calculated by using the formula;

$$\text{Exponential Growth Rate} = [\ln (P_t/P_o)] / t$$

Where,  $\ln$  is the natural log with base 'e'

$P_t$  is the population size at the later date

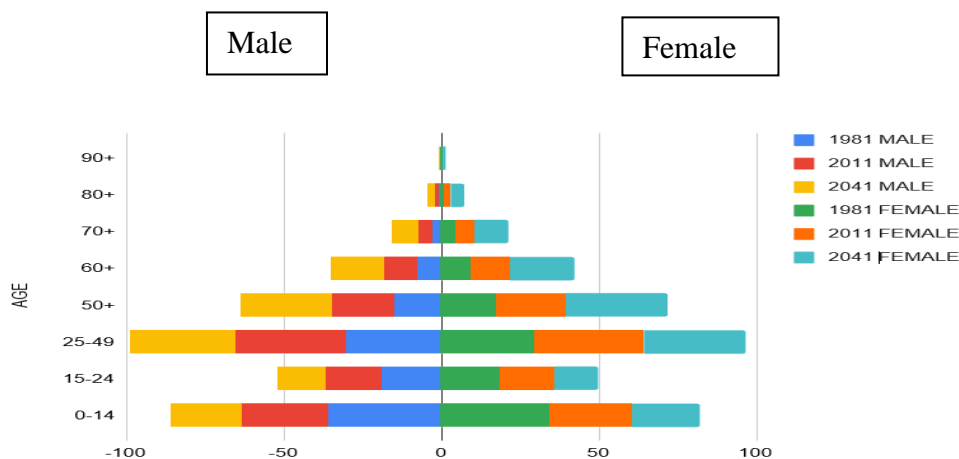
$P_o$  is the population size at the earlier date

't' is the time (number of years) between o and t

The history of the world population shows that the ageing process started since 1950's. From 1965 onwards, the exponential growth rate of elderly is higher than growth rate of the total population and it is expected to continue in the future. Starting from 2010 onwards, the elderly's rate is more than double as compared to the growth rate of total population. The gap between the growth rates is the highest in 2025, but the projected years are experiencing a downfall in the exponential growth rate of both the elderly populace and the total population. Mostly, the exponential growth rate of elderly exceeds the total population and hence, population ageing is considered to lead to a situation of 'demographic bomb', currently seen in developing countries.

In the Asian continent, ageing is fast in the eastern and south eastern Asian region. Also, the region contains the two most populated countries, viz, China and India and countries with relatively high elderly populations. It is mainly attributed to the gender differences in high life expectancy in the region (World Population Ageing Report, 2019). India belongs to the south Asian region, where the state of Kerala (the study area) is located at the southern tip of India. Kerala resembles many of the features of ageing seen across the developed countries of the world.

**Figure 3.3 World Population Pyramid (Age- Sex), 1981, 2011 and 2041\*.**



Source: Forecasted and Constructed by the researcher based on World Population Prospects, 2019 using Google Sheet 2013.

Note: \*Projected value.

There exists a global gender gap in absolute numbers in the world, on an average, women outlive men for 4.8 years. Huge differences in longevity of life for women creates gender inequality among the elderly population, leading to feminization of ageing, which is expected to narrow over the coming three decades. (World Population Ageing Report, 2019). The sharp decline in the percentage of children (0-14) as well as the increase in the percentage of elderly (60+, 70+, 80+, 90+) is a population threat to the economy, which will continue in the projected years. At the same time, increase in the median age (50+) makes large impact of this doubling effect of elderly threaten grievously, because 50+ is the elderly in the coming years. Here, the working age groups can be categorised into two. The category of 15-24 ages depicts a decline, which further proves the children are remain low in the previous and future years. Second group of 25-49 the rate of growth of ages depicts a slight increase, but it is very low as compared to the growth rate of elderly population. Recently, the growth rate of the 90+ group is warming up and is expected to grow in near future. This creates economic and financial issues to the economy, where the economy needs to spend more for providing social protection, income security and old age care, which may contradict with the capacity of the economy. There is a skipped generation effect depicted in the pyramid. It means that the working age group emigrated to other countries to meet their economic needs, resulting in households with only elderly and children (UNFPA Report, 2012).

### 3.2.2 Old Age Dependency: Measure of Population Ageing

Old age dependency is based on shifting elderly population structure for intergenerational support systems, namely Old Age Dependency Ratio (Conventional approaches) and Economic OADR (New approach). OADR is calculated by using the formula;

$$\text{OADR} = \text{Population aged 60+} / (20-64) \text{ working age population} \times 100.$$

Globally, OADR is increasing overtime and 16 persons per 100 elderly persons are dependent in 2019 and it is projected to increase to 28 persons per 100 by 2050. There are glancing difference in OADR across region. It is highest in the eastern and south eastern Asia in 2019, and an OADR of 18 persons is expected to increase to 43 in 2050. Among countries in eastern and south eastern Asia, the OADR is highest in Japan (World Population Ageing Report, 2019). The data for 67 countries indicate that older persons have become more likely in recent decades to live independently, whereas co-residence with children has become less common (World Population Ageing Report, 2017).

**Table 3.2 Economic Independence of the Elderly in Selected Regions of the World, 2019 & 2030.**

Year	Economic dependence/ Independence	World	Less Developed Countries	Asia	Southern Asia	India
2019	Old age population (65+ in percent)	9.1	7.2	8.6	6	6.4
	OADR	15.9	12.6	14.3	10.6	11
	Economic OADR	19.5	14.1	16.7	13.2	14.1
	Economic OADR/ OADR	1.23	1.12	1.17	1.25	1.28
2030	Old age population (65+)	11.7	9.7	11.8	8	8.6
	OADR	20.5	16.9	19.7	13.5	14.1
	Economic OADR	24.9	19	22.8	16.5	17.8
	Economic OADR/ OADR	1.22	1.12	1.16	1.22	1.26

Source: Estimated by the Researcher from the World Population Ageing Report, 2019

The economic life cycle is a universal feature of all contemporary societies. To determine whether a person is economically independent, it is important to examine at what age/ current economic status he produces more than he consumes. Economic OADR integrates to measure the levels of consumption and production by disaggregated ages. High proportions of elderly together with high levels of old age consumption make the ratio in higher values. Normally, its value is higher than the value of OADR. In other words, it is the OADR based on an economic perspective related to population ageing. For this labour force participation rates or full life cycle economic behaviour of National Transfers Accounts (NTA) is used. NTA provides a link between elderly population and the generational economy. Elderly consumption is financed through public transfers, private transfers and income from assets and labour income. The ratio is calculated by using the formula:

$$\text{Economic OADR} = \frac{\sum_{x=65}^W C(x)N(x)}{\sum_{x=0}^W Y(x)N(x)}$$

Where, C(x) is the per capita consumption at age x

Y(x) is per capita labour income at age x

N(x) is the population of age x

Increase in the value of Economic OADR means the number of effective elderly consumers per effective worker is increasing overtime. It formally enables to absorb the elderly's demand for financing old age pension and health care expenses which are the major requisites of old age. Hence it helps the policy makers of the world as useful information for fiscal and social planning. Economic OADR has increased over the years. Countries with higher the number of employed elderly experienced a higher level of economic OADR (WPAR, 2019). At present it is high in Japan, which has the highest percentage share of elderly in the world and experiences a higher level in OADR. Also, Asia nearly represents the world and India represents the southern Asia in 2019 and in near future, the value of the ratio between the OADR and Economic OADR declines, reflecting on the rise in the number of economically independent elderly, which drives the need for old age care. This feature is seen in almost all regions and countries except the less developed regions in the world. The elderly can stand firm as economically independent to buy old age care from the social institutions in the world.

### 3.2.3 Elderly Population: A Comparison of India and Kerala

The phenomenon of ageing is quite common across the world. The Asian continent represent the highest number of elderly populace (606 million) in the world. In the Asian continent, eastern and south eastern Asian countries are considered to have a large impact on the occurrence of ageing process (World Population Ageing Report, 2019). India is one among the southern Asian country, which records high growth rate of the total population and with pace in to the starting of the ageing process. Kerala is the southern most state on the Indian sub - continent. With a hundred percent literate people, world class health care systems, lowest infant mortality and highest life expectancy rate, Kerala is India's most developed state. Kerala has commendable achievement in terms of the Human Development Index (HDI). Rapid improvements in the quality of life and health care facilities have brought in better demographic indicators very close or even on a par with that of the more developed regions (Prakash, 2004). Kerala occupies the first position with respect to the proportion of elderly population among the Indian states and union territories.

**Table 3.3 Share of Elderly Population in Total Population in States and Union Territories (in percent)**

States/ UTs	Percentage of Elderly people in the Total Population of State/UTs	States/ UTs	Percentage of Elderly people in the Total population of State/UTs
India	8.6	Uttar Pradesh	7.7
Kerala	12.6	Karnataka	7.7
Goa	11.2	Rajasthan	7.5
Tamil Nadu	10.4	Jammu & Kashmir	7.4
Punjab	10.3	Bihar	7.4
Himachal Pradesh	10.2	Jharkhand	7.1
Maharashtra	9.9	Manipur*	7
Andhra Pradesh	9.8	Delhi	6.8
Pondicherry	9.7	Sikkim	6.7
Odisha	9.5	A & N Islands	6.7
Uttarakhand	8.9	Assam	6.7
Haryana	8.7	Chandigarh	6.4
West Bengal	8.5	Mizoram	6.3
Lakshadweep	8.2	Nagaland	5.2
Tripura	7.9	Meghalaya	4.7
Madhya Pradesh	7.9	Daman & Diu	4.7
Gujarat	7.9	Arunachal Pradesh	4.6
Chhattisgarh	7.8	Dadra & Nagar Haveli	4

Source: Calculated by the researcher from Population Enumeration data of final population, Government of India, 2011.

Among all the Indian States and union territories, Kerala is holding the maximum proportion of elderly in its population (12.6 percent) which is followed by Goa (11.2 percent) and Tamil Nadu (10.4 percent) and is estimated to be the least in Dadra and Nagar Haveli (4 percent) followed by Arunachal Pradesh (4.6 percent) as per the Census 2011 and the growth rate of the aged has registered an increase over the years.

**Table 3.4 Number of Elderly Populations, 1961-2061 (in lakhs)**

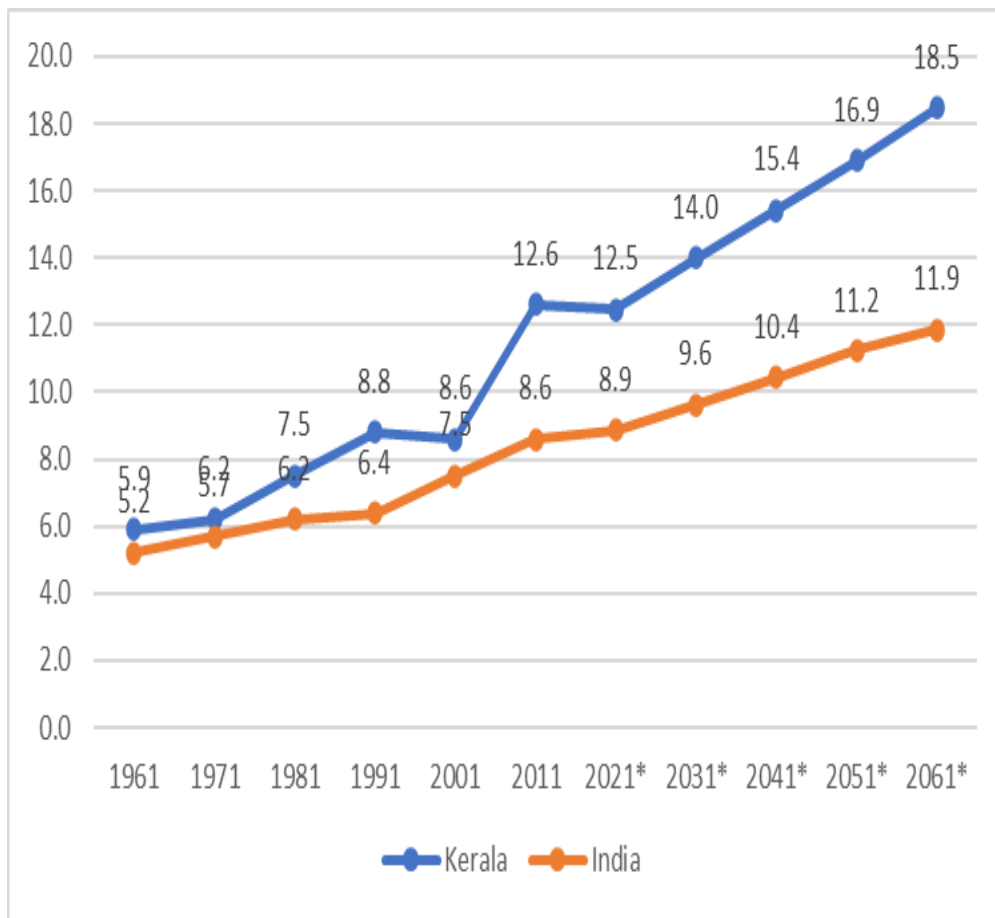
Census Years	India		Kerala	
	Total Population	Elderly populace	Total Population	Elderly populace
1961	4392.3	250.3611	169.04	9.97
1971	5481.6	285.0432	213.47	13.24
1981	6833.3	423.6646	254.54	19.09
1991	8433.9	539.7696	290.98	25.61
2001	10270.2	770.265	318.39	27.38
2011	12101.93	1040.77	333.88	42.07
2021*	13370.33	1104.027073	380.92	43.84
2031*	15123.79	1311.596342	408.97	50.91
2041*	16831.59	1505.309049	437.03	57.66
2051*	18470.38	1696.784345	466.59	64.51
2061*	20055.71	1861.503616	498.81	71.67

Source: Estimated by the Researcher from Population Enumeration Data of Final Population, Government of India, 1961-2011.

Note: \* Forecasted using the increasing incremental population method with Excel 2013.

Population explosion has become a major constraint to development in developing economies like India. At the same time, the growing number of elderly is the constraint of the existing constraint. Together, the comparison of the total population and total number of elderly populations of India and Kerala shows the fact that Kerala has grown faster than India concerning the elderly population.

**Figure 3.4 Share of Elderly Populace in Kerala and India, 1961-2061 (in percent)**

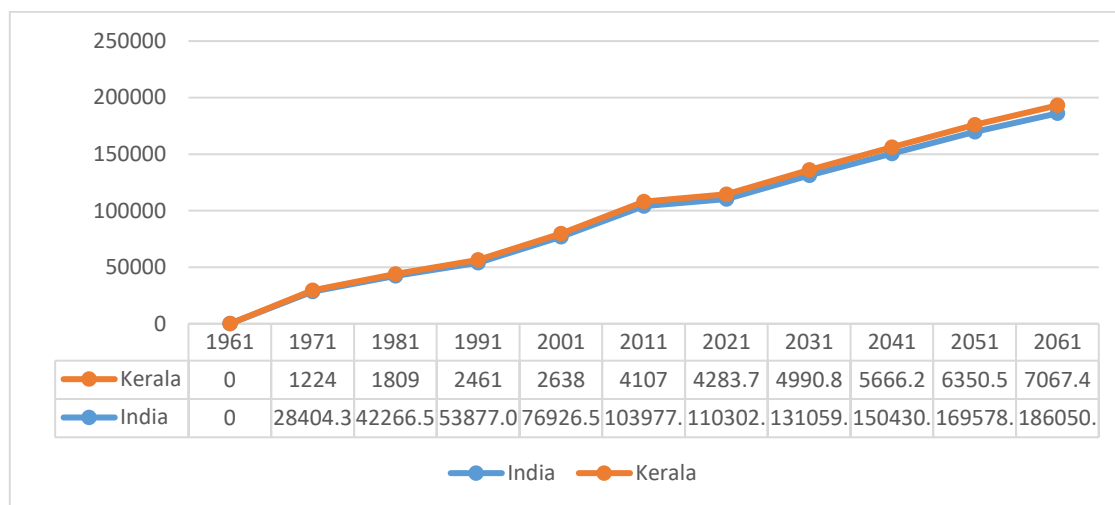


Source: Estimated and Constructed by the Researcher from Population Enumeration Data of Final Population, Government of India, 1961-2011.

Note: \* Forecasted years (2021-2061) using increasing incremental population method in Excel 2013

The year 1961 marked an era of relatively similar share of elderly in Kerala and India. Since then, a higher share of elderly is seen in Kerala than in India. This is because of the high life expectancy in Kerala, on account of advanced medical facilities. Even in the projected years, the share of the elderly populace in Kerala and India draws a wide gap. Thus, it reveals that the growth rate of elderly is moving faster in Kerala than the national average.

**Figure 3.5 Decadal growth rate of the Elderly populace in Kerala and India, 1961-2061 (in Lakhs)**

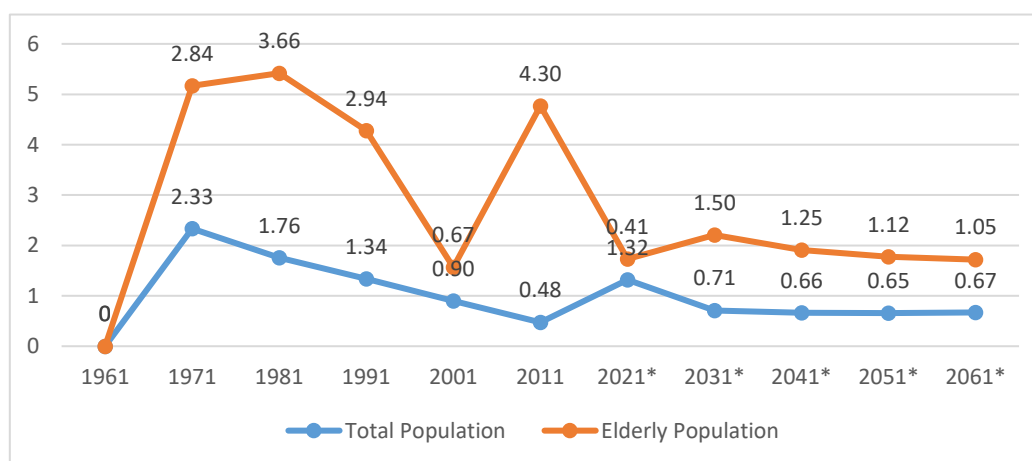


Source: Estimated by the Researcher from Population Enumeration Data of Final Population Government of India, 1961-2011.

Note: \* Forecasted years using increasing incremental population method in Excel 2013.

The decadal growth rate of the elderly populace is relatively higher in the state of Kerala after the year 1991 and it is expected to continue in the projected years up to 2061. This fact reflects upon the elderly person’s lives with scarce resources and unmet needs.

**Figure 3.6 Comparison of the Exponential Growth Rate of the Total Population and Elderly Population in India, 1961-2061 (in Percent)**

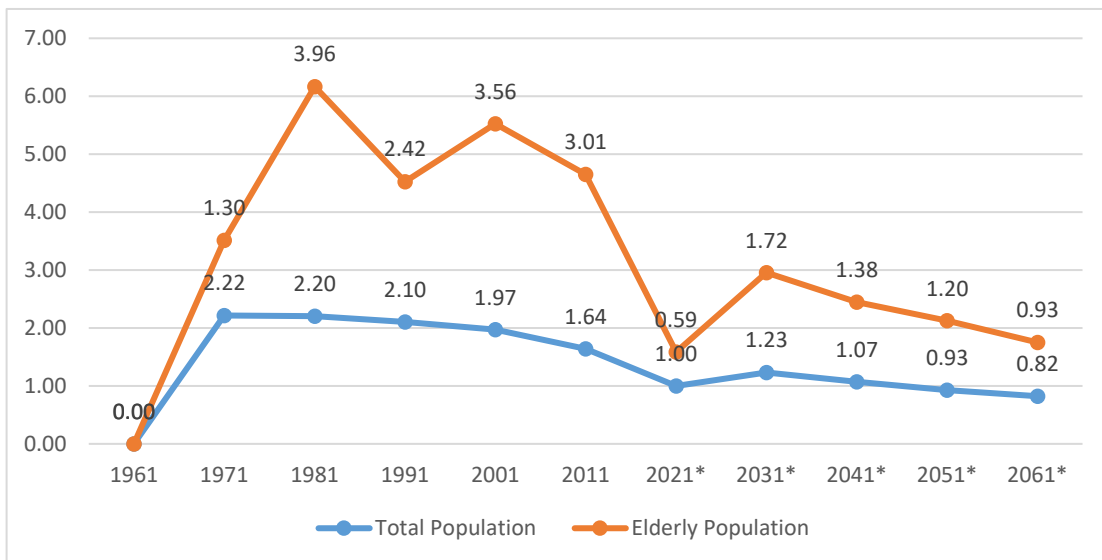


Source: Estimated and Constructed by the Researcher from Population Enumeration Data of Final Population, Government of India, 1961-2011.

Note: \* Forecasted years (2021-2061) using increasing incremental population method in Excel 2013

The exponential growth rate of the elderly populace has been the highest for India in 1981. Though it has come down and fluctuated, it is still much higher than the exponential growth rate of the total population up to 2011 and in all the projected years up to 2061. This means that in the upcoming years, the challenge will be more grievous.

**Figure 3.7 Comparison of the Exponential Growth Rate of the Total Population and Elderly Population in Kerala, 1961-2061 (in Percent)**

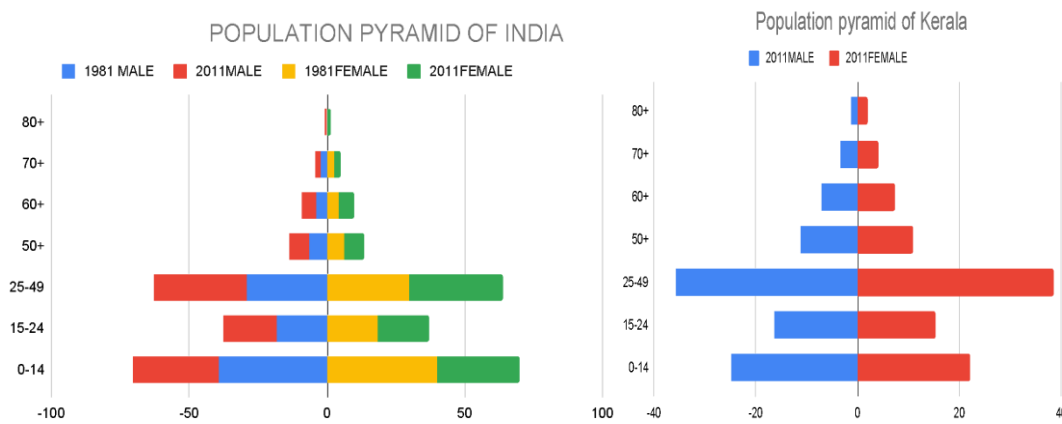


Source: Estimated and Constructed by the Researcher from Population Enumeration Data of Final Population, Government of India, 1961-2011.

Note: \* Forecasted years (2021-2061) using increasing incremental population method in Excel 2013

Kerala has experienced the highest exponential growth rate of elderly populace in 1981 because of the significant growth in senior population. The year 2001, on the other hand, exhibits a somewhat slower growth rate, followed by fluctuations in subsequent years. In the projected years since 2031, the exponential growth rate of elderly and the total population of Kerala has demonstrated a more or less a stable path without much fluctuations, though the gap between the two rates still continues.

**Figure 3.8 Analysis of Population Pyramid, 1981 and 2011.**



Source: Constructed by the Researcher from Population Enumeration Data of Final Population, Government of India, 1961-2011, using Google Sheet 2013.

A point to be noted is that, if we take the whole population of India, the sex ratio is favourable to men, but it is favourable to women if we take the 60 plus category. This trend regarding male and female population has been the same since 1961. An analysis of the decadal growth rate of all India population showed an increase from the year 1921 to 1981 and since then the rate of growth started declining. Young age population showed an increasing trend up to 1971. But it started declining from 1981 onwards reaching 29.5 percent in 2011. The study of age composition is helpful in determining the proportion of the labour force in the total population and also the dependency ratio. A high proportion of children only reflect a large proportion of unproductive consumers. To reduce it, it is essential to bring down the birth rate. Working age population, which was very high in the early periods declined to 53.3 percent in 1961, but since then it started increasing and reached 62.5 percent in 2011.

The percentage of population above 60 was very low at one percent in 1911 which increased to 1.5 percent in 1931. Based on the census report, elderly population has marked a steady increase in the Indian population since 1961. But in 2011 the percentage of elderly population was 8.6 percent. The continuing population growth in India during the period after independence has been accompanied by a marked increase in the number of people aged 60 and above. According to the data available from the decennial census, the percent of the aged has been increasing at a steady rate. Much of the reason for the

growth of India's elderly population is expected to comprise people with adverse life course experience clouded by excessive socio- economic backwardness. In response to the growing changes in age composition and faster ageing, the central and state governments in India have adopted a set of policy initiatives to help the elderly people.

Age sex pyramid shows that Kerala is dramatically changing its ageing structure of population. Kerala is leading with the highest proportion of working age population and 60+ elderly, but has also recorded a significant decline in the growth of population of children among the age group of 0-14. This lowest rate for percentage distribution of population in the 0-14 group is very relevant in the case of Kerala as it clearly points to lowest fertility rates among the Indian states. On the other hand, Kerala has the highest 60 plus population, which shows that the life expectancy is very high. Coupled with these facts, it can be said Kerala is aged.

**Table 3.5 Share of Elderly Population in Total Population by Gender and Place of Residence in India, 1961-2011 (in percent)**

Years	Male	Female	Rural	Urban	Total
1961	5.5	5.8	5.8	4.7	5.6
1971	5.9	6.0	6.2	5.0	6.0
1981	6.4	6.6	6.8	5.4	6.5
1991	6.7	6.8	7.1	5.7	6.8
2001	7.1	7.8	7.7	6.7	7.5
2011	7.7	8.4	8.1	7.9	8.6
2004-05*	6.9	7.5	7.3	7.0	7.2
2007-08*	7.3	7.7	7.6	7.2	7.5

Source: Population Census Reports of India, 1961-2011, NSSO Survey 2004-05 and 2007-08\*, SRS (Sample Registration System) Statistical Report 2011

The growth rate of elderly was increasing over the years. It was 5.6 percent in 1961 and by 2011, it increased to 8.6 percent. Improved life expectancy has contributed to an increase in the number of people in the age group of 60 +. According to the Census of India, the ageing scenario depicts difference in rural and urban India. India is regarded as one of the countries in the world where men outnumbered women at all ages till old-old age. One of the main social effects of extension of life in later life is the extended period of widowhood for women. Widowhood often lowers the socio-economic status of women and illiteracy / low level of education becomes the barrier for their economic and

social security. Growth rate of elderly is quite high in rural areas when compared with that of the urban areas. Due to rapid urbanization from the 1990's onwards, urban dwellers became more in number and this can affect the living conditions of the elderly population in India. As a result, elderly population is more in rural India than urban areas. Kerala leads all other Indian states in the proportion of women over 60+ years.

Demographers categorise the old in to three, viz, young- old (60+), old-old (70+), and oldest- old (80+). Among them, the proportion of young old group to the total population is high as compared to 70 + and 80+ populations, because of the increasing number of median age group (working age population) of the Indian population and this high proportion of 60+ in relation to the other two categories is quite natural, because of the life span. The elderly population in the old-old group was only 9 million in 1961 and it rose to 29 million in 2001. In 2001, the population of the 80+ age group increased to over 8 million who were of major concern in our society (Census, 2011). The 80+ population was less than the other two groups because of high age specific death rates of the old-old group. The volume of supportive socio-economic and emotional infrastructure needed for this fast-growing population is huge and it's a big challenge for the planners in the years to come.

**Table 3.6 Share of Elderly Population in Total Population by Age, Gender, and Place of Residence in Kerala, 1961-2011 (in percent)**

Year	Number Of Aged ('000)			Place of Residence		Gender	
	60+	70+	80+	Rural	Urban	Male	Female
1961	986	363	85	5.89	5.55	5.65	6.02
1971	1328	496	125	6.26	5.99	5.97	6.47
1981	1910	712	186	7.59	7.13	7.15	7.84
1991	2574	1001	290	8.97	8.62	8.33	9.29
2001	3487	1572	449	10.5	10.4	10	11.62
2011	2,416,805	1,234,739	541,849	12.58	12.53	11.8	13.3

Source: Population Census of India, 1961-2011

This table shows the increasing growth rate of the old age population in Kerala. It is higher in rural areas than urban areas in Kerala. Among the proportions, 80+ populations to total population are less as compared to 60+ and 70+ populations, because of the high

age specific death rate of 80+ population. Again, the proportions of elderly women exceed that of their male counterparts. It is because of the greatest female longevity at the very old ages. Estimates say that the expectation of life at birth has been consistently higher among females in Kerala where it is not true for India as a whole. In Kerala, the majority of elderly females are widows. Thus, elder women of Kerala are doubly marginalized due to the combined effects of ageing and widowhood, which is considered as a special group to get priority in any national policy for the elderly.

### **3.2.4 Characteristics of Elderly Populace in Kerala**

The most developed state of Kerala experienced through demographic transition and has undergone the ageing process, across the different stages of demographic transition. From 1980's onwards, demographers began to focus on ageing in Kerala. As discussed, among all the Indian states, Kerala is holding the maximum proportion of elderly in its population (12.6 percentage) against the national average of 8.6 percentage based on population Census of India, 2011. Ageing scenario is unique in Kerala among the Indian states, which resembles the ageing characteristics of the world. This section examines the demographic, structural and socio- economic characteristics of elderly population as reflected in the important secondary data sources.

#### **3.2.4.1 Demographic Factors Responsible for Ageing Process in Kerala**

An important effect of demographic transition in the state is the change in the age structure of the population from young to old age. Due to dependence for meeting the personal requirements, old age is sometimes called the 'Second Childhood'. It is also called 'Second Demographic Dividend', which arises due to adult longevity and on account of the saving character of old aged and related capital accumulation among them, to meet their unexpected needs of life or for old age care. On an average, a woman in Kerala ends up producing only 1.8 children displaying below replacement level of fertility. This replacement level of fertility was attained by Kerala even by the 1990's and is ahead of earlier before other states of India. Kerala registered the lowest growth rate of population in the last one decade. Zero Population Growth (ZPG) is a demographic condition in which a population either grows nor declines, because the number of births in the year equals the number of deaths (SRS, 2009). In effect, the

population growth rate is equal to zero. Kerala passed the ZPG in the year 2000. Basic demographic features responsible for fast aging process in Kerala are:

**Table 3.7 Demographic Factors of Ageing process in Kerala.**

Year	Population (In lakh)	Birth Rate	Death rate	Life Expectancy at Birth		Sex ratio
				Male	Female	
1961	169.04	-	-	46.2	50	1022
1971	213.47	31.1	9.0	60.5	61.1	1016
1981	254.54	25.6	6.6	60.6	62.1	1032
1991	290.98	18.3	6.0	66.9	72.8	1036
2001	318.39	17.3	6.6	68	74	1058
2011	333.88	15.2	7.0	71.40	76.30	1084

Source: Sample Registration Survey, Office of Registrar General, Population Census Reports 1961-2011.

Initially, Kerala has experienced a higher population growth rate. It is contributed by the very high fertility and very low mortality. The decline in growth rate in later years is due to the reduction in fertility rate. Though both the birth and death rates increased in the beginning (1<sup>st</sup> stage of demographic transition), it declined in the last few years (in the 3<sup>rd</sup> stage) and the life expectancy at birth among males and females increased gradually, but is lower for males when compared with females. As a consequence, the number of widows (marginalised elderly females) in Kerala has increased which had an additional socio – economic implication in the society. Also, high sex ratio for women makes it a more vulnerable situation when old, than men.

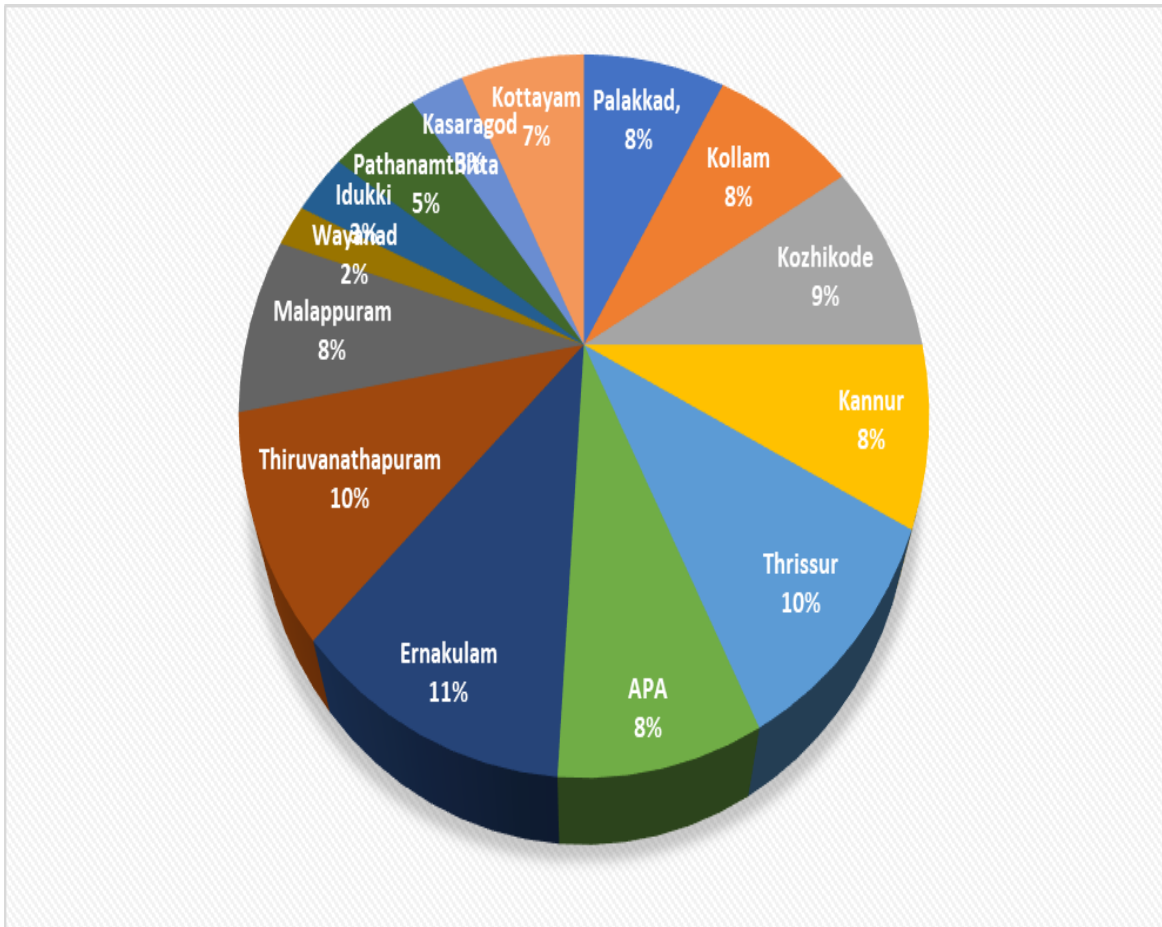
Young age dependency ratio has been continuously declining and attained a level which is less than half of the rate in 1961. An increasing of the old age dependency ratio over the census years indicates the rising trend of elderly population in the economy. In effect, as there is no large change in the dependency ratio, the need demand for service by the society will require a radical shift from the childcare services to old age care. The index of ageing has increased because the upper indicator of population aged 60 and above has a rising trend in Kerala.

Age structural transition is a process and consequence of shifting age structure from a young aged population to old aged population. This is an integral part of a demographic transition and its trajectories are determined by the timing and speed of fertility and

mortality rates. To Sax, during the early stages of demographic transition, both fertility and mortality rates are high and constant, resulting in a constant age structure. In the next stage, when mortality declines and fertility is constant, a large share of the country's population becomes young resulting in a high dependency ratio. Later, when fertility starts declining, cohorts of high fertility regime move into the working age leading to decline in dependency ratio. In the final stage, both fertility and mortality reach the lowest level and the share of the old age population increases. Proportionally, there is also an increase in the dependency ratio (Sax's Theory of Demographic Transition, 1956). Apparently, Kerala has entered to the final stage of the demographic transition during the last few decades. Thus, at present, the ageing scenario of Kerala has particular interest in the present time, and policy formulation for the aged is of great importance, are the rest of the country will also experience two similar states of affairs in the coming decades.

Census data reveals the point that; Kerala's elderly population is growing at a rapid rate. Under this circumstance, the problems of the elderly is a newly emerging issue in India and the ever challenging problem in Kerala. Kerala always resembles the ageing characteristics of the world. The share of the elderly population has been increasing in the case of Kerala and it has been growing faster than that of all India levels. So, the threat of population ageing is more severe in the case of Kerala than in the rest of the country (Sharma, 2004). The incremental pace of the elderly population is at the peak level at present based on its decadal growth rate, where the projected value shows a declining trend. The elderly population increased 6 times more in 2011 than in the year 1961. It has increased 8 times within the 100 years of history of Kerala and reveals the fast speed of its growth. The percentages of elderly in the total population warn economists and policymakers to address this grave issue.

**Figure 3.9 District-Wise Distribution of Elderly Population in Kerala, 2011.**



Source: Calculated by the Researcher from Population Enumeration Data of Final Population, Government of India, 2011.

#### **3.2.4.2 Characteristics of Elderly Population in Kerala: An Analysis**

From the review of literature, it is understood that the bequeath nature of the elderly differs with respect to age, gender and place of residence (BKPAI, 2011; Pal, 2015; Lakshmanasamy, 2012). On the other hand, the proportion of elderly receiving care and protection is largely dependent on their socio-economic status, as the ageing process is the same (WPA, 2019). So, a detailed study of elderly characteristics across age, gender and place of residence is apt to analyse the current ageing scenario of Kerala.

**Table 3.8 Salient Features of Elderly across Age, Gender, and Place of Residence in Kerala, 2011  
(in percentage)**

Features	Variables	Age			Gender		Place of Residence		Elderly Households to Total Population (%)
		60+	70+	80+	Male	Female	Rural	Urban	
Elderly Head of the household		60.62	29.64	9.75	67.32	32.68	51.72	48.28	59.01
Social Level	SC	61.83	26.99	11.18	42.92	57.08	59.04	17.58	7.76
	ST	61.10	26.80	12.10	46.80	53.20	87.82	12.18	1.06
Religion	Hindu	57.59	29.60	12.81	44.00	56.00	50.11	49.89	59.51
	Muslim	62.21	27.28	10.51	46.20	53.80	47.51	52.49	17.24
	Christian	54.31	30.68	15.01	46.41	53.59	62.17	37.83	22.68
	Sikh	57.54	28.39	14.07	48.85	51.15	47.83	52.17	0.01
	Buddhist	41.91	34.44	23.65	35.68	64.32	69.29	30.71	0.01
	Jain	55.47	31.99	12.54	41.16	58.84	43.41	56.59	0.01
	Others	65.20	24.19	10.61	59.12	40.88	47.61	29.37	0.02
Marital Status	Never Married	55.03	30.14	14.83	30.51	69.49	46.19	53.81	2.64
	Married	67.30	25.57	7.12	65.75	34.25	52.89	47.11	60.75
	Widowed	41.07	36.14	22.79	11.07	88.93	51.92	48.08	35.70
	Separated	70.12	23.28	6.60	25.01	74.99	58.12	41.88	0.74
	divorced	67.13	23.79	9.08	18.99	81.01	51.44	48.56	0.17
Educational status of elderly	Illiterate	47.22	34.37	18.41	19.43	80.63	73.24	10.19	18.02
	literate	60.98	27.89	11.13	41.61	58.39	67.29	17.31	81.98
Disabled elderly		43.80	33.44	22.76	45.01	54.99	55.38	44.62	5.34
Number of Elderly	1				42.83	57.17	51.69	48.31	71.95
	2				96.52	03.48	53.65	46.35	26.83
	3				23.67	76.33	49.60	50.40	1.14
	4+				71.20	55.91	44.81	55.19	0.08
Total Number of Households with Elderly					58.26	71.12	52.18	47.82	41.09
Migrated elderly		58.50	29.06	12.44	37.61	62.39	68.36	16.03	48.16

Source: Calculated by the Researcher from Population Enumeration Data of Final Population, Government of India, 2011

In Kerala, the majority of the elderly belong to the Hindu religion (60 percent), followed by Christians (23 percent), and Muslims (17 percent). Other minorities are less than one percent. Elderly Buddhist persons are more octogenarians and fewer hexagenarians, is against the usual distributive pattern across old age groups. Elderly females and those residing in rural areas are greater in proportion. Muslim elderly show an urbanized character and Christians show a ruralised character, maybe because of their religious beliefs / and preference for a peaceful lifestyle. All religions registered the gender gap, and females outnumbered males irrespective of the place of residence. Also, there has been some twofold upsurge in the Buddhist religion. The elderly of SC and ST category consists of 8 percent and OBC and general category together is 92 percent of the Kerala elderly. The distributive pattern of age and gender gap is same, except that they are more rural in character. ST elderly are more visible in the rural areas than SC. It is because the reserved wish may force them to live in rural parts of the society.

The marital status and family structure deeply affect the living of the elderly in Kerala. Marital status has a strong effect on the situation of elderly parents with regard to the availability of family care and support. Among the sample elderly, males are significantly higher in the 'currently married' (65.75 percent) category. And among the widowhood category (36 percent), females are significantly higher in the widowhood (88.93 percent). In the case of marital status of the elderly, currently married are seen more in the rural than urban areas. Early marriages, relatively low female age at marriage and long-life expectancy at birth are the reasons for it. In other words, this paved the way for the emergence of the elderly female headed households (FHH). Basically, FHH are two types, viz, de facto and de jure. De facto emerged due to migration and de jure due to widowhood, divorce, separation and because of being single. Hence elderly FHH is in the de jure category. However, at times FHH is for name's sake only, to avail various government schemes by male members of the family. Nearly 60 percent of elderly are head of the households (HHH) in Kerala. It is basically their life experiences and asset holding tendency where it created in their saving life and passed it hereditarily. Elderly headed households are women in rural areas than urban counterparts. It is based on the fact that the rural elderly either enjoy more decision-making powers or maintain assets as a part of capital accumulation for unmet needs and the involvement of the rural elderly

in economically productive activities is relatively high. As the FHH is increased, the male dominance in heading of the household reduced to an extent. Males HH are twice greater than female HH, which is determined under conditions of the proportion of age.

Except the unmarried elderly, all elderly in other categories of marital status wish to live in the rural village area. The unmarried elderly women lost their beliefs about married life and migrated to urban towns for getting care and protection from the institutional caregivers.

Education is human capital, which is transferred through generations. In the case of the aged populace, 82 percent are literate. But majority have primary education and few have professional education. Young old are more literate than the other two old age groups. Also, the gender gap is more vulnerable for the illiterate than literate once. Elderly Females surpassed male populace as 81 percent and 59 percent for illiterate and literate respectively.

Migration is defined as the movement of people between countries or regions. Data reveals that 48 percent of the elderly experienced it in seek of care and protection from their migrated children and to avoid loneliness. Mainly rural and female elderly did it naturally. Due to the improved standard of living of their children, they are forced to migrate to urban cities or outside the country. And female elderly are good in keeping the social connection and household jobs. Apart from the altruistic mind of children, the amendment of MWSC Act, 2019 has been instrumental in advancing care to the 80+ elderly.

As the age progress, a number of disabilities develops in the fag end of life. In Kerala, 5 percent of elderly lead their life with the disabilities related to vision, hearing, walking, communication, chewing, cognition, self-care/memory loss and so on. It may be one or multiple in number. It increases as the age increases. Hence, the incidence of disabilities for 80+ are higher than other age categories. Also, females suffer more from disabilities than the male elderly. According to the Kerala Disability Census (2015), aged persons with locomotor disability tops 43 percent followed by multiple disabilities 13 percent. Persons suffering from Alzheimer's were 35,041. In Kerala, the number of senior citizens having disabilities and living in institutions is 4,260, out of which 2,352 are female and

1,908 are male. Also, there are 570 persons who are more than 80 years old. Number of households in which all members are senior citizens is 32,953 which is 5.27 percent of total households (Economic Review 2018, p.212). Disabled elderly are less in urban area due to advanced medical facilities. In Kerala, 41 percent of households have elderly inhabitants. The households with single elderly are 72 percent and with too elderly persons is 27 percent. The two emerging issues of Kerala households are more than 1 percent of households are living with more than four elderly members and the other is the emergence of elderly family member households without a non-elderly member (all are dependents without an independent member). It increased the demand for old age care from the institutional care givers. Hence, households with more than 4 elderly people seem to live in the urban areas and others prefer the rural areas. In other words, at present Kerala society experiences an ‘age of ageing’ era, so that the aged (young old) are forced to take care of the aged itself (old-old and oldest old).

### 3.2.5 Measures of Ageing in Kerala

The old age dependency is measured through various measures. Earlier, it was based on the number of middle-aged persons, who are the upcoming elderly. But later when the numbers increased, it is measured through the young age and old age dependency. Furthermore, it is measured through the ageing index.

**Table 3.9 Young Age Dependency, Old Age Dependency and Index of Ageing in Kerala.**

Year	Young age dependency	Old age dependency	Index of ageing
1961	83	11.3	13.69
1971	75.2	11.6	15.45
1981	61.5	13.2	21.46
1991	47.0	14.1	30.02
2001	42.2	16.1	38.19
2011	31.0	17.4	54.2

Source: Census Reports of India, 1961-2011

The demographers together adopt the index of ageing as the oldest measure of ageing. This index shows at what rate the young age population in the society can support the

old age. The value of the index shows a higher value over the years as the growth rate of old age is increasing at an increasing rate and the young age is increasing at a decreasing rate.

**Table 3.10 OADR of Elderly Population across Age, Gender and Place of Residence in Kerala, 2011.**

Census Year	Age			Gender		Place of Residence		Total OADR
	60+	70+	80+	Male	Female	Rural	Urban	
2011	10.62	5.42	2.38	17.41	19.35	18.55	18.29	18.42

Source: Calculated by the Researcher from Population Enumeration Data of Final Population, Government of India, 2011

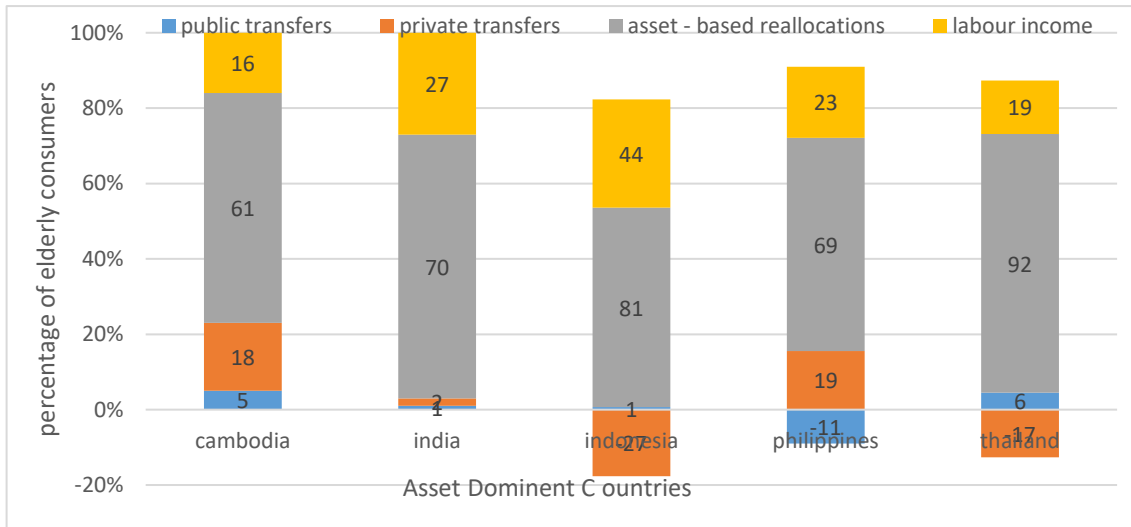
According to the Population Census of India, Old Age Dependency ratio (OADR) refers to the ratio of the population above 60 years of age to the population in working ages (15-64) multiplied with 100.

### **3.3 Bequest Transfers by the Elderly**

Elderly population (current generation) bequeaths to their children and grandchildren (future generations) a wealth of tangible assets and knowledge. Also, debt transfers between them. Fostering a balanced approach to financing old age consumption can help to ensure generational equity and fiscal sustainability in the world (SDG 8 & 10). In the low and middle-income countries, elderly secure their financial wellbeing through accumulated savings and family transfers or increase their aggregate capital accumulation (World Population Ageing Report, 2019).

Elderly fund their consumption from four different sources, viz, public transfers (pension, health care, and other social welfare programmes), private transfers (from family members or others), own asset and wealth, and their own labour income. These are clustered in to four again across countries and regions in the world. It includes public transfer dominant, asset dominant, dual balanced (either public or private transfers), and balanced (financing through four sources).

**Figure 3.10 Income Sources to Finance Old Age Consumption in Asset Dominant Countries in the World, 2019.**



Source: National Transfer Accounts (NTA) database, <http://www.ntaccounts.org/>, 2019.

The asset dominant countries experience fewer public transfers and limited private transfers. Thus, assets become the primary source for support in old age. It means that individuals need to save and accumulate assets during old age as Cambodia, India, Indonesia, Philippines, and Thailand. Private transfers are 1/4 of the consumption of the elderly in the eastern Asia, while others are experienced negative (elderly are giving more than they receive) or small values. Labour force participation typically declines as people age. It accounts for 15 to 25 percentage of old age consumption, except for Europe. It is substantial across all clusters. It is relatively high in Ecuador, India and Singapore, where 1/3 of old age consumption is financed through own work. In countries with low intergenerational transfers, population ageing will create a financial pressure on elderly to be self-reliant. Asset dominant countries, where both private and public transfers are projected to remain modest, asset reallocation in favour of the elderly will enhance elderly's consumption in the future.

**Table 3.11 Economic Dependence of Elderly Populace in Kerala, 2013 (in Lakhs)**

Economic Dependence / independence of the Elderly		Age			Gender		Place Of Residence		Total
		60+	70+	80+	Male	Female	Rural	Urban	
Independent		26.6	22.3	13.3	37.5	13.1	22	28.7	23.4
Dependent	Only on spouse	10.2	6	3.8	4.4	10.6	7.9	8.4	8
	Partially on children	20	21.5	19	22.3	19	21.1	17.7	20.4
	Fully on children	37.7	45.3	58.9	31.1	51.8	44.9	36.1	43

Source: Calculated by the Researcher, from KAS 2013

Kerala Ageing Survey (2013) explains the economic independence of elderly populace through self-reporting question and answers. Majority of the elderly is fully dependent in the society. The higher level in this group is marked with oldest old, females and rural elderly populace due to the double marginalised category. Independent group is nearly half of the fully dependent group. On the contrary, independent elderly mainly comes under the young old, male and urban, which is confirms the impact of modernization and male dominant culture in the society. Elderly, who is dependent only on the spouse, is less number shows either the impact of growing widowhood or their preference to depend only on spouse. The emergence of partially dependent group of elderly is the result of demographic and structural changes, productive ageing and even the fear of abandonment of children. The present research measures the economic dependency of elderly through the life cycle deficit/ surplus of the NTA model and propose a better picture about the concept.

**Table 3.12 Ownership of Assets by the Elderly in Kerala, 2011 (in percent)**

Type of asset	Rural			Urban			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Inherited land	42.0	31.9	36.2	32.5	20.3	25.4	39.0	28.2	32.7
Self-acquired land	42.2	11.0	24.2	39.8	11.9	23.4	41.5	11.3	24.0
Inherited house	11.1	16.1	14.0	9.0	7.5	8.1	10.5	13.3	12.1
Self-acquired house	58.0	14.5	32.9	61.5	14.4	33.9	59.1	14.4	33.2
Housing plot	7.5	5.0	6.1	3.0	2.2	2.5	6.1	4.1	4.9
Inherited gold or jewellery	1.7	15.0	9.3	3.3	16.1	10.8	2.2	15.3	9.8
Self-acquired gold or jewellery	6.5	18.7	13.6	6.4	17.0	12.6	6.5	18.2	13.3
Savings in bank, post office, cash	12.4	6.3	8.9	22.9	16.4	19.1	15.7	9.5	12.1
Savings in bond, shares and mutual funds	0.3	0.3	0.3	1.2	0.0	0.5	0.6	0.2	0.4
Life insurance	3.2	0.9	1.9	6.3	2.2	3.9	4.2	1.3	2.5
Don't own any assets	21.6	41.1	32.9	23.4	48.0	37.8	22.2	43.3	34.4
Number of elderly	292	398	690	275	400	675	567	798	1,365

Source: BKPAI Survey Kerala, 2011

The elderly populace accumulated property mainly through two ways. In one way, the past generation transfers assets mainly as inherited property. Secondly, assets are acquired independently. Their assets are mainly in the form of land, house, housing plot, jewellery, savings, cash, bonds, shares, mutual funds and life insurance. The provision of inherited land holding elderly is less in number as compared to the self-acquired land

holders in urban Kerala. Mainly, inherited land is owned by males rather than females, as males are considered the heads of houses in traditional society. The moveable assets like land, house cash, mutual funds, bonds and shares are foreseen among the males than their counterparts. On the other hand, the moveable but dead asset like fold is mainly with the females. The rural elderly depend on inherited property. Hence, the males, especially in urban areas are the active partners of asset accumulation, while the females are passive in character.

**Table 3.13 Elderly Consumers in Kerala, 2011 and 2013 (in percent)**

Type of Income	Source Of Income	Age			Gender				Place		Total
		60 +	70 +	80 +	M	M*	F	F*	U	R	
Labour Income	Employment	20.7	11.7	10.8	22.7	13.8	11.8	6.1	12.2	17.6	16.4
Public Transfers	Pension	28.5	40.6	39.3	32	38.4	35.2	40.1	36.3	33.2	33.9
Income From Asset	Interest	0.8	0.7	1.0	1.2	-	0.5	-	1.9	0.5	0.8
	Rent	1.0	1.5	1.3	0.9	-	1.4	-	1.2	1.2	1.2
	Property	7.0	7.7	5.9	9.5	19.9	5.2	3.8	2.1	8.4	7
Private Transfers	Remittance	7.7	8.3	6.5	7.5	-	7.8	-	4.7	8.5	7.7
Others Sources		24.7	21.6	25.1	18.7	17.1	27.5	5.7	31	21.8	23.8
Income Less Elderly					-	25.3	-	50			

Source: Calculated by the Researcher, from KAS 2013

\* BKPAI Survey Kerala, 2011

With the rising demand for medical facilities in the old age, the high medical cost could impose pressure on government and family budget, as ageing of the population could lead to a drastic shift in consumption and saving behaviour not only of the elderly but also of all those whom they depend for their consumption. Public transfer and labour income are the main sources of income for the elderly in Kerala, while the income from assets and private transfers are at the national level. The Kerala elderly depend on public transfer in the form of old age pension, widow pension, agriculture pension, and so on,

which is Rs. 1600 for young old and old-old and Rs. 3100 for the oldest old respectively. In this sense, the public transfers are the same in the hierarchical society. In order to get care or prefer to be independent, the aged are forced to do employment not only by preference but by compulsion (BKPAI, 2011). The private transfers received by the elderly are less in number in the land of migration, Kerala. It shows the absence of financial support from the informal caregivers. Thus, Kerala is not an asset-dominant state in India because of the existence of culture and traditional values in the society.

In KAS (2013), the following three statements are used to capture the bequest opinions of the elderly.

1. “Elderly should transfer their whole property to their children within their life”(Altruistic).
- 2.” Elderly should keep one of the shares and remaining property can be transferred to their children within their life” (Strategic).
- 3.Elderly should keep their whole property and transfer only after their death” (Accidental).

**Table 3.14 Bequest Opinion of the Elderly Population in Kerala, 2013 (in percent)**

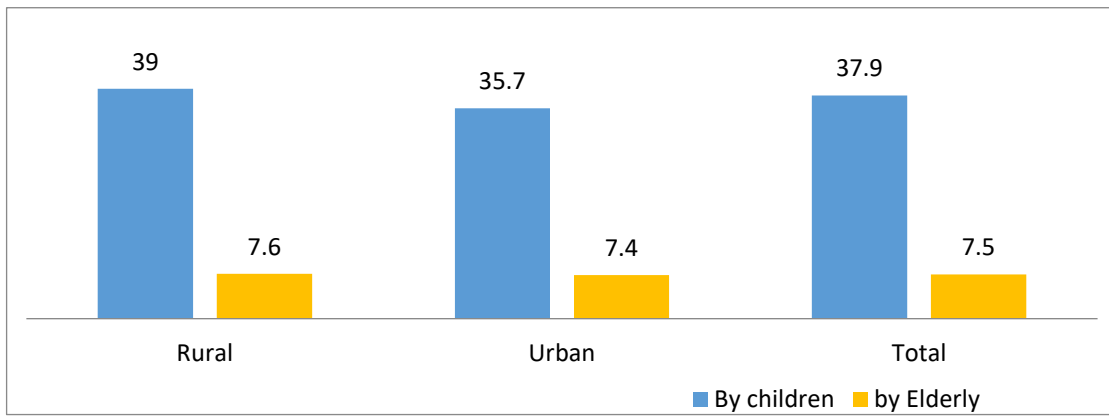
Type of Bequest Opinion	Age			Gender		Place of Residence		Total
	60+	70+	80+	Male	Female	Urban	Rural	
Altruistic	35.3	34.9	33.1	36.8	39.6	30	40.7	34.9
Strategic	35.3	34.9	33.1	35.9	34.1	30.7	36	34.9
Accidental	56.7	53.0	41.7	56.8	51.0	57.7	52.3	53.5

Source: Calculated by the Researcher, from KAS 2013

Based on the statements used in KAS, in Kerala, the majority of elderly have accidental bequest motives because of the long life expectancy and insufficient old age care which created a belief that no one can be trusted and that they have to be independent themselves. As a result, no elderly can trust and transfer their asset to the next generation for receiving care. The young old group strongly believes this. However, females and rural elderly have altruistic perceptions and believes in traditional methods of asset

transfers. At the same time, to live at present era and overcome the dizziness of life, elderly follow a strategic behaviour in asset reallocation. In KAS (2013) ask their opinion through self-reporting questions. To get a more in-depth knowledge about their motive, the present research collected it with several statements based on 5-point Likert Scale.

**Figure 3.11 The Monetary Transfer of the Elderly Populace in Kerala, 2013.**



Source: Kerala Ageing Survey (KAS), 2013.

On the contrary of the above opinions the Figure proves that there is financial transaction happening between the old and children, and it is high in rural areas. It means an economic transfer occurred between them. But it is very less between the elderly and other elderly households.

### 3.4 Informal Old Age Care and Elderly

Former UN Secretary-General Ban Ki-Moon, pointed out in the preface to the World Population Ageing Report (2019) that the society and economic implications of this phenomenon are profound, extending beyond the individual older persons and immediate family, touching broader society and the global community in unprecedented ways.

The concept old age care is understood fully by means of information about the informal formal old age care. The informal care is provided by the informal caregivers or members of social institutions like family, community and society. The main caregivers are children, spouses, relatives, friends and neighbours. The literature review helped to realize the fact that the elderly populace is more satisfied with informal old age care,

more than formal old age care. The speciality of informal old age care is that it varies between the elderly person to person in terms of their socio-economic status.

**Table 3.15 Informal Old Age Care concept of ‘Best Place to live with ‘in Kerala, 2013 (in percent)**

Best place to live with...	Age			Gender		Place of residence		Total
	60+	70+	80+	M	F	U	R	
With spouse only	30.8	24.7	17.9	35.0	21.3	36.5	24.6	27.1
With married daughters	19.7	21.7	26.3	18.4	23.4	18.1	22.1	21.2
With married sons	43.9	47.1	49.9	41.9	48.5	39.8	47.3	45.7
With unmarried children	3.1	3.5	2.9	3.1	3.3	2.9	3.3	3.2
With other relatives	1.4	1.3	1.1	0.7	1.8	1.5	1.3	1.3
Alone	0.8	1.3	1.8	0.6	1.4	0.8	1.1	1.1
Old age homes	0.3	0.3	–	0.3	0.3	0.4	0.3	0.3
No. of elderly	4048	2403	964	3143	4272	1566	5849	7415

Source: Calculated by the Researcher from KAS, 2013.

To the question of the best place to live in and to feel comfortable and strong-minded, the elderly were asked about various situations as shown in Table 3.15. and their responses are given in percentages. Absence of a son and widowhood are two important reasons cited for not considering Kerala as a best place to live in. The elderly depend on their married daughters. It shows a reverse picture of the traditional provision of care. The female elderly populace prefers to live with their married and unmarried daughters with a belief that, it is a better way to seek good care and support. The abandoned, childless and elderly who prefers independence either live alone or with the relatives or in old age home. At present, this kind of preference is revealed among them in the society. Unfortunately, the urban elderly are found to live in this pattern without generations due to the impact of migration. The rural elderly are seekers of care in the traditional way.

**Table 3.16 Opinion on the responsible informal caregiver by the elderly in Kerala, 2013 (in percent)**

Responsibility Of Old Age Care	Age			Gender		Place Of Residence		Total
	60+	70+	80+	Male	Female	Rural	Urban	
Self	10.3	9.9	6.9	11.6	8.3	8.4	14.8	9.7
Children	46.1	45.7	45.7	45.7	46.0	46.6	43.3	45.9
Son	34.7	34.8	32.6	34.0	34.8	35.4	30.7	34.4
Daughter	4.3	4.4	5.2	3.6	5.0	4.2	5.3	4.4
Others	1.1	0.8	0.6	0.8	1.0	0.9	1.1	0.9

Source: Calculated by the Researcher from KAS, 2013.

According to the opinion of the elderly populace, children have the prime responsibility to take care of them because their whole middle-aged earnings are invested in the education and well-being of the children. As per the tradition and culture of our society, the responsibility of elderly care vests on the son rather than the daughter's. As a result, the daughters-in-law are the traditional caregivers of old. On the other hand, the female elderly populace prefers daughters to sons. Because, they believe that daughters take care of them than daughters-in-law, as they come from another family background. The elderly preference is again changed between the places of residence. The rural elderly give preference to sons as the traditional caregivers. But urban elderly like daughters due to the structural changes of society. In the abstract, there are changes in the attitude of the elderly from traditional caregiver son to daughter. It gives a positive outlook on the place of females in modern society.

**Table 3.17 Family Support to the Aged in Kerala, 2013 (in percent)**

Family Support	Likert Scale				
	1 Always	2 Mostly Almost Always	3 Someti mes	4 Rarely	5 Never
During the past 10-15 years how often and how much do you feel that your family has contributed to your health and overall wellbeing?	75.6	16.5	2.8	0.6	0.6
Are you satisfied with the help you receive from your family when you have a problem?	76.7	12.1	4.5	0.2	0.1
Are you satisfied with the time you and your family spend together?	81.2	10.8	3.7	0.4	0.5

Source: KAS, 2013

KAS (2013) explains family support with the help of three questions based on the Likert scale in Kerala. The majority of them answered ‘always’ with respect to the questions regarding the care and support they receive from the family. This kind of measurement is inadequate. So, the present study measures family support as the summation of informational, financial, emotional, social, and esteem care to the elderly person, which is yet to be estimated.

### **3.5 Formal Old Age Care and Elderly**

Formally it is the responsibility of the government to ensure sufficient care to the senior citizens of our country. Most of them are out of the informal care circle, due to several reasons. So, this responsibility is vested in the formal caregivers like government, NGO’s, communities and private individuals. At the global level, it is considered as the prime responsibility. The third objective of the ‘UN Principles for Older Persons’ is old age Care. It emphasized that they should benefit from family and community care and protection based on cultural values, access to health care for physical, mental and emotional well-being, access to social and legal services to enhance their autonomy, protection and care, ability to utilize appropriate levels of institutional care providing a

humane and secure environment, and able to enjoy human rights and fundamental freedoms when residing in any shelter, care or treatment facility (UN, 2013).

To access old age care, the Global Age Watch Index (GAWI) was formulated by the Help Age International, the World’s largest NGO (2013). It is measured based on, income security including pension income, poverty rate, relative welfare, GDP per capita, health status including life expectancy at the age of 60 and psychological well-being, enabling environment including social connections, physical safety, civic freedom and access to public transport and employment and education.

**Table 3.18 The GAW Index: Rank and its Value of India in the World.**

Year	GAWI		Income security		Health status		Employment and education or capability		Enabling environment	
	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value
2013	73	35	54	59.4	85	24.4	73	27.9	72	56.1
2014	69	39	71	44.6	87	27	55	29.3	52	65.3
2015	71	40	72	45.9	87	27	55	30.1	52	65.4

Source: Help Age International Report, 2015

Among the southeastern Asian countries, India is considered to be the second in number but matter of providing old age care Indian govt. need to achieve in the near future. The reason for poor rank depends on the low provision of human capital supplies like health, education, employment and environment. The government provision of income security is the maximum level, but the growing number of elderly populations creates troubleshoot. Nowadays employment of the elderly and is high, it is not by choice by economic compulsion (BKPAI, 2011). Also, an to attempt to calculate this for the Indian states, especially Kerala.

In an effort to address loneliness and financial dependency of the elderly and to provide attention towards their health and well-being, the formal caregivers introduce, implement and run many programs. Article 41 of the Indian Constitution guarantees social security for old aged in India (Directive Principals of State Policy) and establishes that “*the State*

shall, within the limits of its economic capacity and development, make effective provision for securing the right to work, to education and to public assistance in case of unemployment, **OLD AGE**, sickness and disablement and in other cases of undeserved want”. In 2007, “the Maintenance and Welfare of Parents and Senior citizens (MWSC) ACT was passed to provide a legal framework in support of the elderly, parents and grandparents who are unable to maintain themselves from their own income and can demand maintenance from their children, inclusive of food, clothing, residence, medical attention and treatment, to a maximum of ₹10,000 per month. The Act provides for a tribunal to receive and take action on complaints. In case the children themselves do not have sufficient means to maintain them, the State governments are expected to provide old-age homes in each district to accommodate a minimum of 150 elderly. An important provision under the Act legally empowers the elderly to claim their property back from their children if the condition of maintenance is not satisfied. In 2009, the Government of Kerala constituted Maintenance Tribunals for each sub division and appointed Revenue Divisional Officers as Presiding Officers by and constituted Appellate Tribunals for each Districts and appointed Collectors as the presiding Officers (Section 7 of the MWSC Act). To review the provisions, its implementation experience and its effect on senior citizens, the Ministry of Social Justice and Empowerment (MoSJE) has set up a committee of experts. The Act was modified in 2018 by adding the name of adopted children as legal heir for providing old age care and so on.

**Table 3.19 Number of Petitions filed by the Elderly in selected States of India, 2011.**

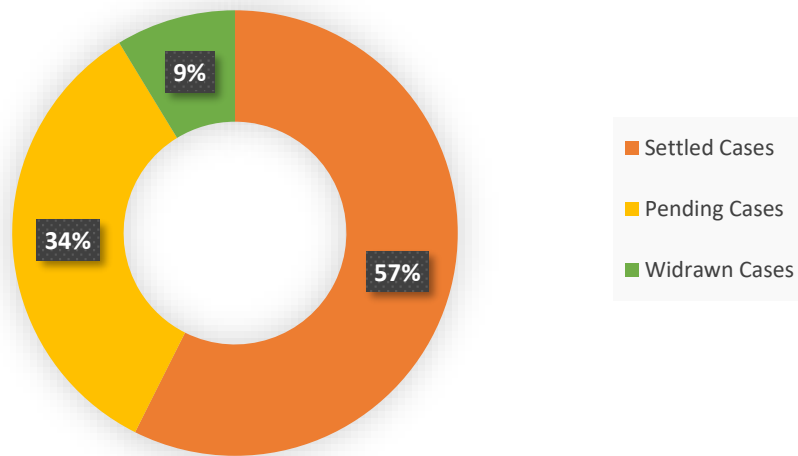
<b>No. of petitions filed and states</b>	<b>Kerala</b>	<b>Tamil Nadu</b>	<b>Punjab</b>	<b>Haryana</b>
Pending cases	597	120	38	13
Cases settled	555	91	70	20
Total number of cases	1152	212	119	33

Source: Ministry of Social Justice and Empowerment, Government of India, 2011.

Through filing petitions against their informal caregivers, the elderly household tries to get informal care with the help of formal caregivers. As compared to states like Tamil

Nadu, Panjab and Hariyana, there is an alarming number of complaints in Kerala may be because Kerala has become the land of elderly households. The pending petitions are more than the settled petitions in Kerala and Tamil Nadu, showing an ineffective treatment to the demand for care by the old aged and the MWSC Act in Kerala.

**Figure 3.12 Distribution of Petitions Filed by the Elderly in Kerala, 2017. (in percent)**



Source: Ministry of Social Justice and Empowerment, Government of India, 2016-17

Figure 3.10 shows an improvement in the number of settling petitions as compared with 2011 (Table 3.19). Elderly households have with withdrawn petitions (8.7 percent) because either their death occurred at the procedure period of filed petition or they think this system wouldn't work to get justice for their future life or it seems that the elderly are forced to withdraw petitions on account of fear of children/ the case is informally settled.

The National Institute of Social Defence (NISD) is an autonomous institute established in 1961 under the Ministry of Home Affairs and was mandated to work for the welfare of senior citizens. Under the National Initiative on Care for Elderly (NICE), NISD contributes to improved care for the elderly through awareness creation, targeted interventions and capacity development of relevant stakeholders, identifying and promoting support systems and networking for care of older persons and facilitates

convergence of services from government and other sources. NISD fully depends on grants-in-aid from MoSJE.

**Table 3.20 Number of Elderly Beneficiaries by Different Pension Schemes in Kerala (In crores)**

Year	Indira Gandhi National old age pension	Agricultural Labour pension	Indira Gandhi national disability pension	Indira Gandhi national old age pension for widows	Pension for Unmarried women (above 50 years)
2013	145.2	247.7	257.6	654.7	458.01
2014	542.6	370.8	296.1	841.8	542.9
2015	1074.4	382.8	364.08	1088.8	675.75
2016	2078.6	470.7	361.9	1341.7	833.52
2017	2537.9	541.4	432.1	1438.3	902.27
2018	3833.4	797.7	706.0	2242.2	1407.1
2019	779.6	148.2	138.4	448.6	279.89

Source: Sevana Pension, Department of Local Self Government, Kerala

In 1995 the National Old Age Pension Scheme (NOAPS), and Annapurna Yojana in 2000 aims to provide food security to meet the requirements of those senior citizens who have remained outside the old-age pension scheme. It provides 10 kg of rice free of cost every month to each beneficiary. In 2007, the old-age pension scheme was renamed as Indira Gandhi National Old Age Pension Scheme (IGNOAPS) and covered all families below the poverty line (BPL). Subsequently in 2009, NSAP was expanded to include the Indira Gandhi National Widow Pension Scheme (IGNWPS) covering widows aged 40–64 years, and the Indira Gandhi National Disability Pension Scheme (IGNDPS) for persons with multiple or severe disabilities aged 18–64 years living below poverty line. In 2011, the age limit for IGNOAPS was lowered from 65 to 60 years and monthly pension amount for those 80 years and above was increased. At present 60 and above receive Rs. 1600 per month and 80 and above receive Rs.3100 per month. The Building a Knowledge-base for Population Ageing in India (BKPAI) survey conducted in seven states, showed that among the BPL households the overall awareness of these social security schemes is reasonably high (70 percent). Also, the awareness level was generally higher among older men than older women and awareness generally decreased with the age. The problem however is more with the utilization of these schemes by BPL elderly

(17–20 percent only) and there are significant interstate variations. The utilization of the widow pension scheme even among BPL widows is only around 25 percent.

In India, 19 different ministries of central government provide service to the old age for the states including Kerala. In 1999, the National Policy on Older Persons (NPOP), under the nodal agency Ministry of Social Justice And Empowerment (MoSJE) targeted the welfare, social justice and empowerment of aged persons in India, under the National Initiative on Care of Elderly (NICE), mainly through four cluster activities.

The health care programme for the elderly is being implemented by the Ministry of Health and Family Welfare (MOHFW) from 2011 under the National Rural Health Mission (NRHM). The National Programme of Health Care for Elderly (NPHCE) aims to provide dedicated health care facilities to the elderly through primary, secondary and tertiary health care delivery systems consisting of district hospitals with regional medical institutions. It is meant to be implemented in convergence with the National Health Mission, Ministry of Ayurveda, Yoga & Naturopathy, Unani, Siddha, Sowa Rigpa and Homoeopathy (AYUSH) and the MOSJE, to stimulate the action for geriatric care in the country. NPHCE functions under the control, coordination and monitoring and supervision of the national, state and district cells for non-communicable diseases (NCD).

Ministry of Panchayath Raj (MOPR) is responsible for empowerment, enablement and accountability of Panchayath Raj Institutions (PRIs) to ensure inclusive development with social justice and efficient delivery of services and participatory self-governance, in rural areas. It is effective by the implementation of the Panchayath Extension to Scheduled Areas Act of 1996. In 2014, the Sansad Adarsh Gram Yojana (SAGY) was started to the same.

The draft revised National Policy for Senior Citizens (NPSC) was submitted in 2011, for providing special attention to the elderly women and rural poor. It identifies income security as a key intervention as more than two thirds of elderly live below poverty line. Hence the draft policy recommends a monthly pension of ₹ 1,000 per person to be revised periodically for inflation adjustment. It proposes establishment of a Department of Senior Citizens at the MOSJE and corresponding Directorates in the States and union territories.

Similarly, National Commission for Senior Citizens at the centre and similar commissions at the state level are proposed as laid down in the NPOP. At the community level, the draft calls for active involvement of Block Development Officers and Panchayaths, urban councils or Gram Sabhas in the implementation of NPSC. NPHCE capacity development of medical and paramedical professionals and family-based caregivers in dedicated health care for the elderly. Both long-term and short-term geriatric training courses are also sponsored by the government.

### **3.6 Initiatives of the Government of Kerala**

The role of government of Kerala in the old age care is examined through various programmes implemented in near future. They are mainly five categories; Health security schemes like National Programme for the Health Care of the Elderly (2010), Vayomithram (2011), Arogyakeralam Geriatric Care Project (2008-09), Arogyakeralam Palliative Care Project (2008-09), State's 12<sup>th</sup> Five Year Plan (2012-2017), Kerala State Mental Health Policy (2013), Vayoamruthamin, Mandahasam, Vayomadhuram, Swavalamban"; Physical Security schemes like Travel concession- KSRTC, 'Senior Citizen Friendly', Janamaithri Suraksha Project (2008), Kerala security mission for the aged (2012-13), State Old Age Policy (2013), Age Friendly Panchayat, Second Innings Home Project, Vayoshreshta Samman Award for the Aged; Food Security scheme like Annapurna Scheme (2000); Income security & Health security scheme like Rashtriya Swasthya Bhima Yojana and Comprehensive Health Insurance Scheme (2008), Mahatma Gandhi National Rural Employment Guarantee Scheme (2005), Residential and Day Care Services like Grant to old age homes providing shelter to aged Ex-Servicemen/ widow, Sayamprabha Home project, Integrated Programme for Older Persons (IPOP) in 1992, Institutional services to aged people and so on.

The Vayomithram Project (2017) offers medical attention and assistance to seniors over 65 who live in corporation or municipal districts of the State. Local self-government and the Kerala government collaborated on it. The primary goal of this project is to offer Kerala's elderly population free health care. Their primary offerings include help desk, counselling, palliative care, and mobile clinic services. It emphasises older women in particular. It calls for the implementation of senior-friendly pachayaths to improve the elder population's health and quality of life. It has been launched in Thiruvananthapuram

Manikal Pachayath as "Vridha Jana Saba," under the direction of the Panchayath President. The Aswasakiranam Scheme offers financial assistance to patients who are bedridden and have mental health issues, as well as to their family and primary caregivers. The programme offers care all bedridden patients who require full-time care and gives monthly support of Rs.600 (Government of Kerala, 2023). About 19,600 senior beneficiaries are now receiving support through the programme.

The Swasraya Initiative is designed for older parents in BPL families, particularly mothers, who have to manage household chores and employment in addition to providing care for mentally retarded and differently-abled individuals. The family members of bedridden, mentally retarded, and differently-abled patients receive a monthly payment of Rs. 525 (Social Justice Department, 2024). However, this is not enough to cover all expenses. For these single mothers, the Social Justice Department has created an innovative initiative called "Swasraya" that provides financial help so they can pursue self-employment. If beneficiaries fulfil the minimal criteria of graduating the eighth grade, they will get a one-time assistance payment of Rs 35,000.

In Kerala, where the rate of family breakdown is on the rise, elderly women regularly shoulder the responsibility of childcare. A recent project called Snehapoorvam gives money to people who are orphans or who have lost one parent but are still supported by their family. The financial support for these children's education ranges from 300 per month (for elementary school students) to 1000 per month (for undergraduate students), and is given to elderly grandparents who are frequently the caregivers.

With 20 select police stations at its beginning, the Kerala Police Janamaithri Suraksha programme has grown to 248 stations across the state's 14 districts of the state. The police contact with senior persons over the phone, pay them regular visits, plan field trips and offer advice on their personal issues to help and keep an eye on them. Since many elderly women live alone and are unable to attend to the police station to file complaints, this one-on-one engagement with the police is extremely helpful for them. The programme is pertinent in the current environment when social and familial ties are weaker than ever and loneliness and insecurity are common among the elderly, particularly women.

Arogyakeralam along with NRHM and the Geriatric Care Project was named "Ayurarogym" in the Velinallur block panchayath in the Kollam district of Kerala with the goal of enhancing the health and quality of life of elderly people who work as daily labourers in cashew, rubber, and coir factories retired employees from the public and private sectors, etc. Its main goals are to provide elderly persons with appropriate health care services, safeguard them from the exploitation of private health care institutions, ensure a balanced supply of health care, create knowledge about ageing through counselling, etc. Their main activities are community-based health surveys, training of health workers and Accredited Social Health Activist (ASHA) workers, house visits, conducting geriatric clinics in the Community Health Center (CHC), supply of wheelchairs, walking sticks, spectacles, dentures, counselling, and free supply of medicines for chronic ailments for the economically poor.

The Arogyakeralam Palliative Care Project of the Kerala government is effective throughout the state. The assistance of local self-governments for the aged in this regard is communicable. Its objectives include locating patients in need, providing advice on proper care, caring for the bedridden and terminally ill at home, and providing socioeconomically disadvantaged people with access to the main healthcare system. It operates on three levels: primary care provided at home (700 palliative care units), secondary care provided in hospitals (there are 64 hospitals), and tertiary care provided by community-based organisations (250 palliative care units).

Six priority areas in the health sector are identified by the State Planning Board Expert Committee Report on Health for the 12th Five Year Plan (2012-2017) under the leadership of Dr. K. Mohandas (former Vice Chancellor of Kerala University of Health and Allied Science). 'Improving the services for the elderly's mental health and disabilities' is suggested as the fifth priority in the report. Programmes for mental health, CD and NCD prevention, and e-health have all been proposed as components of a comprehensive health sector plan. According to the reports, the government of India is involved in 63 significant initiatives that are also important to Kerala. One of the prior factors of Kerala State Mental Health Policy (2013) is ageing and health problems.

About 16 large old age homes were started by the Kerala government as a part of the state's security mission for the elderly (2012–2013). This new programme called Vayo Amrutham in 15 Old Age Homes, was started by the Social Justice Department with the help of the Indian System of Medicine Department to treat prisoners who have health issues. Diabetes, Asthma, Skin Conditions, Arthritis, Eye and Ear Conditions, etc. are the majority of instances that are treated as health ailments.

State Old Age Policy, 2013, and the Social Justice Department's latest programme, the age-friendly panchayath, are related. The goal of the plan is to make all the panchayaths in the State age-friendly in order to ensure senior citizens' quality of life, participation, and good health. The Social Justice Department has launched a new initiative called Mandahasam to provide senior residents with free dental care. Seniors who are considered to be below the poverty line are eligible for the benefits under this programme. A client may receive up to Rs. 10,000 in financial aid for tooth repair (Social Justice Department, 2024).

Some of the programmes of social involvement for the care of the aged include medical benefits, railway concessions, preference in bank transactions, seat allotment in the buses, numerous senior citizens associations and organisations like Help Age India. A few hospitals have established geriatric departments (17<sup>th</sup> November, Malayala Manorama, 1999). May 2<sup>nd</sup> is observed as the World Alzheimer's Day. The discovery of Alzheimer's disease in the year 2006. Alzheimer's causes dementia, therefore extra care is required to manage the illness. It is noticed that 2 lakh of India's 40 lakh dementia patients come from the small state of Kerala (23<sup>rd</sup> September, Jacob Roy K, The phrase "Maravi Rogam Vendathu Veedente Swanthwanam", Malayala Manorama, 2001).

A new amendment to the MWSC Act, sections 125, 127, and 128 that favours the elderly to claim from the children the money legally allowed for their survival within 60 days of one's complaint has been made due to the new trend in Kerala of nuclear family arrangements and the tendency to move to urban areas, leaving behind the elderly in a worse condition (11<sup>th</sup> November, "Mathapithakkalku Jeevanamsam", Malayala Manorama, 2002). The Senior Citizens Maintenance Care and Protection Act (MCPA)

is to enable citizens to obtain maintenance from their children to meet their basic requirements and lead a life with dignity (4<sup>th</sup> July, Malayala Manorama, 2009). The availability of new website [www.seniorindia.com](http://www.seniorindia.com) is ready to provide information regarding the statistics of aged persons, the list of old age homes, things to be remembered for preparing the last will, 94 exercises, prescribed diet, healthy way of behaviour towards grandchildren, tips to avoid conflicts in a joint family, hobbies and entertainment for the old etc (BKPAI, 2011).

The Second Innings Home project (2019) aims to convert current government-managed and assisted living facilities into second-inning homes as prototypes, inclusive to all community care. Furthermore, field extension services will be provided by the model home. The pilot project included the development of the government run old age home in Kannur as the model of second-chance housing. By delivering senior individuals with access to basic needs, including food, shelter, healthcare, and recreational opportunities, the project aims to improve their quality of life. The goals of the project are to establish multi-service community age care centres; provide health care, education, legal and psycho-social support, and services; reach the elderly population and those who provide care for them; support caregivers and their families; and carry out psychosocial and public awareness initiatives to create an environment that promotes elder care and prevents institutionalization.

Kerala has the highest rate of diabetes patients in India and among the cases, 19.4 percent of the present cases are in Kerala. Indian Council of Medical Research (ICMR) observed 80 percent of the elderly in Kerala suffer from diabetes. To make Kerala more aging-friendly, the government's Social Justice Department has introduced a new initiative called "Vayomadhuram" that provides free glucometers to senior diabetic patients in the BPL category. As per this proposal, each area's 1000 senior diabetic patients will receive glucometers from the department.

In collaboration with Local Self Government (LSGD) institutions, the Social Justice Department has launched a new project called "Sayamprabha Home," which offers nursery services. Senior adults who are lonely throughout the day can find comfort in these daycare centres' opportunities to socialize with other seniors in their age group, as

well as participate in counselling and yoga and meditation courses. Persons above 60 years of age from the concerned Panchayats / Municipalities / Corporations will benefit from this project. At least 20 beneficiaries from each Sayamprabha Homes can be provided with the services.

**Table 3. 21 Administrative Level Distribution of Number of Old Age Care Nursing Institutions in Kerala, 2015-16**

Districts	Panchayath	Municipality	Corporations	Total
Kasaragod	6	9		15
Kannur	12	31		43
Wayanad	6	0		6
Kozhikode	5	6	14	25
Malappuram	7	14		21
Palakkad	10	10		20
Thrissur	10	21	19	50
Ernakulum	6	48	41	95
Idukki	5	5		10
Kottayam	14	31		45
Alappuzha	7	22		29
Pathanamthitta	24	22		46
Kollam	18	4	8	30
Thiruvananthapuram	18	11	62	91
Total	148	234	144	526

Source: Report on Home Nursing Institutions in Kerala 2015-16, Department of Economics and Statistics, Government of Kerala.

The Vayoshreshtha Award Reiterating the government's commitment to the cause of the elderly, raising public awareness of the issues and needs of older people, and recognising the contributions made by senior citizens are the goals of the Award program. There are ten awards throughout the different categories. These include the Institution Award for Knowledge (given to institutions that research the issues related to ageing), the Institution Award for Service (given to associations that provide services to the welfare of the elderly), the Centenarian Award (given to individuals over 90 who continue to work in social work), the Best Mother Award (given to the best mothers who made a strong effort to raise their children), the Courage and Bravery Award (given to brave elderly people), the Life time Achievement.

In 1992, MoSJE's established Integrated Programmes for Older Persons (IPOP). It aimed to improve the quality of life for senior citizens by offering them access to basic services

like food, shelter, healthcare, and recreational activities, as well as by encouraging a healthy and active ageing process. Local governments, non-profit groups, schools, hospitals, assisted living facilities, and other charity organisations can receive financial help from the IPOP up to 90 percent of the time. A variety of facilities, such as assisted living homes for the elderly, mobile medical units for senior citizens residing in isolated and rural areas, daycare centres, physiotherapy clinics, provision of disability aids, running counselling and helplines, and instruction of high school and college students regarding issues related to ageing are made available in this programme. States have a big impact on its effectiveness. In 2008, it was modified due to the MWSC Act's introduction. In 2014, MoSJE reviewed the IPOP and recommended standardising senior living facilities and establishing rules to ensure that state-run facilities adhere to strict minimum criteria. The MOSJE encourages senior citizen associations to oversee non-governmental organisations that oversee elder care subsidies as part of IPOP. Additionally, the Planning Commission backed a plan to encourage national cooperation between governmental and non-governmental organisations. A project's expenses may be fully funded by the government when it comes to programmes and services for senior citizens offered by schools, universities, educational institutions, and recognised youth organisations like the National Service Scheme (NSS) and Nehru Yuvak Kendra Sanghathan (NYKS). Financial assistance under the Scheme is granted to state and union territory authorities.

As part of a joint venture project, the Government of India and The New India Assurance Company Limited developed the prestigious "Swavalamban" health insurance plan, which offers insurance coverage up to Rs 2 lakhs for those with disabilities for the BPL category. The programme seeks to offer reasonably priced health insurance to those suffering from mental illness, mental retardation, hearing impairment, low vision, leprosy that has been treated, blindness, and motor handicap. The Kerala Social Security Mission of the Department of Social Justice oversees the Scheme through the State Initiative on Disabilities (SID). Rs. 357 is fixed as each BPL elderly person's premium contribution

"Senior Citizen Friendly" refers to a district, city, or panchayath or an area that has been remodelled to accommodate the needs of the elderly and accommodate changes in

infrastructure, health, affordability, and amenities. The first age-friendly district in Kerala is Kozhikode.

# **CHAPTER IV**

## **OLD AGE CARE IN KERALA**

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#### 4.1 Introduction

The old age care comprises informal as well as formal old age care. The Informal Old Age Care Index (INOI) is constructed based on the United Nations Development Programme (UNDP) methodology (UN, 2013), using the details collected from the sample respondents on a five-point Likert scale, and a scoring method is employed. Similarly, the construction of the Formal Old Age Care Index (FOCI) is also based on the UNDP methodology (UN, 2013), which meets the concept of old age care in Kerala. After the construction of informal and formal care indices, an attempt is made to measure the Old Age Care Gap. This chapter addresses the first objective of the present research.

#### 4.2 Informal Old Age Care Index (INOI)

Elderly care and support in Kerala are predominantly informal in nature. It is mainly provided by the informal caregivers like family members, members of the community, neighbours, and friends. In order to understand how much care the elderly receive and how much care they are in need of, the present research constructs an informal old age care index based on the UNDP methodology (UN, 2013). The elderly would like to receive care from their beloved family members and other informal caregivers. But there are constraints in the provision of informal care, especially in modern family life. Also, these constraints differ depending on the extent of availability/ non-availability of care from the informal caregivers. These constraints are taken as the determinants of informal old age care in the society.

**Table 4. 1 Instruments of Informal Old Age Care.**

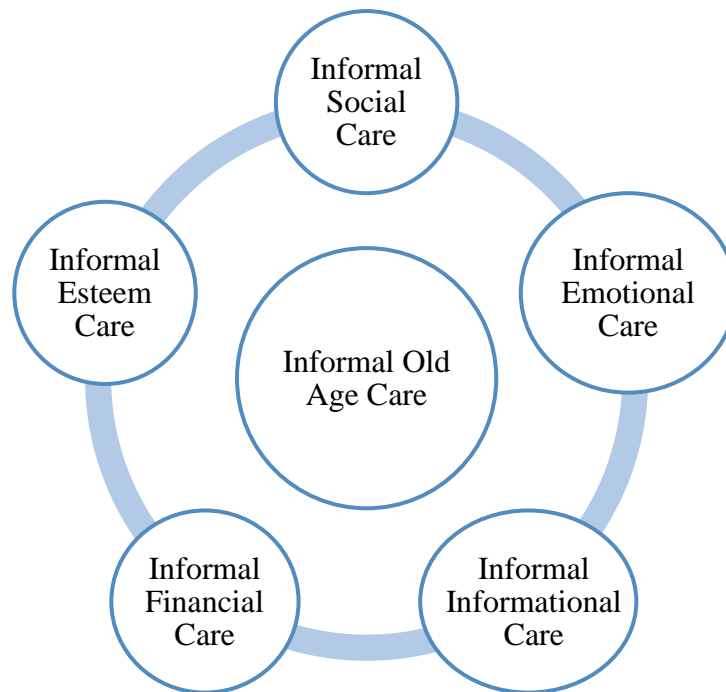
Sl.No.	Statements	Measuring construct
I	1 My life is interesting.	Informal Social Care
	2 Compared with the past, I feel my life is better.	
	3 I am happy with the things that I am doing.	
	4 I think, I have achieved the expected standard of living and the social status.	
	5 I have always achieved success and am getting ahead.	
	6 Most of the time, I can accomplish what I want to do.	
	7 Most of the time, I can manage situations even when they do not turn out as expected.	

II	1	Adult children should provide financial assistance to their older parents.	Informal Financial Care
	2	Adult children should provide financial assistance to their older parents only if they have good relationship.	
	3	Adult children should provide financial assistance to their older parents only when the elderly have insufficient income for their living.	
	4	Adult children should provide financial assistance only when they can afford it.	
III	1	Most of the time, I got technological assistance more than my peers. *	Informal Esteem Care
	2	I am more independent than my peers.	
	3	My mind is always achieving something.	
	4	I am confident during the occurrence of a crisis.	
IV	1	I am happy that I can share information/advice regarding the household spending.	Informal Informational Care
	2	I am happy that I can share information about buying the household durables.	
	3	I feel I can share information with my children in investment decisions.	
	4	I am happy that I can share information to my grandchildren in their decision to buy properties.	
	5	I am happy that I can share information to my children's decision about my grandchildren's education.	
	6	Most of the time, I share information regarding children's decisions on buying vehicles.	
	7	I can share information about my children's decision about my grandchildren's insurance policy.	
V	1	I feel confident in coping up with the future.	Informal Emotional Care
	2	I am satisfied with the contributions of the family member to health and overall being.	
	3	I am satisfied with the help from the family members, when I have a problem.	
	4	Yes, I am happy with the family together.	
	5	I am happy that my children love me.	
	6	I am happy that my children help me.	
	7	I am happy that my children listen to me.	
	8	I am happy that my life experiences are useful to my children.	
	9	I am more self-confident than my peers.	
	10	I am confident with my children.	
	11	I am the role model to my children.	

Sources: Chuan, 2015; \* Bardhan, 2015

Based on the above constructs, the extent of informal old age care is determined using five types of care which are shown in Figure 4.1.

**Figure 4.1 Determinants of Informal Old age Care.**



Source: Constructed by the Researcher

The determinants of informal old age care of the elderly population in Kerala are interlinked and broadly categorised as five forms of care that an elderly person requires in his/ her life at home as well as in the society.

**Table 4.2 The Constructs of Old age care -Descriptive statistics and Cronbach's Alpha.**

Factors	Mean	Std. Deviation	Cronbach's Alpha	Items
Informal Social Care	3.33	0.99	0.916	7
Informal Financial Care	3.83	1.21	0.797	4
Informal Esteem Care	2.95	1.04	0.762	4
Informal Informational Care	2.35	0.97	0.847	7
Informal Emotional Care	3.58	0.97	0.923	11

Source: Calculated by the Researcher

Five indices, viz; Informal Social Old age Care Index (ISOCI), Informal Financial Old age Care Index (IFINOCI), Informal Esteem Old age Care Index (IEOCI), Informal Informational Old age Care Index (IIOCI) and Informal Emotional Old age Care Index (IEMOCI) are calculated to understand the extent of influence of the five determinants on informal old age care using the UNDP methodology (UN, 2013) as given below:

$$ISOCI = \frac{\text{Actual } X_i - \text{Minimum } (X_i)}{\text{Maximum } (X_i) - \text{Minimum } (X_i)}$$

$$IFINOCI = \frac{\text{Actual } X_i - \text{Minimum } (X_i)}{\text{Maximum } (X_i) - \text{Minimum } (X_i)}$$

$$IEOCI = \frac{\text{Actual } X_i - \text{Minimum } (X_i)}{\text{Maximum } (X_i) - \text{Minimum } (X_i)}$$

$$IIOCI = \frac{\text{Actual } X_i - \text{Minimum } (X_i)}{\text{Maximum } (X_i) - \text{Minimum } (X_i)}$$

$$IEMOCI = \frac{\text{Actual } X_i - \text{Minimum } (X_i)}{\text{Maximum } (X_i) - \text{Minimum } (X_i)}$$

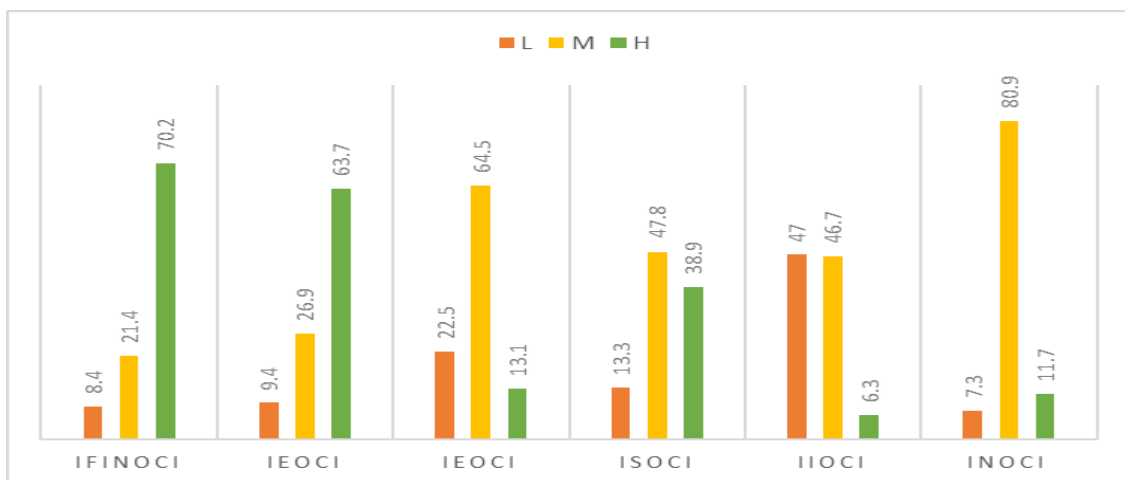
Where Actual  $X_i$  = Actual value of the  $i^{\text{th}}$  indicator.

The average of these five sub-indices are used to calculate the Informal Old Age Care Index (INOCI).

$$\text{Informal Old Age Care Index (INOCI)} = \frac{ISOCI + IFINOCI + IEOCI + IIOCI + IEMOCI}{5}$$

The value of the index ranges between 0 - 1. Those responses that lie between 0 - 0.33 have been categorized as Low-level Informal Old Age Care (L); between 0.33 - 0.66 as Moderate level Informal Old Age Care (M); and between 0.66 - 1 as High-level Informal Old Age Care (H) among the elderly population.

**Figure 4.2 Distribution of level of Informal Old age Care of the Elderly Respondents in Kerala (in percent)**



Source: Primary Survey

The majority of the sample elderly have reported that they received a medium level of care (80.9 percent), and the percentage of elderly who received low informal old age care is 7.3. This can be due to the high level of informal financial and informal emotional old age care reported by the elderly. The elderly mostly need financial and emotional care, which is seen as high in provision. However, the researcher observed that the actual situation of informal care is worse than revealed by the elderly from the responses of the elderly through different statements. Notably, only 11.7 percent received high-level informal care during old age. The increased health expenditure and ageing of the aged generations create a financial and emotional care deficiency among the informal caregivers especially the family members, which the elderly were a little hesitant to reveal.

**Table 4.3 Distribution of Elderly Respondents by level of Informal Old age Care.**

<b>Characteristics</b>	<b>INOCI</b>			<b>Total</b>
	<b>Low</b>	<b>Medium</b>	<b>High</b>	
<b>Region</b>				
Thiruvananthapuram	3 (2.3)	124 (93.2)	6(4.5)	133 (100)
Ernakulum	10 (7.2)	117 (84.2)	12 (8.6)	139(100)
Kozhikode	15 (13.5)	69 (62.2)	27(24.3)	111(100)
Total	28(7.4)	310 (80.9)	45 (11.7)	383(100)
<b>Age</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Total</b>
Young old	11(5.2)	179 (84.4)	22 (10.4)	212 (100)
Old- Old	13(10.7)	94(77.7)	14(11.6)	121 (100)
Oldest old	4(8)	37(74)	9(18)	50 (100)
Total	28 (7.4)	310 (80.9)	45 (11.7)	383 (100)
<b>Gender</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Total</b>
Male	13(7.5)	141(81)	20(11.5)	174 (100)
Female	15(7.1)	169(80.9)	25(12)	209 (100)
Total	28 (7.4)	310 (80.9)	45 (11.7)	383 (100)
<b>Place of residence</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Total</b>
Rural	13(4.6)	236(84)	32(11.4)	281 (100)
Urban	15(14.7)	74(72.5)	13(12.7)	102 (100)
Total	28 (7.4)	310 (80.9)	45 (11.7)	383(100)

Source: Primary Survey.

Note: Values in brackets are percentages.

From Table 4.3, it has been observed that among those who received high informal care by region, the Northern part of Kerala registered high levels of care from the informal caregivers who provided respect, resulting in a high level of care received by the elderly.

The highly dependent groups, like the oldest old, have received relatively high levels of informal old age care. On the contrary, few healthy and productive young old categories opined that a high level of care is unnecessary. The impacts of modernisation, better lifestyle, and technological innovations might have contributed to relatively higher levels of care in the urban areas than in the rural counterpart of Kerala. However, the unequal distribution of household income in urban Kerala can be attributed as a reason for the relatively higher proportion of elderly in low care. Furthermore, the study, like the role theory of ageing observes that old-age males show a tendency to receive lower care than their counterparts due to changing roles in the family (Philips, 1957; Cottrell, 1947).

**Table 4.4 Distribution of Elderly Respondents and Informal Old age Care Received by Social Characteristics.**

Social Characteristics	INOCI			Total
	Low	Medium	High	
<b>Religion</b>				
Hindu	14 (7.4)	159 (84.1)	16 (8.5)	189 (100)
Muslim	5 (5.8)	64 (74.4)	17 (19.8)	86 (100)
Christian	9 (8.3)	87 (80.6)	12 (11.1)	108 (100)
Total	28 (7.4)	310 (80.9)	45 (11.7)	383 (100)
<b>Social group</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Total</b>
SC	1 (2)	45 (88.2)	5(9.8)	51 (100)
ST	0	5 (100)	0	5 (100)
OBC	9 (6.8)	107 (80.4)	17 (12.8)	133 (100)
General	16(9.2)	138(79.3)	20(11.5)	174 (100)
EWS	2 (15.4)	8 (61.5)	3 (23.1)	13 (100)
OEC	0	7 (100)	0	7 (100)
Total	28 (7.4)	310 (80.9)	45 (11.7)	383 (100)
<b>Marital status</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Total</b>
Single	2 (100)	0	0	2 (100)
Married	14 (7.1)	157(80.1)	25(12.8)	196 (100)
Widow / Widower	11(6.2)	146(82.5)	20 (11.3)	177 (100)
Divorced / Separated	1(12.5)	7(87.5)	0	8 (100)
Total	28 (7.4)	310 (80.9)	45 (11.7)	383 (100)
<b>Migrated household</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Total</b>
Yes	7 (13.5)	37 (71.1)	8(15.4)	52 (100)
No	21(6.3)	273 (82.5)	37 (11.2)	331 (100)
Total	28 (7.4)	310 (80.9)	45 (11.7)	383 (100)
<b>Head of the household</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Total</b>
No	6(6.5)	78(84.8)	8(8.7)	92(100)
Yes Partially	6(3.8)	141(90.4)	9(5.8)	156 (100)

Yes Fully	16(11.9)	91(67.4)	28(20.7)	135(100)
Total	28 (7.4)	310 (80.9)	45 (11.7)	383 (100)
<b>Family type</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Total</b>
Single member Family	5(20)	18(72)	2(8)	25 (100)
Nuclear Pair Household	10(14.1)	56(78.9)	5(7)	71 (100)
Extended Family	2(5.6)	28(77.8)	6(16.7)	36 (100)
Nuclear Family	4(2.7)	127(85.8)	17(11.5)	148 (100)
Joint Family	2(5.7)	26(74.3)	7(20)	35 (100)
Broken Nuclear	5(7.4)	55(80.9)	8(11.8)	68 (100)
<b>Total</b>	<b>28 (7.4)</b>	<b>310 (80.9)</b>	<b>45 (11.7)</b>	<b>383 (100)</b>

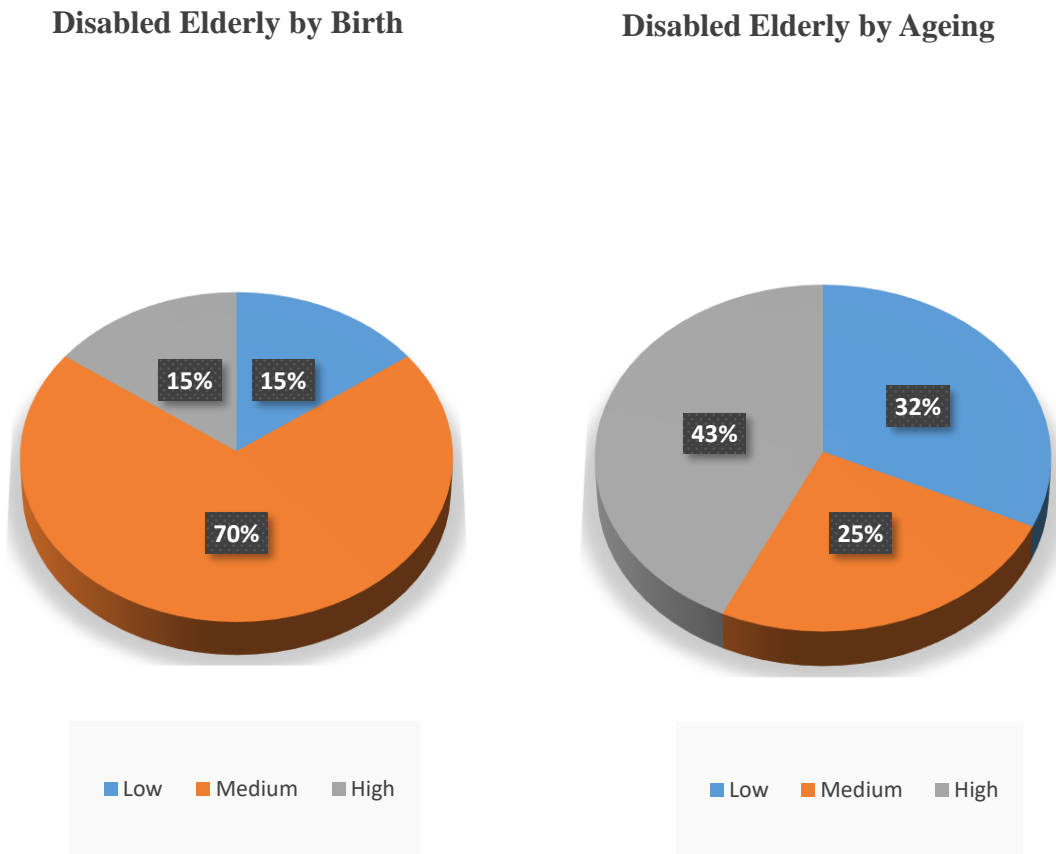
Source: Primary Survey.

Note: Values in brackets are percentages

Across religions, it is observed that the elderly among Muslims receive high levels of care in Kerala. Except for the scheduled caste, all the other social groups enjoy relatively high levels of care. Based on marital status, the married and the widows/ widowers get high levels of care. Also, the elderly who have migrated are seen to have high informal care. It is interesting to observe that high levels of care are received by the elderly if he/ she is the head of the household (fully). The elderly receive a high level of care when they are a joint family member or an extended family member.

The elderly households living with either spouse alone or elderly children alone are in more significant existence than more than one elderly person depends on them. It discloses that a nuclear pair of elderly households became the face of Kerala society. The level of care received is in exact proportion except the medium level of care. Among the medium level of care, only one dependent elderly received more care than the more than one elderly dependent group. Thus, the researcher discovers that the elderly are not single but are accompanied by at least one more dependent. It shows the growing grey nature of the society.

**Figure 4.3 Distribution of Disabled Elderly Respondents and Informal Old Age Care.**



Source: Primary Survey

The elderly have a chance to be disabled in their life either by birth or by getting old (in ageing process). Also, the level of informal care required is different in each case. While getting old, they face disabilities like hearing, vision, mobility, cognition, chewing, and memory loss. They need and get higher levels of care compared to the other cases of disability. On the other hand, when they are disabled by birth, where they struggle with both kinds of disabilities, the percentage of elderly who receive relatively high care is low. Hence, the researcher suggests that the additional income security provision by the government to this priority category won't work well to bring enough informal care. Hence, society has the responsibility to take necessary action for the same in the future.

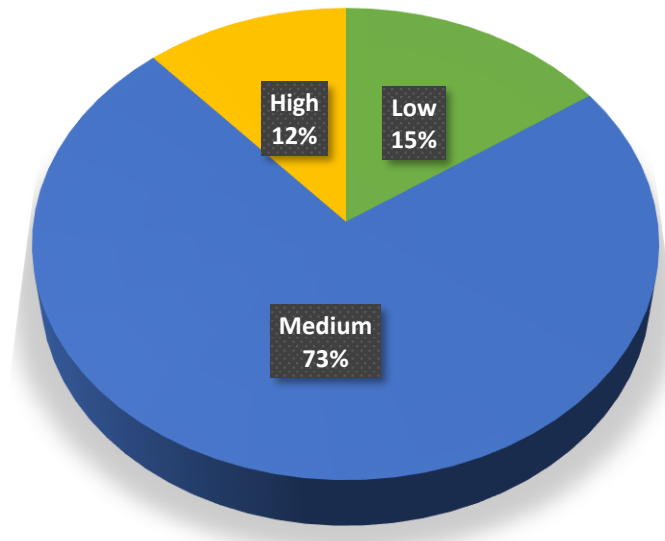
**Table 4.5 Informal Care Received by the Elderly Respondents by Incidence of Diseases.**

Type of Health Diseases	INOI			Total
	Low	Medium	High	
<b>Non-Communicable Diseases</b>				
Yes	26(10)	205(78.5)	30(11.5)	261(100)
No	2(1.6)	105(86.1)	15(12.3)	122(100)
Total	28 (7.4)	310 (80.9)	45 (11.7)	383 (100)
<b>Communicable Diseases</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Total</b>
Yes	6(9.8)	48(78.7)	7 (11.5)	61(100)
No	22(6.8)	262(81.4)	38(11.8)	322(100)
Total	28 (7.4)	310 (80.9)	45 (11.7)	383 (100)
<b>Degenerative diseases</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Total</b>
Yes	16 (12.8)	94 (75.2)	15 (12)	125 (100)
No	16(6.1)	216(82.4)	30(11.5)	262 (100)
Total	28 (7.4)	310 (80.9)	45 (11.7)	383 (100)

Source: Primary Survey, note: Values in brackets are percentages.

Most of the time elderly households suffer from Non-Communicable Diseases (NCD), Communicable Diseases (CD), and Degenerative diseases (DD) when they get old. The incidence of NCD is 68.2 percent whereas that of CD and DD are 15.9 percent and 32.6 percent respectively. The elderly perceive a high level of care with NCD but perceive low care with CD. It is purely due to the nature of the diseases. An elderly person has a risk of getting DD like cancer, diabetes, Parkinson's disease, rheumatism, arthritis, Alzheimer's, osteoporosis, disc-related diseases, heart diseases, and degenerative disabilities. If the elderly are a victim of DD, there is a need for a high level of care. Unfortunately, the elderly with DD who receive low care is large in number.

**Figure 4.4 Young Married Couples Staying with the Elderly and Level of Care Received.**



Source: Primary Survey

As observed by the researcher, the elderly who lived with newly married couples (children/ grandchildren) enjoy receiving more care emotionally. Among the 383 sample elderly, 26 elderly (6.8 percent) live with young married couples. Among them, 18 couples with the elderly completed only less than one year of their married life. Routinely, the newly married couples consider that it is their responsibility to care of the family members, especially the old, resulting in a small chance for a care gap.

#### **4.2.1. Income, Assets, and Informal Old Age Care**

Whether income and assets influence the provision of informal care is a matter of discussion among economists and thinkers and is worth exploring. In most cases, it is income that works more efficiently than wealth in the provision of care (Mankiw, 2014). On the other hand, the accumulation of wealth is the reason why the elderly are called the ‘Second Demographic Dividend’ (Narayana, 2011). The economic status of the elderly is examined using the variables like assets, retired benefits, poverty line, insurance, employment, expenditure, saving, investment, and debt.

**Table 4.6 Distribution of Elderly Respondent and Informal Old Age Care received by Economic characteristics.**

<b>Economic Characteristics</b>	<b>INOCI</b>			<b>Total</b>
<b>Poverty line</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	
Above Poverty Line	4 (15.4)	17(65.4)	5(19.2)	26(100)
Below Poverty Line	10 (5.9)	148(87.6)	11(6.5)	169 (100)
Antyodaya	14 (7.5)	143(76.9)	29(15.6)	186 (100)
Total	28 (7.4)	310 (80.9)	45 (11.7)	383(100)
<b>Insurance</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Total</b>
Health insurance	14(7.3)	157(82.2)	20(10.5)	191(100)
Non health insurance	1(2.7)	28(75.7)	8(17.8)	37(100)
No insurance	13(8.4)	125(80.6)	17(11)	155(100)
Total	28 (7.4)	310 (80.9)	45 (11.7)	383(100)
<b>Retirement Benefits</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Total</b>
Yes	5(16.7)	18(60)	7(23.3)	30 (100)
No	23(6.5)	292(82.7)	38(10.8)	353(100)
Total	28 (7.4)	310 (80.9)	45 (11.7)	383(100)
<b>Tax payer</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Total</b>
Yes	16(8.8)	137(75.7)	28(15.5)	181 (100)
No	12(6)	173(85.6)	17 (8.4)	202(100)
Total	28 (7.4)	310 (80.9)	45 (11.7)	383(100)
<b>Contribution to Household Expenditure</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Total</b>
Yes	19(7.1)	223(82.9)	27(10)	269 (100)
No	9(7.9)	87(76.3)	18(15.8)	114(100)
Total	28 (7.4)	310 (80.9)	45 (11.7)	383(100)

Source: Primary Survey.

Note: Values in brackets are percentages.

The government programmes and policies can make drastic changes in the matter of care received by the elderly. Economic status of the households reflected as APL / BPL shows that the highest percentage of elderly who receive low care is from the APL category. Among the APL category respondents who received low care, the researcher came across an upper caste elderly household (Namboothiri) without any income and another elderly denied care from the authorities on the grounds that the son is a government employee. It is observed that majority of the high care receivers were from APL category followed by Antyodaya card holders. Antyodaya card holders, particularly widows, disabled and single elderly, get high informal old age care as distinguished from the BPL category. This is because they receive more support from the government in their name, which in turn facilitates care from the family members. Among the sample elderly, 69.5 percent have taken insurance. The elderly are comparatively weak with respect to health and hence, health insurance is considered as a tool to help them to get high level care than non-health insurance policy holders. But it is observed that non-health insurance brings a higher level of care than health insurance, due to the constraints imposed by the insurance companies on age and related morbidities. To cope up with this gap, the government intervened with the Rashtriya Swasthya Bima Yojana (RSBY). In addition to this, the tax payments and retirement benefits help them to get care. A benefit is received by government employees after they retire from employment at the age 56 and pensioners are found to receive relatively high levels of care, either because of fixed income security of formal employees in the sample or on account of their savings. The tax payment here means the payment of direct tax, especially income and wealth tax. All the sample respondents are paying it yearly except some female elderly who does not own any land, house or other assets. In line with the secondary data evidence from BKPAI (2011) that 59 percent of the elderly contribute their earnings to the household expenditure, the sample data reveals that 70.2 percent of the elderly contribute their earnings to the household expenditure. But it is interesting to note that low levels of care are seen among those elderly who contribute to household expenditure, may be because of the relatively poor socio- economic status or an account of few members at the household.

**Table 4.7 Distribution of Elderly Respondents Who Possess Immovable Assets and Level of Informal Old Age Care Received.**

<b>Immovable Assets</b>	<b>INOCI</b>			<b>Total</b>
<b>Land</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	
Without Own Land	3 (2.6)	107(93.9)	4(3.5)	114(100)
Self-acquired	7 (9.6)	55(75.3)	11(15.1)	73(100)
Inherited	16 (8.3)	148(76.3)	30(15.4)	194(100)
Granted by the government	2(100)	0	0	2 (100)
<b>Total</b>	<b>28 (100)</b>	<b>310 (100)</b>	<b>45 (100)</b>	<b>383 (100)</b>
<b>House</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Total</b>
Without Own House	6 (5.5)	95(87.2)	8(7.3)	109(100)
Self-acquired	11(10.8)	76(74.5)	15(14.7)	102(100)
Inherited	8 (5.3)	121(80.7)	21(14)	150(100)
Granted by the government	3(13.6)	18 (81.8)	1(4.6)	22(100)
<b>Total</b>	<b>28 (100)</b>	<b>310 (100)</b>	<b>45 (100)</b>	<b>383 (100)</b>
<b>Flat-</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Total</b>
Own Flat	1(6.25)	12 (75)	3(18.75)	16 (100)
Doesn't Own Flat	27 (7.4)	298(81.2)	42(11.4)	367 (100)
<b>Total</b>	<b>28 (100)</b>	<b>310 (100)</b>	<b>45 (100)</b>	<b>383 (100)</b>
<b>Field</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Total</b>
Owens Field-Rural	1(3.8)	13(50)	12(46.2)	26(100)
Owens Field- Urban	1(7.1)	6(42.9)	7(50)	14(100)
Own Field	2 (5)	19 (47.5)	19 (47.5)	40 (100)
Doesn't Own Field	26 (7.6)	291(84.8)	26(7.6)	343(100)
<b>Total</b>	<b>28 (100)</b>	<b>310 (100)</b>	<b>45 (100)</b>	<b>383 (100)</b>

Source: Primary Survey, note: Values in brackets are percentages.

Immovable assets include land, houses, flats, and fields (NSSO 56th the Round, 2000). Land may not be a good variable to determine informal old age care. However, inherited land holders are found to receive a high level of old age care. Similarly, self-acquired land holders, though relatively few in number, are found to receive a high level of care. Among the sample, less than 30 percent are houseless and they either lived in a relative's house or in a rented one. In the case of ownership of a house, elderly in the self-acquired category receive a high level of care, followed by those with inherited house. Also it is noteworthy that, the number of inherited land owners is higher than the number of inherited house owners and a higher level of care is received by the former than the latter one. Among the sample respondents only 4.18 percent own a flat and 10.44 percent have

land as fields. High level of care is also seen among those who own fields and flats. In short, the immovable assets are partially accepted in variation of receiving informal old age care. It is also observed that the 3.5 percent of landless elderly and 7.3 percent of the houseless elderly also receive high care as they are either employed/ have accumulated wealth for the future or are receiving the returns for investments made in human capital formation of their children. Thus, the level of informal care received by the elderly can depend upon other socio- economic factors as well.

**Table 4.8 Distribution of Elderly Respondent Who Possess Movable Assets and Level of Informal Old Age Care Received.**

Movable assets	INOCI			Total
	Low	Medium	High	
<b>Jewellery</b>				
With Jewellery	10 (5.4)	153 (83.2)	21 (11.4)	184(100)
Without Jewellery	18 (9.1)	157 (78.9)	24 (12)	199(100)
Total	28 (100)	310 (100)	45 (100)	383 (100)
<b>Inherited Valuable vessels</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>Total</b>
Yes	2(12.5)	9(56.3)	5(31.2)	16 (100)
No	26(6.9)	311(82.5)	40(10.6)	377(100)
<b>Total</b>	<b>28 (100)</b>	<b>310 (100)</b>	<b>45 (100)</b>	<b>383 (100)</b>

Source: Primary Survey.

Note: Values in brackets are percentages.

Movable assets are defined as jewellery, valuable vessels and so on (NSSO 56<sup>th</sup> Round, 2000). The moveable assets are considered to be dead assets (Lakshmanaswamy, 2012). The percentage of the elderly who possessed jewellery (either inherited or self-acquired) and received a low level of care is low when compared with those who do not possess jewellery. Similarly, the elderly who possess inherited valuable vessels are found to receive relatively higher levels of care than those who do not possess valuable vessels. The majority of moveable asset holders are female elderly populace in Kerala. Most of them came to the possession of these at the time of their marriage. In essence, the possession of movable assets is fairly acknowledged for getting informal old age care.

**Table 4.9 Domains of Income received by the Elderly and Level of Informal Old Age Care.**

<b>Level of Care</b>	<b>Labour Income</b>	<b>Income from Assets</b>	<b>Private Transfers</b>	<b>Public Transfers</b>
Low	5(4.9)	3(6.4)	10(6.7)	20(6.1)
Medium	88(85.4)	32(68.1)	110(73.3)	274(83.8)
High	10(9.7)	12(25.5)	30(20)	33(10.1)
Total	103 (100)	47 (100)	150 (100)	327(100)

Source: Primary Survey, note: Values in brackets are percentages.

The present research categorised the income receivers of the elderly populace into four kinds; public transfers (income received from the govt. in the form of pensions), private transfers (income received from family members and friends), income from assets (income received as returns from factors of production), and labour income (income received from employment as wages and salary). An elderly person may receive income from more than one source. The study finds that 85.4 percent of the elderly are receiving public transfers followed by private transfers (39.2 percent), labour income (26.9 percent), and income from assets (12.3 percent). It is also observed that even though the public transfers are promoted to fill the old age care gap, it is not sufficient to enhance high levels of care. Compared with the national data on National Transfer Accounts (NTA, 2019), Kerala elderly populace is less eligible to reap benefits from second demographic dividend due to the possession of mainly unproductive assets and less proportion of elderly have income generating assets. In short, the elderly who receive higher levels of old age care are earners of income from assets followed by those who receive private transfers (care received from informal caregivers). In future, with precautionary motive the Kerala elderly populace is expected to gain the second demographic dividend / accumulation of capital in line with national trend.

**Table 4.10 Distribution of Elderly Respondents by activity from which income is received and the level of Informal Old age Care Received.**

Level of Care	Employed	Retired & Employed	Retired & not Employed	Employer	Own Account Worker	Paid Family Worker
Low	4 (11.8)	0	8 (12.7)	0	1(4.2)	1(14.2)
Medium	28 (82.4)	7 (87.5)	43 (68.3)	4 (57.1)	18(75)	3(42.9)
High	2(5.9)	1 (12.5)	12 (19)	3(42.9)	5(20.8)	3(42.9)
Total	34 (100)	8(100)	63 (100)	7(100)	24(100)	7(100)

Source: Primary Survey

Note: Values in brackets are percentages

The level of old age care and employment after the age of sixty are associated. Table - 4.10 shows that the elderly who are retired, retired and employed are found to receive a high level of care, may be, they are financially secure on account of their retirement benefits and present personal income (remuneration to factors of production especially wages). However, the wives of the elderly enjoy high level of care due to their economic dependence.

**Table 4.11 Saving, Investment and Debt of the Elderly and Level of Informal Old Age Care Received.**

Level of Care	Saving	Benefits received	Investment	Benefits Received	Debt	Difficulties faced in Receiving Loans
Low	4 (7.7)	3 (7.5)	1 (20)	0	4 (8.9)	2 (12.5)
Medium	39 (75)	30 (75)	2 (40)	0	30 (66.7)	12 (75)
High	9 (17.3)	7 (17.5)	2 (40)	1(100)	11 (24.4)	2 (12.5)
Total	52 (100)	40 (100)	5 (100)	1(100)	45 (100)	16 (100)

Source: Primary Survey; Note: Values in brackets are percentages

The outward appearance of an older household at this time is its collected assets. In Kerala, the old aged save and invest their assets. According to the post-Keynesian economist James Tobin (1965), this activity should be seen as a challenge to the life cycle hypothesis (rather than a dissaving, a saving behaviour of seniors'). This behaviour is noticed in the present research and 52 percent of the elderly are savers. The government must provide an additional incentive for an elderly individual to invest or save. The elderly investors are found to receive a high level of informal care than savers. On the

other side, the elderly have also availed gold loans, house loans, and other loans, which causes problems to them. The lenders guarantee that the borrower can pay back the debt over their lifetime. Due to the increased likelihood of developing communicable diseases and non-communicable diseases as well as the requirement from the side of young children, the elderly are forced to purchase expensive insurance plans. Physical limitations and substantial financial repayments discouraged them from being economically independent. As a result, loan holders are small in number and the elderly is availing loan experience difficulties.

#### 4.2.2 Informal Old Age Care Across Generations

Informal old age care in Kerala is basically related to family and their children. So, it is interlinked with the generations. Table 4.13 explains the level of informal care received by the elderly from three generations, viz, children, grandchildren, and great grandchildren of their family lineage.

**Table 4.12 Level of Informal Old Age Care across Generations.**

Generation	INOI			Total
	Low	Medium	High	
<b>Children</b>				
Have	22(5.9)	302 (82.1)	44(12)	368(100)
Doesn't have	6 (40)	8 (53.3)	1 (6.7)	15(100)
Total	28 (7.4)	310 (80.9)	45 (11.7)	383(100)
<b>Grandchildren</b>				Total
Have	19(5.6)	279 (81.8)	43(12.6)	341(100)
Doesn't have	9(21.4)	31 (73.8)	2 (4.8)	42(100)
Total	28 (7.4)	310 (80.9)	45 (11.7)	383(100)
<b>Great Grandchildren</b>				<b>Total</b>
Have	1 (3.5)	22(78.6)	5(17.9)	28(100)
Doesn't have	27(7.6)	288 (81.1)	40(11.3)	355(100)
Total	28 (7.4)	310 (80.9)	45 (11.7)	383(100)

Source: Primary Survey.

Note: Values in brackets are percentages.

The elderly who have children (96 percent), grandchildren (89 percent), and great grandchildren (7 percent) are found lucky to receive a high level of care. For this reason, the banker of high-quality care is a joint family led by an aged "Karanavar." Having great grandchildren is believed to offer subpar care, because the birth of a great grandchildren will force a family to split up somewhat, creating adequate space for everyone to live

together or be absorbed. In spite of all these, the elderly who have great grandchildren possess a higher level of care (17.9 percent) than elderly who have children (12 percent) and grandchildren (12.6 percent). Informal emotional old age care and informal esteem old age care provisions are closely linked with the birth of great grandchildren. Kerala's culture depicts the dream of an elderly person in the last mile of their life to see/ live with their own great grandchildren. Though children are largely the care providers when compared with the grandchildren and great grandchildren, elderly receiving low level of care is relatively high when provided by the children, either because their children are aged sixty and above (an aged person takes care of another aged person), busy with their own life or children do not wish to provide care.

**Table 4.13 Sex Composition of Children and the level of Informal Old Age Care.**

No. of children	INOI			Total
	Low	Medium	High	
No boy	11(16.4)	51(76.1)	5(7.5)	67 (100)
At least one boy	8(5.3)	128(84.2)	16(10.5)	152 (100)
At least two boys	6(5.5)	90(82.6)	13(11.9)	109 (100)
More than two boys	3(5.5)	41(74.5)	11(20)	55 (100)
No girl	15(14.3)	81(77.1)	9(8.6)	105 (100)
At least one girl	6(3.9)	131(84.5)	18(11.6)	155 (100)
At least two girls	5(6.8)	59(79.7)	10(13.5)	74 (100)
More than two girls	2(4.1)	39(79.6)	8(16.3)	49 (100)

Source: Primary Survey.

Note: Values in brackets are percentages.

The sex composition of children is a matter of concern in the provision of care. The traditional Kerala society focused on the belief that sons are the legacy of the future generations. Hence, they give more importance for having a son. This ideology is practised especially when they get old and from generation to generation which is strongly reflected in the society. Traditionally, the son and his family stay with the elderly parent rather than the daughter who stays with the husband's family and are not the direct providers of care. As a result, the parents are worried about giving birth to at least one

son in a family. From table 4.14, elderly who has more than two sons are observed to receive high levels of care, when compared with the elderly who have more than two daughters, which proclaims that even though the social and economic systems changed, the cultural instincts still exist. At the same time, elderly with at least one daughter or two daughters received a relatively higher level of care than elderly who has at least one son or two sons. Hence, the credibility of daughters (women as the traditional caregivers) in the provision of care is identified and desired by the elderly community. Modern views blow the wind towards the opposite direction, as explained by the present research. Literature shows that single female elderly households (defacto) are mainly seeking care and support from their adult daughters in modern society (DeJong, 2010).

**Table 4.14 Distribution of Stay of Children, Grandchildren & Great Grandchildren with the Elderly and the Level of Informal Old Age Care.**

Generations	INOCI			Total
	Low	Medium	High	
<b>Children</b>				
Stay with the Elderly	12(4.1)	239 (82.4)	39(13.5)	290(100)
Do not stay	16 (17.2)	71 (76.3)	6 (6.5)	93(100)
Total	28 (7.4)	310 (80.9)	45 (11.7)	383(100)
<b>Grand Children</b>				
Stay with the elderly	9 (3.6)	210 (84)	31 (12.4)	250(100)
Do not stay	19 (14.3)	100 (75.2)	14 (10.5)	133(100)
Total	28 (7.4)	310 (80.9)	45 (11.7)	383(100)
<b>Great Grandchildren</b>				
Stay with the Elderly	1 (12.5)	7(87.5)	0	8(100)
Do not stay	27 (7.2)	303 (80.8)	45(12)	375(100)
Total	28 (7.4)	310 (80.9)	45 (11.7)	383(100)

Source: Primary Survey.

Note: Values in brackets are percentages.

The parents of two of our sample elderly are staying with the elderly (elderly's parents') and are found to receive medium level of care. It indicates that people who live with their parents benefit from good care. Elderly who received relatively high levels of care have children staying with them and vice versa. Similarly, grand children of an elderly provide care when they stay with the older adults. When old people live with children and

grandchildren, they get many kinds of high levels of informal care including technological, informational and esteem care. It is interesting to observe that, staying without the great grandchildren (GGC) is associated with relatively high care for the elderly. This may be due to the fact that either the family members get more time to care for the elderly in the absence of GGC or migration of GGC enables senior households to obtain sizable remittances, which in turn provides financial support and emotional care.

**Table 4.15 Sex Composition of Children who stay with the Elderly and the level of Informal Old Age Care received.**

No. of children	INOCI			Total
	Low	Medium	High	
No boy	20 (14.8)	104(77)	11(8.2)	135 (100)
At least one boy	7(3.2)	187(84.2)	28(12.6)	222 (100)
At least two boys	1(4.8)	16(76.2)	4(19)	21 (100)
More than two boys	0	3(60)	2(40)	5 (100)
No girl	24(7.3)	267(81.4)	37(11.3)	328 (100)
At least one girl	2(4.1)	41(83.7)	6(12.2)	49 (100)
At least two girls	2(33.3)	2(33.3)	2(33.3)	6 (100)

Source: Primary Survey.

Note: Values in brackets are percentages.

The reality/ myth of the Kerala traditional society that sons are care providers as observed and explained in table 4.14 is expressed in a similar way in table 4.16. The elderly who don't have sons often experienced low care and vice versa. To elaborate, the more the number of sons staying with the elderly, the more care they receive. In contrast to the girls staying with the elderly, when more than two sons are staying with the elderly, high levels of care are received by the elderly. Though there were sample elderly who had two and more girls, the stay of more than two daughters with the elderly is not seen in the sample and hence, unable to portray the situation exactly. As per the social norms, the youngest son has the responsibility to stay with the elderly in traditional Kerala society. It is observed that the possible reason for not staying with the other sons along with the elderly is to avoid a quarrel for getting property. In case, if none of the sons stay

with the elderly, a high level of care (8.2 percent) is received from their daughters. Most daughters are not allowed to stay with elderly parents after marriage. Because the daughters are added as members of the husband's family. Sons are considered to be people who generate the next generation. But in reality, it is just a belief, that is, biologically only females can generate the next generation. But she has proved to be a good caretaker of the young and old (the female's role of traditional caregiver). To compare with this fact, the sample data reveals the power of daughters who stay with the elderly and provide care. Like the son's, daughters are vehicles of higher level of old age care but less proportionately than sons.

**Table 4.16 Distribution of the Elderly Respondents by selected characteristics of their Generations and level of Informal Old Age Care Received in Kerala.**

Special Characteristics	INOI			Total
	Low	Medium	High	
Migrated Son	6 (5.1)	93 (80.2)	17 (14.7)	116(100)
Migrated Daughter	5 (3.2)	134 (88.2)	13 (8.6)	152(100)
60+children	0	19 (79.2)	5 (20.8)	24(100)
Divorced children	1 (9.1)	6 (54.5)	4 (36.4)	11(100)
Migrated Grandchildren	6 (3)	170 (84.6)	25 (12.4)	201(100)
Migrated Great-grandchildren	0	15 (79)	4 (21)	19(100)

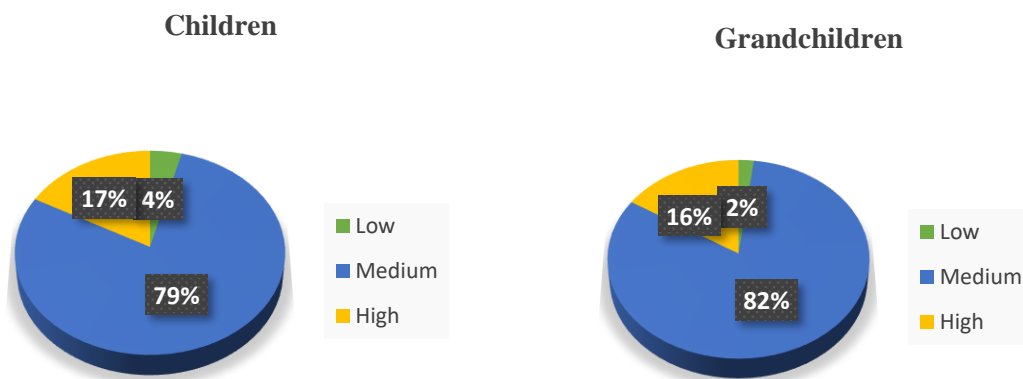
Source: Primary Survey.

Note: Values in brackets are percentages.

The elderly receive a high level of informal care from their own generations, which at times seem to be closely associated with certain characteristics. Elderly with divorced/separated children, especially with daughters staying with the elderly, are found to receive high levels of care as they have no other social commitments other than as caregivers of their elderly parents, if they are single. At present 36.4 percent of elderly households received it. Migrated great grandchildren (GGC) delivers a high level of care to the elderly when they are not physically present. This enables them to obtain sizable remittances and also informal emotional care. The modern society in Kerala is characterised by a recent phenomenon of the 'Ageing of the Aged', where a 60+ person looks after another elderly person who is the son/ daughter, father/ mother or life partner of the elderly person. Most of the aged children provide a high level of care to their

elderly parents. Finally, the elderly receive relatively higher care from migrated sons than from migrated females, which can be due to more financial care from sons as against emotional care from daughters. After marriage, the daughters leave the family, but they usually give high levels of care and express love towards their parents. The enduring conviction that existed in Kerala, regardless of how long they lived or stayed with them, was that the elderly people would receive care when they had children. Most of the time, they are unable to live with the elderly owing to migration, marriage, education, desire for independence, disputes over the transfer of assets, and other factors.

**Figure 4.5 Level of Informal Care received by the Elderly from the Professionals of their Generations.**



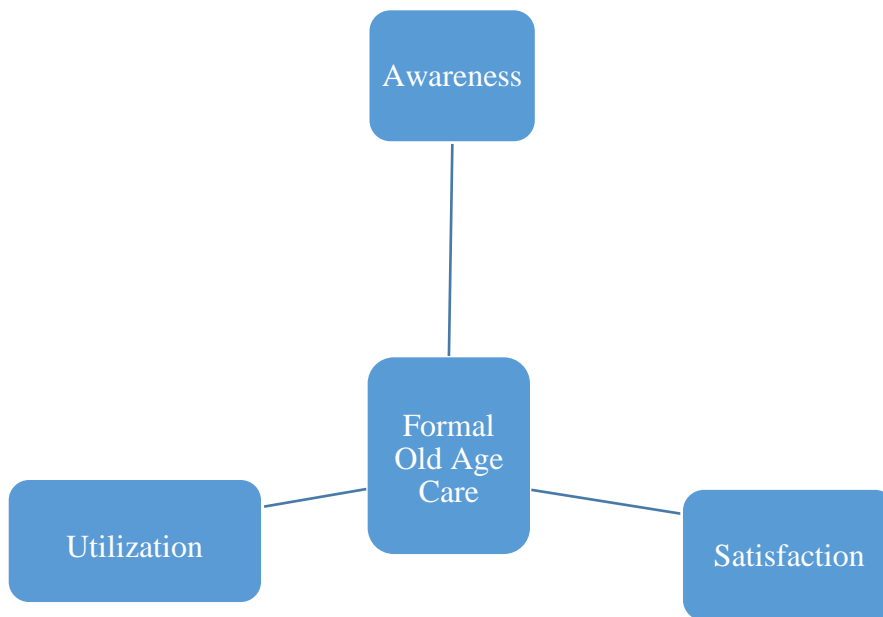
Source: Primary Survey.

The professional experience of the children, grandchildren and great grandchildren in various fields as doctors, nurses, teachers, accountants, and so on, is found to help the elderly to receive more financial, medical, physical and intellectual care and support. Among the sample respondents, the elderly's children, grandchildren and great grandchildren with professional experience are 126, 50 and 2 respectively. Together with other types of care, informational care is more relevant in Kerala's elderly populace as they live in an isolated world of information. Most of the time, the professional ability of the generations enhances care for the elderly. It is high in the case of elderly with children and grandchildren.

### 4.3 Formal Old Age Care Index (FOCI)

As taxpayers and citizens of the country, elderly households have the right to receive care formally from institutional caregivers like the government, NGO, private communities and individuals, especially in the context of Kerala with a relatively high proportion of elderly, migrant population and women. On the other hand, the formal caregivers have the responsibility to provide enough care for the elderly. But, in the near future, an exponential growth rate of the elderly will itself become a constraint and affect their social wellbeing in terms of the awareness, utilization and satisfaction of the programmes organised as a part of formal old age care. Awareness, utilization and satisfaction of the 28 selected old age care programmes forms the dimensions of formal old age care.

**Figure 4.6 Dimensions of Formal Old age Care of Elderly Population**



Source: Constructed by the Researcher

The dimensions of formal old age care are classified into three - awareness, utilization and satisfaction –based on the concessions and the rights that they deserve. A Formal Old Age Care Index (FOCI) is constructed based on these three dimensions.

The rights of elderly to receive concessions which are provided by the formal caregivers, especially the government, through different ministries are selected for the creation of FOCI. There are 28 programmes which render care to the elderly in their day-to-day life in Kerala. They are:

**Table 4.17 Policies and Programmes used for the Construction of Formal Old Age Care in Kerala.**

<b>A.NGO's and other caregivers</b>	<b>B.Pillars of Age friendly Panchayath</b>	<b>C. Income and physical security</b>	<b>D.Food and health security</b>
1. Technological programmes	8. Medical programmes	12. National old age pension	22. Annapurna scheme
2. Health related programmes	9. Physical programs	13. Widow pension	23. National Rural Health Mission (NRHM)
3. Financial programmes	fitness	14. Concessions for tickets in train	24. Rashtriya Swasthya Bhima Yojana (RSBY)
4. Literacy Programmes	10. Nutritious food programmes	15. Concessions for tickets in plane	25. MNREGA
5. Employment programmes	11. Infrastructure	16. Reservations of seats in bus	26. Electoral ID
6. Informational programmes	programmes	17. higher Interest in Bank accounts / Post office	27. Aadhar
7. Recreational programmes		18. Income Tax benefits	28. PAN & Driving license
		19. Other tax benefits	
		20. 8% interest on saving	
		21. Preference for facilities such as telephone connection	

Source: BKPAI Report, 2011

**Table 4.18 Descriptive Statistics on the Formal Old Age Care Constructs and Cronbach's Alpha.**

<b>Factors</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Cronbach's Alpha</b>
Awareness of formal old age care	0.35	0.32	0.827
Utilisation of formal old age care	0.17	0.26	0.691
Satisfaction of formal old age care	0.03	0.10	0.607

Source: Calculated by the Researcher

Three indices, namely, Index of Awareness of Formal Old age Care (IAFOC), Index of Utilization of Formal Old age Care (IUFOC), and Index of Satisfaction of Formal Old age Care (ISFOC) are used for measuring the depth of the three dimensions of Formal Old age Care, and the average of these are used to calculate the Formal Old age Care Index (FOCI)

$$IAFOC = \frac{X_i - \text{Minimum}(X_i)}{\text{Maximum}(X_i) - \text{Minimum}(X_i)}$$

$$IUFOC = \frac{X_i - \text{Minimum}(X_i)}{\text{Maximum}(X_i) - \text{Minimum}(X_i)}$$

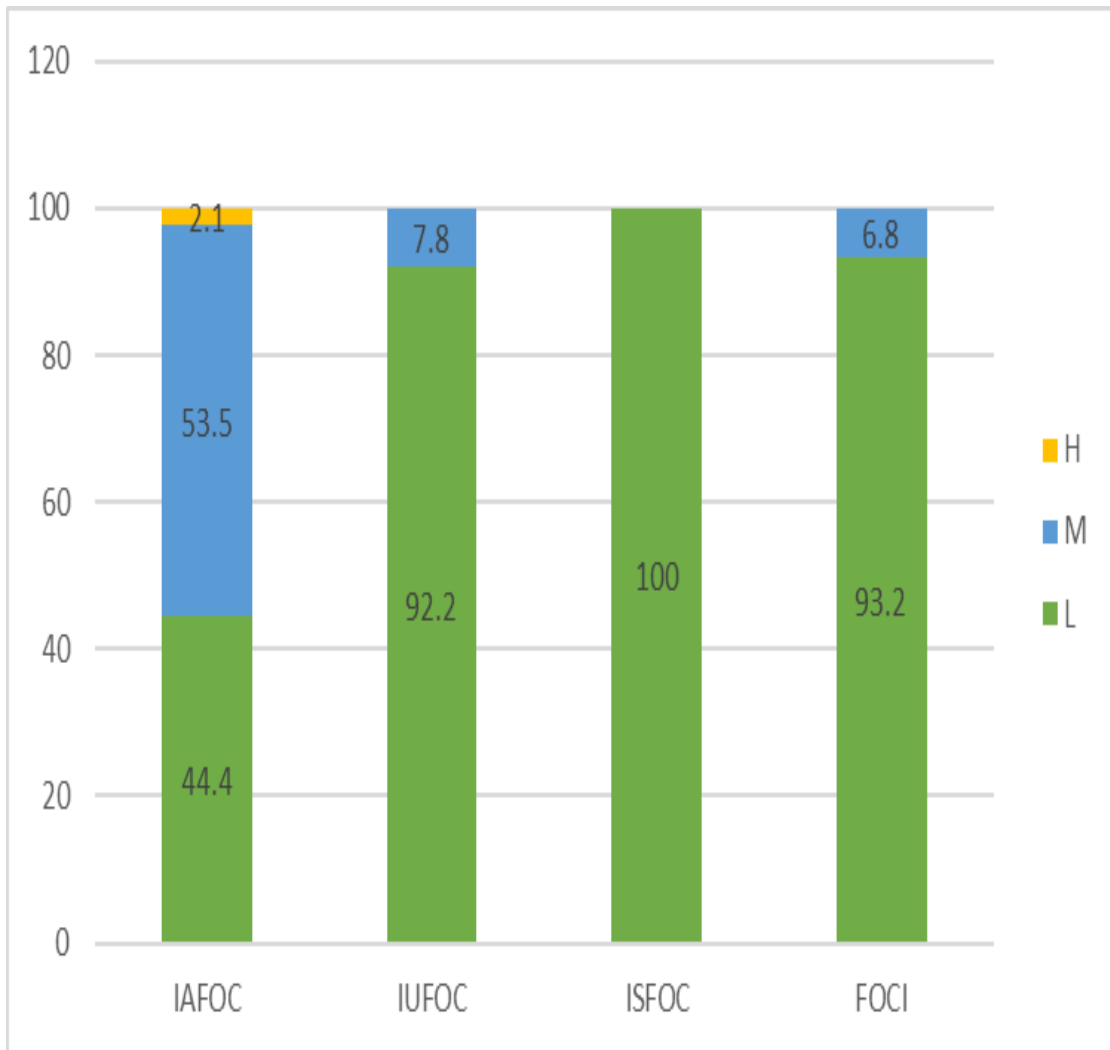
$$ISFOC = \frac{X_i - \text{Minimum}(X_i)}{\text{Maximum}(X_i) - \text{Minimum}(X_i)}$$

$$\text{Formal old age care Index (FOCI)} = \frac{IAFOC + IUFOC + ISFOC}{3}$$

Where  $X_i$  = Actual value of the  $i^{\text{th}}$  indicator.

The value of the index ranges between 0-1 and the scoring method has been used here. The given scores are 1 for the positive response and 0 for the negative response. Those responses that lie between 0 - 0.33 have been categorized as Low level formal old age care (L); between 0.34 - 0.66 as Moderate level formal old age care (M); and between 0.67 - 1 as High level formal old age care (H) among the elderly population.

**Figure 4.7 Distribution of Formal Old Age Care of Elderly Household in Kerala (in percent)**



Source: Primary Survey

Among the respondents, 93.2 percent of the Kerala elderly household receive low formal care which is practiced as a pattern of their allowed rights and concessions. That is, as much as they are aware about their rights and concessions, that much they utilise and satisfy with it. In other words, little awareness on high level formal care follows little utilisation and satisfaction indices of high-level formal care which resulted in low level of formal care for elderly. To make it more clear, the exponential growth rate of elderly cannot be efficiently absorbed by the government which shows a turnpike effect that the care is demanded from the informal caregivers like the past.

**Table 4.19 Analysis of Formal Old age Care across selected characteristics.**

Demographic Characteristics	FOCI		Total
	Low	Medium	
<b>Age</b>			
60+	201 (94.8)	11 (5.2)	212(100)
70+	108 (89.3)	13(10.7)	121(100)
80+	48(96)	2(4)	50(100)
<b>Total</b>	<b>357(93.2)</b>	<b>26(6.8)</b>	<b>383(100)</b>
<b>Gender</b>	<b>Low</b>	<b>Medium</b>	<b>Total</b>
Male	158(90.8)	16(9.2)	174(100)
Female	199 (95.8)	10(4.2)	209(100)
<b>Total</b>	<b>357(93.2)</b>	<b>26(6.8)</b>	<b>383(100)</b>
<b>Place of residence</b>	<b>Low</b>	<b>Medium</b>	<b>Total</b>
Rural	271(96.4)	10(3.6)	281(100)
Urban	86(84.3)	16(15.7)	102(100)
<b>Total</b>	<b>357(93.2)</b>	<b>26(6.8)</b>	<b>383(100)</b>
<b>Regions</b>	<b>Low</b>	<b>Medium</b>	<b>Total</b>
Thiruvananthapuram	130(97.7)	3(2.3)	133(100)
Ernakulam	126(90.6)	13(9.4)	139(100)
Kozhikode	101(91)	10(9)	111(100)
<b>Total</b>	<b>357(93.2)</b>	<b>26(6.8)</b>	<b>383(100)</b>

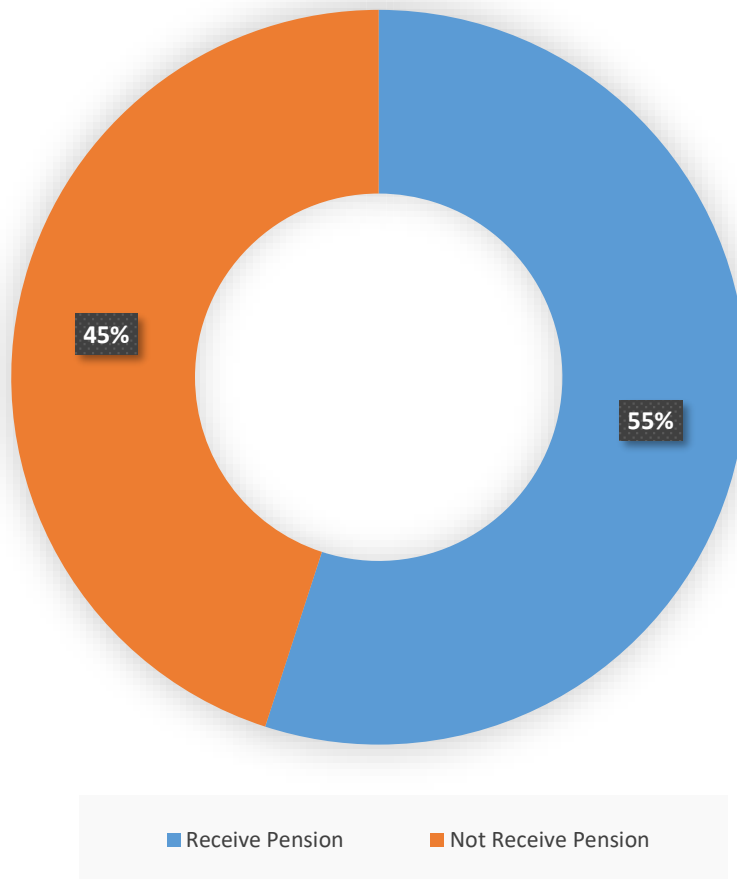
Source: Primary Survey

Note: Values in brackets are percentages

It is interesting to note that none of the elderly received high formal care. The oldest old category which needs the highest care, received relatively low formal care. At the same time, though the young old category raises their voice for getting both physical and financial support from institutional caregivers, most of them get low level care. The female elderly demand more formal care than their counterparts, as widowhood is most common among the female elderly in those ages (Rajan, 2018), and they constitute the most financially vulnerable category. During the primary survey, the widowers' raised questions as to why the widow pension is prohibited for them by the government, which seemed a pertinent question. The rural elderly are found to receive relatively a low level of formal care, whereas the elderly in urban areas received relatively more medium care. In the northern part of Kerala, the elderly have experienced low formal care that coincides with high informal care. Among those who received medium care, most of the elderly

are from the central part of Kerala. This can be due to improved technologies and social transformation in the central region.

**Figure 4.8 Old Age Pension Received by the Elderly Respondents in Kerala. (in percent)**



Source: Primary Survey

Among the sample elderly, more than half of them received old-age pensions. However, the interesting matter is that, all the elderly who are citizens of India has the right to receive old age pension.

**Table 4.20 Distribution of Social Pension holders across Formal Old age Care levels.**

Type of pension	FOCI		Total
	Low	Medium	
<b>Old Age Pension - Age wise</b>			
60+	113 (91.9)	10(8.1)	123(32.1)
70+	55(88.7)	7(11.3)	62(16.2)
80+	24(100)	0	24(6.3)
Not receive any pension	165(94.8)	9(5.2)	174(45.4)
Total	357(100)	26(100)	383(100)
<b>Old Age pension - Gender wise</b>	<b>Low</b>	<b>Medium</b>	<b>Total</b>
Male	113(89.7)	13(10.3)	126(32.9)
Female	79(95.2)	4(4.8)	83(21.7)
Not receive any pension	165(94.8)	9(5.2)	174(45.4)
Total	357(100)	26(100)	383(100)
<b>Widow pension -Age wise</b>	<b>Low</b>	<b>Medium</b>	<b>Total</b>
60+	56(100)	0	56(14.6)
70+	32(94.1)	2(5.9)	34(8.9)
80+	17(100)	0	17(4.4)
Not receive any pension	252(91.3)	24(8.7)	276(72.1)
Total	357(100)	26(100)	383(100)

Source: Primary Survey

Note: Values in brackets are percentages

The old age pension provided by the government is Rs. 1600 (23/09/2020), which is meagre when compared with the expenditures of old age. The old age pension is usually given to only one elderly person. The situation of low formal old age care for the elderly can happen in households with more than one elderly, where, except one, the other elderly members are non-receivers of social pension. This is particularly true in the context of Kerala where the elderly population is not only the highest, but also the elderly are taking care of the elderly parents. Also, the female elderly though in dire need, are denied old age pensions because senior male members are given old age pensions. Among the age categories, hexogenerians receive low formal old age care which can be attributed to their relatively high economic independence, and the demand for care might be low. Across genders, females are found to receive lower care than males. Widow pension is available to females and not to males (widowers) in Kerala and widows are

eligible to receive the same after eight years (as per rule of Indira Gandhi National Widow Pension Scheme). The elderly widows who receive the widow pension fall in the category of low formal level of care.

**Table 4.21 Land and House from the Government to Social Groups and the level of Formal Old Age Care.**

Level of care	SC		OBC		EWS	
	Land	House	Land	House	Land	House
Low	5(100)	9(100)	8(88.9)	7(87.5)	1(33.3)	3(60)
Medium	0	0	1(11.1)	1(12.5)	2(66.7)	2(40)
Total	5(100)	9(100)	9(100)	8(100)	3(100)	5(100)

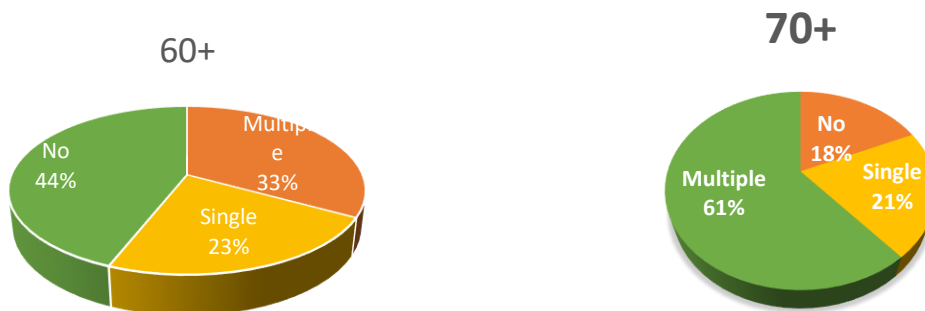
Source: Primary Survey

Note: Values in brackets are percentages.

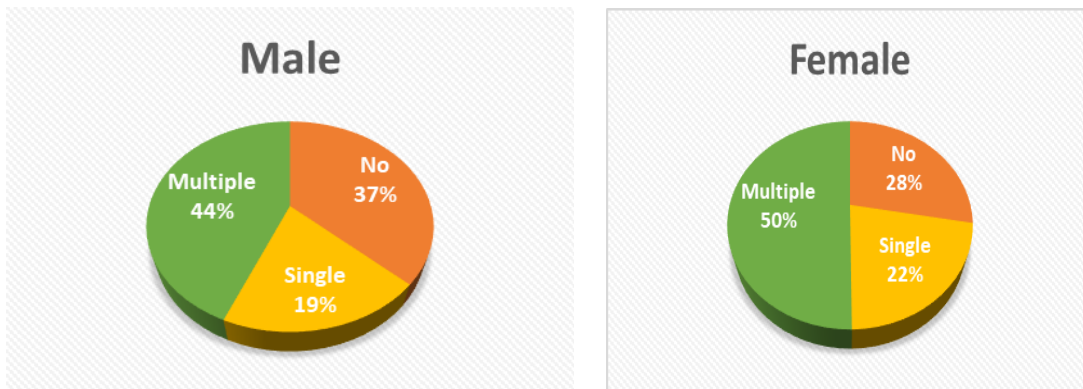
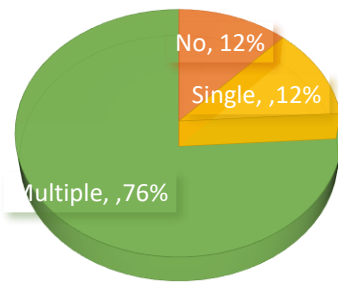
As a part of creation of the entitlements, the government has provided land and house to the landless and the houseless people. All the elderly among the SC category are found to receive a low level of care. The affirmative action of the government seems to be instrumental for few elderly households who received medium care, from the EWS and OBC category.

Distribution of NCD of the sample elderly by age and gender is shown through pie diagrams in Figure 4.9

**Figure 4.9 Distribution of NCD by the Elderly across Age and Gender.**

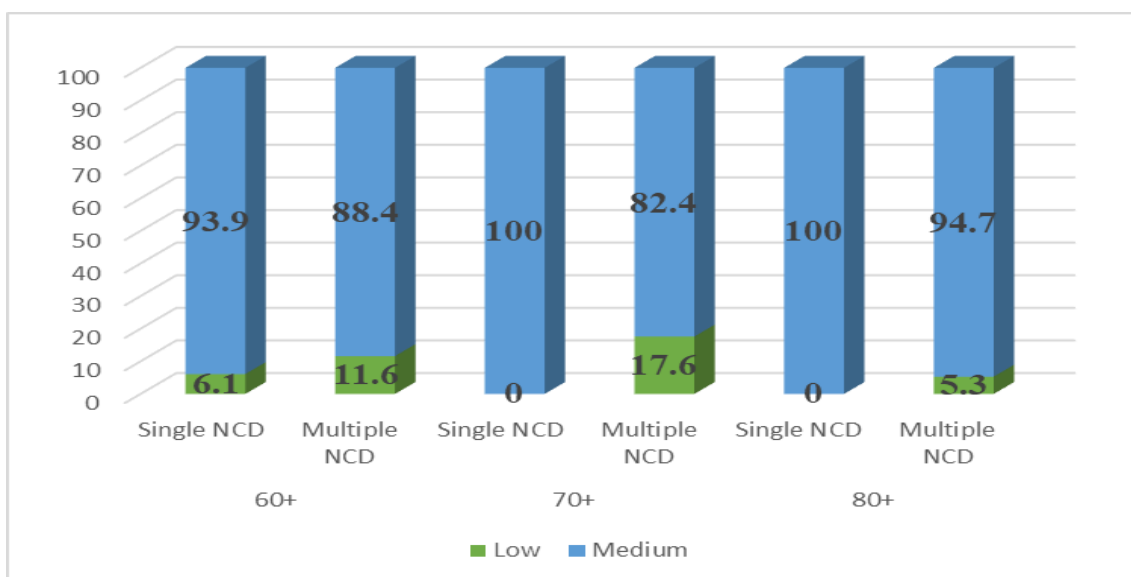


**80+**



Source: Primary Survey

**Figure 4.10 Distribution of Elderly Respondents who received Formal Care by Number of NCDs (in percent)**



Source: Primary Survey

The elderly household's health expenditure is high compared to other age groups. To reduce the expenditure on health of the elderly, the government has introduced many programmes like the geriatric care project, palliative care project, Madhuram and so on. In the study conducted by Sri Chithira Thirunal Institute of Medical Science in 2017, among the seven selected states of India, the incidence of NCD is reported to be the highest among the elderly populace of Kerala. Most of them experienced a high level of multiple NCD in their life span. As a part of providing special care for the oldest old, the government introduced a house visit by the doctors that functioned through the Vayojana Mithra project. But in reality, none of the oldest (80+) among our sample received a high level of formal care. The researcher has observed that the elderly with multiple NCD received low levels of formal old age care and attention and; suggests the need for improvement in the provision of formal old age care in future.

#### **4.4 Old Age Care and Old Age Care Gap in Kerala**

Old Age Care Index (OACI) is constructed in this research as a proxy variable to measure the old age care. It comprises both informal and formal old age care. Informal old age care becomes an integral and powerful component of old age care that can even influence the bequest motives of the elderly; viz, pure altruism, altruism towards children's well-being, strategic life cycle, accidental, and social norms and tradition. In order to study the old age care and its components, viz, formal care and informal care, the hypothesis.

H<sub>1</sub> is proposed as below;

H<sub>1</sub>: *Old age care depends on informal old age care as well as formal old age care.*

H<sub>1</sub> (a): *Old age care depends on informal financial care*

H<sub>1</sub> (b): *Old age care depends on informal social care.*

H<sub>1</sub> (c): *Old age care depends on informal informational care.*

H<sub>1</sub> (d): *Old age care depends on informal emotional care.*

H<sub>1</sub> (e): *Old age care depends on informal esteem care.*

H<sub>1</sub> (f): *Old age care depends on formal care awareness.*

H<sub>1</sub> (g): *Old age care depends on formal care utilisation.*

H<sub>1</sub> (h): *Old age care depends on formal care satisfaction.*

**Table 4.22 Regression Analysis between Old age Care and Components of Informal and Formal Old age Care in Kerala.**

	<b>R</b>	<b>R<sup>2</sup></b>	<b>B</b>	<b>Std. Error</b>	<b>β</b>	<b>t</b>
	.756	.571				
(Constant)			.202	.090		2.235
Informal Financial Care			.390	.069	.214***	5.678
Informal Social Care			.529	.133	.245***	3.964
Informal Informational Care			.152	.123	.061	1.240
Informal Emotional Care			.503	.157	.210**	3.201
Informal Esteem Care			.512	.128	.233***	4.008
Awareness Of Formal Care			.770	.129	.257***	5.962
Utilization Of Formal Care			.476	.296	.102	1.609
Satisfaction Of Formal Care			-.439	.529	-.049	-.830
Durbin Watson = 1.913, F (8,374) = 62.306***, Dependent Variable: Old Age Care						

Source: Estimated by the researcher.

The table number 4.23 shows the findings of the sub-hypotheses H<sub>1</sub> (a), H<sub>1</sub> (b), H<sub>1</sub>(c), H<sub>1</sub> (d), H<sub>1</sub> (e), H<sub>1</sub> (f), H<sub>1</sub> (g), and H<sub>1</sub> (h). The multiple regression analysis shows the influence of informal old age care and formal old age care on total old age care. These sub

hypotheses have been used to examine the first objective of the research, that is, the influence of informal and formal care on old age care in Kerala. Diagnostic tests are conducted for the sub hypotheses and the assumptions of Multiple Regression Analysis such as normality, linearity, multi collinearity, autocorrelation and homoscedasticity were met.

In social science research, an R-squared between 0.50 and 0.99 is considered acceptable, particularly when the majority of the explanatory factors are statistically significant. The only qualification to this is that multicollinearity or spurious causation among the explanatory variables should not be the cause of the high R-squared (Ozili, 2023). The R squared value for this model is 57.1 percent, and most of the independent variables related to informal care are significant. The model doesn't show multicollinearity. Hence, it is an acceptable model which explains the relationship between old age care and indicators of informal as well as formal old age care. In addition, 75.6 percent correlate each other.

For hypothesis  $H_1(a)$  the independent variable coefficient indicated that for each added score increase in financial care, on an average, old age care score will increase by 0.390, holding all other variables constant. Hypothesis  $H_1(a)$  is significant and supported at 0.05 level (two-tailed). For hypothesis  $H_1(b)$  the independent variable coefficient indicated that for each additional score increase in social care, on average, old age care score will increase by 0.529, holding all other variables constant. Hypothesis  $H_1(b)$  is significant and supported at 0.05 level (two-tailed) which means that social status plays a crucial role in old age care. To make it more clear, the more the social status given to the elderly by the informal caregivers such as the family members, friends, neighbourhood, and relatives; the more is the old age care received. Hence, it explains old age care, informal social old age care given to the elderly is important.

With respect to hypothesis  $H_1(c)$ , the regression coefficient indicated that for each extra score increase in informal informational care, on an average, old age care score will increase by 0.152, holding all other variables constant. Hypothesis  $H_1(c)$  is not significant and not supported. Children who are living with the elderly household often provide

informational services to their elderly parents during the old age (Lee, 1999) but many times, it is incomplete information provision in Kerala.

Hypothesis  $H_1(d)$ , the regression coefficient indicated that for each extra score increase in informal emotional care from children, on an average, old age care score will increase by 0.503, holding all other variables constant. Hypothesis  $H_1(d)$  is supported at 0.05 level (one-tailed). Emotionally, the elderly household is attached with the informal caregivers. That is, how much the elderly satisfy the emotional needs of their family members, that much the family members are obliged to satisfy the elderly's emotional needs. As a result, the hypothesis  $H_1(d)$  is supported. The informal emotional old age care component of the informal old age care is used here and found significant in explaining old age care.

For hypothesis  $H_1(e)$  the regression coefficient indicated that for each additional score increase in informal esteem care, on an average, old age care score will increase by 0.512, holding all other variables constant. Hypothesis  $H_1(e)$  is significant and supported at 0.05 level (two-tailed). This relationship reinforces the fact that technological assistance in the informal esteem old age care can improve the old age care received by the elderly.

Fortunately, all the formal care needs are equally available to each and every elderly citizen in our country. Like informal old age care, the factors of formal old age care are part and parcel of the old age care. The members / workers of age friendly Panchayaths, Vayojanamithra, Help Age India, government and others help the elderly households to utilize their rights and concessions. The utilisation of formal care programmes depends on the attitude, independence and optimistic behaviour of the elderly person. Most of the elderly are aware of their rights and concessions but majority of them doesn't fully or partially utilize it (Bardhan, 2015). The hypothesis which shows the relation between old age care and formal old age care by components, viz, Awareness, Utilisation, and Satisfaction are given as  $H_1(f)$ ,  $H_1(g)$  and  $H_1(h)$ .

For hypothesis  $H_1(f)$ , the independent variable is awareness of formal care, and the dependent variable is old age care. The independent variable coefficient indicated that for each additional score increase in awareness of formal care, the old age care will increase on an average by 0.770 and is significant at 0.05 level (two-tailed). As a result, hypothesis  $H_1(f)$  is supported. For hypothesis  $H_1(g)$ , the regression coefficient indicated

that for each extra score increase in utilisation of formal care, on an average, old age care score will increase by 0.476, holding all other variables constant. Hypothesis H<sub>1</sub>(g) is not significant and not supported. For hypothesis H<sub>1</sub>(h) the regression coefficient indicated that for each extra score increase in satisfaction of formal care, on average, old age care score will decrease by -0.493, holding all other variables constant. Hypothesis H<sub>1</sub>(h) is not significant and not supported. The elderly citizens have a higher level of awareness on formal old age care, but low level of utilisation as well as satisfaction of formal care. This may result in improper management and implementation of the programmes meant for the enforcement of the rights of elderly citizens. This also resulted in a high level of formal old age care gap. Also, there is an exponential growth of elderly population, which cannot be fully or partially absorbed by the formal caregivers, especially the government. Literature shows that in Japan, the government provides very low levels of care, which causes the elderly to seek more care from their family members (Ogawa et. al, 2009).

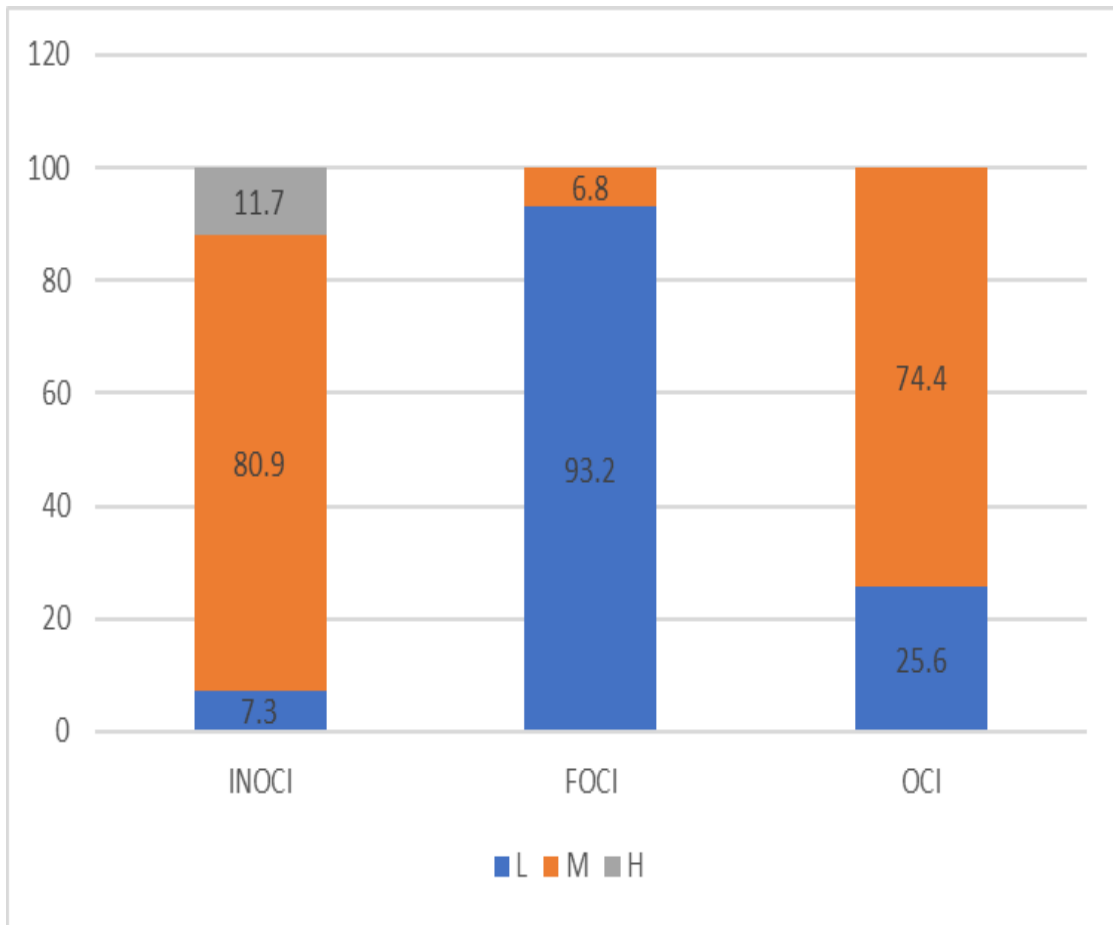
In this way the factors like informal social care, informal esteem care, informal emotional care and informal financial care of the informal caregivers and awareness of formal care determines the old age care in Kerala. In nut- shell, old age care is determined by the factors like social care, esteem care, emotional care and financial care of the informal caregivers and, the awareness of formal care. In this way, old age care is directly influenced by both informal and formal care. Researchers agree that formal as well as informal old age care of the elderly is considered to be the two sides of a coin (Cantor, 1983).

#### **4.5 Old Age Care Index (OCI)**

Old Age Care Index (OACI) is constructed in this research as a proxy variable to measure the old age care. It comprises both informal and formal old age care. Hence, it is hypothesised that the old age care is a blend of both formal as well as informal old age care.

$$\text{Old age care Index (OCI)} = \frac{(\text{FOCI} + \text{INOI})}{2}$$

**Figure 4.11 Distribution of Old Age Care (OCI) in Kerala.**



Source: Primary Survey

None of the elderly received a high level of formal care and the majority (93.2%) received low formal care. Majority of the elderly received medium level of informal old age care. When both formal and informal care are put together as old age care, the majority received medium level old age care and none of the elderly received high level of old age care. This indicates the experience of Japan and other countries with the highest proportion of elderly population, which made them revert to informal care from a policy of formal care (Ogawa et. al, 2009). Kerala's elderly populace has also shown a tendency to return to families and society for receiving care. The enforcement of the MWSC Act (2017, modified in 2020) proves this and can be instrumental in bridging the formal care gap of the elderly in the future.

**Table 4.23 Distribution of Old Age Care across Age, Gender, Place of residence, and Region in Kerala.**

Selected Characteristics		Old age care		Total
		Low	Medium	
Age	60+	45(21.2)	167(78.8)	212(100)
	70+	40(33.1)	81(66.9)	121(100)
	80+	13(26)	37(74)	50(100)
Total		98 (25.6)	285(74.4)	383(100)
Gender	Male	29(16.7)	145(83.3)	174(100)
	Female	69(33)	140(67)	209(100)
Total		98 (25.6)	285(74.4)	383(100)
Place of residence	Rural	55(19.6)	226(80.4)	281(100)
	Urban	43(42.2)	59(57.8)	102(100)
Total		98 (25.6)	285(74.4)	383(100)
Region	South	19(14.3)	114(85.7)	133(100)
	Central	38(27.3)	101(72.7)	139(100)
	North	41(37)	70(63)	111(100)
Total		98 (25.6)	285(74.4)	383(100)

Source: Primary Survey, note: Values in brackets are percentages

The data reveals that the elderly households in Kerala have not experienced a high level of old age care. Among the old age categories, the 70 and above have a relatively high incidence of low levels of old age care. The 80 and above category receive additional formal care (Palliative care project, Geriatric care project, and better income security) and hence, the situation of the oldest old is somewhat better with respect to the old age care received by the 70 and above category. Though the female elderly are high in number compared to the male elderly, the female elderly are prone to experience a very low level of care, even though they are the primary care providers of the family. Often female elderly has to take care of the male elderly who are more aged than them (husbands/ parents) and the female elderly receive relatively low formal care. On account of the proximity to better health care and standard of living, it is widely perceived that the urban elderly receive better care than their rural counterparts. Against this notion, the

study observes that the rural elderly received relatively high care. In the case of regions, North is found more deficient in old age care followed by central part of Kerala. However, it is noteworthy here that the northern region received high levels of informal old age care when compared with the other regions and these low levels of old age care in the north can be on account of poor awareness and utilisation of formal old age care programmes by the elderly of the northern region. It is interesting to note that elderly in the south followed by the central regions are more aware and found to utilize the formal old age care.

#### **4.6 Old Age Care Gap (OACG)**

Old age care gap is defined as the gap between perceived and actual needs in terms of practical assistance (World Population Ageing Report, 2019). In this research, the researcher assumes the elderly has the right to perceive 100 percent care or assistance from the old age care givers, either in the sense of providing care or in the sense of social responsibility. Hence the INOC gap, FOC gap, and OAC gap are calculated as follows:

Informal Old Age Care Gap = 100 - percentage of Informal Old Age Care Index (INOCI)

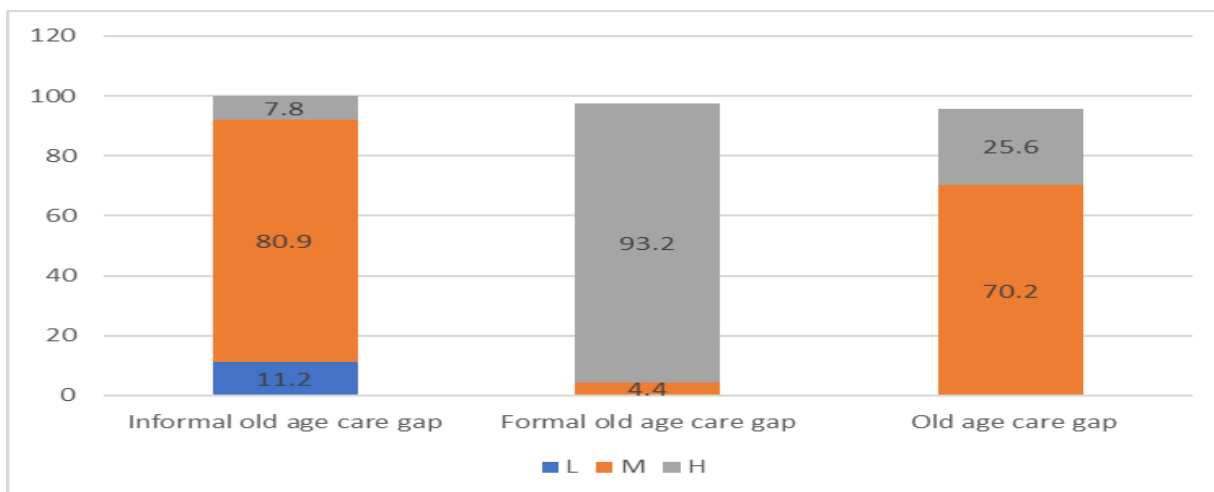
Formal Old Age Care Gap = 100 - percentage of Formal Old Age Care Index (FOCI)

Old Age Care Gap =  $\frac{\text{Informal Old Age Care Gap} + \text{Formal Old Age Care Gap}}{2}$

2

The old age care gap was calculated out of 100 for all the 383 households. The elderly households are classified on the basis of the old age care gap and the percentage of households who experience the old age care gap is shown in fig 4.8. Old age care gap is classified into three, viz, low (between zero to 33.3), medium (between 33.3 to 66.6) and high (between the value 66.6 to 100). Since the old age care is an amalgamation of both formal and informal care, the old age care gap is the summation of formal old age care gap as well as informal old age care gap. The formal old age care gap is very high among the sample elderly. Hence, the Kerala elderly experienced a high and medium level of care gap for the older parents in which the formal care gap is more than informal care gap. Hence, the old age care gap is the mirror image of the old age care index.

**Figure 4.12 Distribution of Elderly Respondent and Old Age Care Gap in Kerala. (in percent)**



Source: Primary Survey.

**Table 4.24 Distribution of Old Age Care Gap across Age, Gender, Place of residence, and Region in Kerala.**

Demographic Characteristics		Old Age Care Gap		Total
		Medium	High	
Age	60+	51(24.1)	161(75.9)	212(100)
	70+	49(40.5)	72(59.5)	121(100)
	80+	14(28)	36(72)	50(100)
Total		269(70.2)	114(29.8)	383(100)
Gender	Male	35(20.1)	139(79.9)	174(100)
	Female	79(37.8)	130(62.2)	209(100)
Total		269(70.2)	114(29.8)	383(100)
Place of residence	Rural	68(24.2)	213(75.8)	281(100)
	Urban	46(45.1)	56(54.9)	102(100)
Total		269(70.2)	114(29.8)	383(100)
Region	South	22(16.5)	111(83.5)	133(100)
	Central	46(37.1)	93(66.9)	139(100)
	North	46(41.4)	65(58.6)	111(100)
Total		269(70.2)	114(29.8)	383(100)

Source: Primary Survey

Note: Values in brackets are percentages

In each old age group, very little is escaped from the high old age care gap. Also, it is prominent among the old-old category. Because it is the transforming age from healthy state to one with diseases. Due to the low old age care, the females experienced a huge care gap than their male counterparts. It is observed that 45 percent of urban elderly have this gap due to under compensated level of care by the elderly in the urban area. Among regions, the lowest care gap is experienced by Southern Kerala than other groups.

Old age care is the amalgamation of both formal and informal care, in which the right to formal care is the same for all categories, whereas informal care varies according to their position in the hierarchical society, socio- economic conditions, attitude, and many other reasons. In order to determine the relationship between informal as well as formal old age care, the hypothesis H<sub>2</sub> is formulated. The association between the components of informal old age care and formal old age care is examined in table 4.26.

H<sub>2</sub>: *There is a significant relationship between informal and formal old age care.*

H<sub>2</sub>(a): *There is a significant relationship between informal informational care and formal old age care.*

H<sub>2</sub>(b): *There is a significant relationship between informal social care and formal old age care.*

H<sub>2</sub>(c): *There is a significant relationship between informal emotional care and formal old age care.*

H<sub>2</sub>(d): *There is a significant relationship between informal esteem care and formal old age care.*

H<sub>2</sub>(e): *There is a significant relationship between informal financial care and formal old age care.*

**Table 4.25 Relationship between Components of Informal Old age Care and Formal Old age Care.**

<b>Hypothesis</b>	<b>Variables</b>	<b>Pearson correlation</b>	<b>Significance</b>
H <sub>2</sub> (a)	Informal Informational Care Vs Formal old age care	0.205** (p = 0.000)	Significant
H <sub>2</sub> (b)	Informal Social Care Vs Formal old age care	0.060 (p = 0.245)	Not Significant
H <sub>2</sub> (c)	Informal Emotional Care Vs Formal old age care	0.017 (p = 0.741)	Not Significant
H <sub>2</sub> (d)	Informal Esteem care Vs Formal old age care	0.157** (p = 0.002)	Significant
H <sub>2</sub> (e)	Informal Financial Care Vs Formal old age care	- 0.273** (p = 0.000)	Significant

Source: Estimated by the researcher.

Note: \*\* Significance level 0.05 (two-tailed)

For hypothesis H<sub>2</sub> (a),  $r = 0.205$  which means that the relationship between informal informational care and formal old age care is significant (two-tailed). The Pearson correlation coefficient for informal social care and formal old age is 0.060 and the p-value is 0.245, which means the relationship is not statistically significant. As a result, hypothesis H<sub>2</sub> (b) is not supported. The Pearson correlation coefficient between informal emotional care and formal old age care is 0.017 and the p-value is 0.741, implying that the relationship is statistically not significant. Hence, hypothesis H<sub>2</sub> (c) is not supported. There is a significant relationship between informal esteem care and formal old age care [H<sub>2</sub> (d)]. Technological advancement in telecommunications (e.g. internet and smartphone) provided mainly by the family members can help the elderly to acquire information about formal care programmes. Technological advancement bridges the gap between older parents and their adult children in terms of informal informational old age care (communication and sharing information) and the older parents feel that they are

still useful, important, and loved by their children (informal esteem old age care). For hypothesis H<sub>2</sub>(e), the Pearson correlation coefficient shows that the relationship between informal financial care from children and formal old age care and,  $r = -0.273$  gives a negative relationship that is statistically significant at the 0.05 level. Hence, the hypothesis H<sub>2</sub>(e) is supported. The research found that parents who received more formal old age care in the form of social pensions, such as old age pensions, widow pensions, disability pensions, and so on, were less likely to receive financial assistance from their children (informal caregivers). Literature shows that in most cases, time transfers by the children and resource transfers by the children do not go hand in hand and the elderly receives either of the one as transfers from a child (Alessie, et al., 2014; Merz, et al., 2009).

Thus, the elderly populace receives informal informational and esteem care from the caregivers and this is found to influence formal old age care and vice versa, though the strength of the relationship is weak. The NGOs ('Magic' in Ernakulam district) and private individuals and communities are instrumental in the provision of formal old age care. Noteworthy, though the elderly receive financial support from formal old age caregivers like government, NGOs, communities and private individuals; it is meagre, irregular and untimely and often fails to meet the health needs of the elderly. As the formal and informal old age care are not correlated with each other, H<sub>2</sub> is not supported. This implies that informal old age care is the major determinant of old age care.

# **CHAPTER V**

## **BEQUEATH BEHAVIOUR OF THE ELDERLY IN KERALA**

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## 5.1 Introduction

This chapter addresses the second objective of the study and probes into the pattern of bequeath behaviour of the elderly populace across heterogeneous socio-economic milieus of the society in Kerala.

## 5.2 Patterns of Elderly Bequest Motives in Kerala

This section analyses the bequest intentions/ motives of the elderly. The bequest motives are classified into five, viz, pure altruism, altruism towards children's well-being, strategic life-cycle, accidental, and social norms and tradition. The elderly's bequest motives were analysed based on ranks given to the elderly's response to a list of statements regarding their perceptions (rank 1= strongly disagree, rank 2 = disagree, rank 3= neither disagree nor agree, rank 4 = agree, and rank 5 = strongly agree).

**Table 5.1 Statements to trace Life Cycle Patterns of Bequest Models.**

SL No	Statements	Measuring Constructs
1	I plan to leave a bequest regardless of whether my children carry on the family business.	<b>Pure Altruism Bequest Motive</b>
2	I want to leave more or all bequests to my children who are with lower income.	
3	It is necessary to leave a bequest under any circumstances.	
4	I want to leave more or all bequests to my children regardless whether my children take care of me.	
5	I want to leave all bequests to my children.	
6	Other than a special effort; I plan to leave behind whatever assets happen to be left over.	
7	Older parents should will their properties to their children.	<b>Altruism towards Children's</b>
8	Older parents should provide financial assistance to help their children to become economically independent.	

9	Older parents should provide financial assistance to their children whenever they can afford it.	<b>Wellbeing Bequest Motive</b>
10	I want to leave as large a bequest as possible to my children.	
11	I plan to leave a bequest regardless whether my children take care of me.	
12	I plan to leave something to my children.	
13	I want to leave more or all bequests to my youngest son regardless whether he takes care of me.	<b>Accidental Bequest Motive</b>
14	I want to leave more or all bequests to my sons only.	
15	I want to leave my bequest equally to my children.	
16	I want to leave more or all bequests to my daughters only.	
17	It is unnecessary to contribute to my children's monthly expenses.	<b>Strategic Bequest Motive</b>
18	It is unnecessary to contribute to my children's monthly expenses even if I can afford it.	
19	It is unnecessary to contribute to my children's monthly expenses even if they have insufficient income for their living.	
20	It is unnecessary to take care of both the health care and living conditions of my children.	
21	I gave enough education and skills to my children so that they would provide enough care during my old age.	
22	I have given education and skills to adult children as a social responsibility.	
23	I facilitated children's employment as a responsibility.	
24	It is necessary to contribute to my children's monthly expenses.	
25	I provided good health to my children without expecting any returns from them.	

26	I gave them good health and living conditions, expecting the same in old age from them.	
27	Adult children should provide health assistance to older parents.	
28	I was committed to providing better education and skills for the eldest son.	

Source: Chung, 2015

**Table 5.2 Descriptive Statistics on Constructs for Bequest Motives and Cronbach's Alpha.**

<b>Constructs of Bequest Motive</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Cronbach's Alpha</b>	<b>Items</b>
Pure Altruism	3.212	1.25	0.840	6
Altruism towards Children's Wellbeing	3.42	1.14	0.494	6
Accidental	3.00	1.2	0.624	4
Strategic	3.14	1.22	0.743	7
Social Norms and Tradition	3.114	1.289	0.567	5

Source: Calculated by the researcher.

In research, reliability, and validity are two important steps and need to be confirmed before proceeding. Reliability means the test result of the variable or set of statements that must be consistent with the concept of the study, even after multiple tests (Hair, et al., 1998). The acceptable value of Cronbach's Alpha was a minimum of 0.50 or more, and this value is commonly accepted by most studies (Bujang et al., 2018). The results with a minimum Cronbach's Alpha were 0.494 or 0.5 (altruism towards children's well-being) while the maximum was 0.840 (pure altruism), which indicated that the statements constructed had reasonable internal consistency and reliability.

An elderly person's bequest motive is not only confined to one particular motive but also mixed up with all the motives together. Hence, the researcher employed mean score values to trace the magnitude, size, and characteristics in which the bequests were distributed across the socio-economic status of the elderly. For this purpose, the researcher used the Independent 't' test for grouping variable two and; one-way ANOVA for grouping variables more than two.

### 5.2.1 Pure Altruism Bequest Motive

In intergenerational resource transfers, altruism is a situation where the elderly leave a bequest to their children without expecting anything from them, irrespective of whether their children would look after them or continue with the family business (Barro, 1974; Horioka, 2002; Hurd, 1987; Kopczuk & Lupton, 2007; Ramessur, 2009; Tin, 2010). The elderly household would leave a bequest to their children without expecting anything from their children. The elderly people who earn low income, would try their best to leave some bequests or to provide financial aid to their children for a better life. Parents who are financially independent would probably leave as many bequests or substantial properties as possible to their children (Altonji, et al., 1992; Yao, et al., 2014).

**Table 5.3 Mean Score of Ranks on Pure Altruism Bequest Motive statements.**

<b>Statements</b>	<b>Mean</b>	<b>Standard Deviation</b>
<b>Pure altruism bequest motive</b>	<b>3.212</b>	<b>1.25</b>
I plan to leave a bequest regardless of whether my children carry on the family business	2.82	1.247
I want to leave more or all bequests to my children who are with lower income.	3.5	1.42
It is unnecessary to leave a bequest under any circumstances	3.02	1.281
I want to leave more or all bequests to my children regardless whether my children take care of me.	3	1.268
I want to leave all bequests to my children.	3.95	1.028
Other than a special effort, I plan to leave behind whatever assets happen to be left over.	2.98	1.279

Source: Calculated by the researcher.

Note: Rank 1: Strongly disagree .... Rank 5: Strongly agree, and the higher the mean score, the greater the agreement to the statement

For pure altruism, the total mean score of rank was 3.212, with a 1.25 standard deviation. A mean score ranging from 3.95 to 2.82, for the statements indicates that most respondents planned to leave a bequest to their children without expecting anything in return. Based on the mean score, the researcher used an independent t-test for grouping variables of two, and a one-way ANOVA test for grouping variables of more than two, which compares the means and points out the significant variations in the pure altruistic bequest motive of the elderly household in Kerala by their socio-economic status.

**Table 5.4 Mean Score of Ranks on Pure Altruism Bequest Motive of the Elderly by Region, Gender, and Age Groups.**

<b>Characteristics</b>	<b>North</b>	<b>Central</b>	<b>South</b>	<b>Sample size</b>
<b>Male</b>	3.0480	3.1566	3.22	174
<b>Female</b>	3.093	3.32	3.02	209
<b>60-69</b>	3	3.54	3.04	212
<b>70-79</b>	3.24	3.26	3.24	121
<b>80+</b>	3.23	3.19	3.09	50
<b>Sample size</b>	133	139	111	383

Source: Calculated by the researcher.

Note: Rank 1: Strongly disagree .... Rank 5: Strongly agree, and the higher the mean score, the greater the agreement to the statement

The study reveals that there was no significant difference between age and gender in the respondents' perception of pure altruism. This might be due to the reason that most pure altruism respondents have the same thoughts about wanting to leave a bequest to their children in Kerala. Among the regions shows a significant difference on the perception of pure altruism. These may be due to changes in the demographic characteristics. However, the influence of other social status upon pure altruism elderly households is explained as below.

**Table 5.5 Elderly with Pure Altruism Bequest Motive across selected Social and Health Characteristics in Kerala.**

<b>Characteristics</b>	<b>Significant</b>	<b>Characteristics</b>	<b>Significant</b>
Age	F(2,380) = 1.08,P =.34	Disability due ageing	t(381) = 1.65,P =.10
Gender	t(381) = 1.09,P =.28	Non - Communicable Diseases	F(2,380) = 4.742,P =.01*
Place of residence	t(381) = -1.68,P =.93	Communicable Diseases	t(59) = 0.17,P =.87
Religion	F(2,380) = 0.97,P =.38	Degenerative Diseases	t(381) = 0.75,P =.46
Social group	F(5,377) = 0.24,P =.94	Dependent elderly	F(2,380) = 0.086,P =.917
Level of Education	F(11,371) = 3.31,P =.00**	Male children	F(7,375) = 1.608,P =.132
Marital status	F(3,379) = 1.84,P =.14	Female children	F(7,375) = 2.76,P =.00**
Headship	F(2,380) = 20.20,P =.00**	Grand children	F(19,363) = 1.72,P =.03*
District	F(3,379)=3.30,P=.02*	Great grandchildren	F(11,371) = 1.427,P =.158
Migrated elderly	t(381) = -1.873,P =.07	Total number of family members	F(39,349)=2.14,P=.00**
Family type	F(5,377) = 1.101,P =.359	Children stay with elderly	F(1,381)=6.23,P=.01*

Source: Calculated by the researcher.

Note: \*Significant 0.01 level and \*\*Significant 0.05 level.

The mean score of total ranks for pure altruism is 3.212, and the standard deviation is 1.25, which indicates that most of the respondents have a plan to leave a bequest to their children without expecting anything from their children. The elderly with pure altruism exhibit significant differences across their socio-economic status in Kerala. It is mainly reflected in the level of education, family headship, region, number of female children and grandchildren, incidence of non-communicable diseases (NCD), total number of family members and stay of the elderly with their children. Considering the respondents' pure altruism across age groups, the table displays no significant difference among

religion, place of residence and gender, because majority of the elderly do have the same desire to leave a bequest to their children. The pure altruism elderly households are positive thinkers. Pure altruism elderly with better education gives due share to their daughters and grandchildren. Among the districts, the F-test statistics is 3.30, and the p-value is 0.02, which means that there is significant variation among the three districts with respect to pure altruism. This observation confirms the result that Asian people are more eager to leave over bequests to their children (Rowlingson & McKay, 2005). In the case of gender, the 't' test statistic is 1.09 which is not significant; meaning that there is no difference between male and female elderly households in their perceptions of pure altruism. This is in conformity with the study conducted on the difference in perception levels of males and females towards bequests, which could not find enough evidence to differentiate gender behaviour towards bequests (Goetting & Martin, 2001). A number of studies on age and the intention to leave a bequest found a positive association (Luc & Christophe, 2012; Palmer, et al., 2006; Schwartz, 1993). However, the present study has found that the difference between age groups in the respondents' pure altruism (F-test statistics is 1.08 while the p-value is 0.34) is statistically insignificant due to the changes in demographic characteristics (Laitner & Ohlsson, 2001). For security reasons, the high incidence of NCD among the elderly makes them live with more family members, especially with children. Hence, this pattern of bequest motive creates variations in the behaviour of the elderly in this heterogeneous society.

**Table 5.6 Elderly with Pure Altruism Bequest Motive across Economic Status in Kerala.**

<b>Economic Status</b>	<b>Significant</b>	<b>Economic status</b>	<b>Significant</b>
APL / BPL/ Antyodaya	F(3,379)=3.30,P=.02*	Debt	F(2,380) = 1.424,P = .242
Employment	F(9,373) = 2.84,P = .00**	Type of income received	F(3,379)=4.90,P=.00**
Land (self-acquired)	F(29,353) = 1.76,P = .01*	Contribution to Household Expenditure	F(1,381) = 5.80,P = .02*
House	F(36,346) = 1.84,P = .00**	Retirement Benefits	F(17,365) = 0.157,P = .694
Jewellery	F(27,355) = 1.56,P = .04*	Remittance by son	F(17,365) = 0.86 P = .183
Valuable vessels	F(8,374) = 1.361,P = .21	Remittance by daughter	F(17,365) = 1.310, P = .183
Savings	F(1,381) = 8.84,P = .00**	Health Insurance	t (381) = 1.77, P = .08
Investment	F(1,381) = 1.194,P = .275	Non-Health Insurance	t (381) = -1.409, P = .295

Source: Calculated by the researcher.

Note: \*Significant at the 0.01 level and \*\*Significant at the 0.05 level.

Incidence of poverty, employment, self-acquired land, house, jewellery, savings, elderly's contribution on household expenses and type of income received by the elderly are found to be significant among the variables used to capture economic status of elderly with pure altruism. Those elderly, who act as the head of the house, often contribute a good amount of money to household expenditure that may vary upon employment and asset holding, mainly in the form of gold, land, house, and savings. The elderly with BPL / Antyodaya card holders are pure altruistic and they transfer the benefits received to their informal caregivers.

### **5.2.2 Altruism towards Children's Wellbeing Bequest Motive**

In this case, elderly parents would provide financial support to their children by handing over their properties. Children face high costs of living and are laden with debts when they start their careers (an ongoing trend of the borrowing-led consumption spending

pattern of the new generation, education loans or other financial loans to start a new family, and so on). This group of elderly believed that they were responsible for providing a reasonably comfortable life for the next generation (Becker, 1974; 1981; 1991; Horioka, 2002). In order to ease the financial burden of children, the elderly often tend to look for different ways of addressing it, even with the assets and the income at hand.

**Table 5.7 Mean Score of Ranks on Altruism towards Children’s Well-being Bequest Motive Statements.**

<b>Statements</b>	<b>Mean</b>	<b>Standard Deviation</b>
<b>Altruism towards children’s well-being bequest motive</b>	<b>3.42</b>	<b>1.14</b>
Older parents should will their properties to their children	3.82	1.188
Older parents should provide financial assistance to help their children become economically independent	3.42	1.134
Older parents should provide financial assistance whenever they can afford it	3.85	1.037
I want to leave as large a bequest as possible to my children	3.39	1.177
I plan to leave a bequest regardless whether my children take care of me	2.91	1.154
I plan to leave something	3.10	1.132

Source: Calculated by the researcher.

Note: Rank 1: Strongly disagree .... Rank 5: Strongly agree, and the higher the mean score, the greater the agreement to the statement

It is reported that the overall mean score of ranks for altruism towards children's wellbeing was 3.42, with a 1.14 standard deviation. This indicates that to lessen their children's financial burden and assist them in becoming economically independent, most respondents would leave a bequest to their children and provide financial wealth (3.42). The elderly would leave their properties to their children (3.82), possibly due to rising housing costs of their children. Older parents should provide financial assistance to help their children to become economically independent (3.42). Furthermore, the respondents were more likely to plan to leave a bequest to their children (2.91) and to aid their children financially, when they could afford to do so (3.85).

**Table 5.8 Mean Score of Ranks on Altruism towards Children’s Well-being Bequest Motive of the Elderly by Region, Gender, and Age Groups.**

<b>Characteristics</b>	<b>North</b>	<b>Central</b>	<b>South</b>	<b>Sample size</b>
<b>Male</b>	3.34	3.41	3.6	174
<b>Female</b>	3.5	3.27	3.4	209
<b>60-69</b>	3.46	3.43	3.45	212
<b>70-79</b>	3.36	3.19	3.55	121
<b>80+</b>	3.57	3.45	3.54	50
<b>Sample size</b>	133	139	111	383

Source: Calculated by the researcher.

Note: Rank 1: Strongly disagree .... Rank 5: Strongly agree, and the higher the mean score, the greater the agreement to the statement

Table 5.8 demonstrates the relationship between the age and gender of respondents' and their beliefs of altruism towards children's welfare. It indicates that younger groups were more willing than older groups to provide financial support for their children. This could be explained by the fact that most of the elderly households between the ages of 60 and 69, were still employed and in better health than those who were 80 years of age and older. Additionally, the many demographic backgrounds, particularly as those pertaining to culture, tradition, and sample backgrounds, also probably contribute to the uniqueness of the research findings (Laitner & Ohlsson, 2001). With the exception of northern Kerala, male elderly have greater influence than female elderly when it comes to ensuring the wellbeing of children. Based on the mean score rank, the researcher conducted the independent t test for grouping variable of two- and one-way ANOVA for grouping variable of more than two, for comparing the means and found out the variations in the socio-economic status among the elderly with altruism towards children’s wellbeing.

**Table 5.9 Elderly with Altruism towards Children’s Wellbeing Bequest Motive across selected Social and Health Characteristics in Kerala.**

<b>Characteristics</b>	<b>Significant</b>	<b>Characteristics</b>	<b>Significant</b>
Religion	F(2,380) = 0.088, P = .92	Disability due ageing	t(381) = -0.748, P = .46
Age	F(2,380)=1.683 ,P = 0.19	Non-Communicable Diseases	F(2,380) = 0.324,P = .72
Gender	t (381) =0.453, P = 0.65	Communicable Diseases	t(59) = 2.010 ,P = .05*
Social group	F(5,377) = 0.628, P = 0.68	Degenerative Diseases	t(381) = -2.354, P =0.02*
Education	F(11,371) = 4.91, P = .00**	Dependent elderly	F(2,380) = 1.611, P =.20
Marital status	F(3,379) = 7.29, P = .00**	Male children	F(7,375)= 0.800, P =.59
Headship	F(2,380) = 5.97, P = .00**	Female children	F(7,375) = 0.837, P =.56
Ownership of House	F(13,369)=1.86,p=.04*	Grand children	F(19,363) = 0.603,P =.91
Place of residence	t (381) = 1.012, P = 0.31	Great grand children	F(11, 371) = 1.099, P=.36
District	F(2, 380) =1.683,P =0.19	Migrated elderly	t(381)=-1.547, P = .12
Family type	F(5,377) = 4.645,P=.00**		

Source: Calculated by the researcher.

Note: \*Significant at the 0.01 level and \*\*Significant at the 0.05 level.

There is no significant variation among regions on the elderly’s altruism towards children’s wellbeing with the F-test statistics at 1.683 while the p-value is 0.19. Literature shows that, at large, the Asian people are more likely to leave a bequest to their family members (Rowlingson & McKay, 2005). There is no significant difference among age groups on respondents' altruism towards children’s wellbeing (F-test statistics is 1.683). The different demographic backgrounds like culture and tradition, and sampling background are the main factors that lead to differences from others (Laitner & Ohlsson, 2001). At the same time, there is no significant difference among gender variables (t-test is 0.453) on altruism towards children's wellbeing by the elderly, and this is in line with the findings of Goetting and Martin (2001). Also, the variable place of residence is

insignificant with respect to the elderly's altruism towards children's wellbeing. With a good educational status, this group of elderly spend more than their counterparts (elderly in the other four bequest motive groups) for the wellbeing of their children in terms of inherited property as well as self-acquired (land, jewellery, and house). By doing so, they never intend to get back old age care as a reward, but as the head of the family, they believe that it is their responsibility to maximize the wellbeing of their family members, especially children, ranging from the nuclear to joint families. The priority of this group of elderly lies in living with their spouse happily. So, they are not expecting any care from the children. But in some cases, if elderly person expects a huge out of pocket health expenditure for treatment of diseases in near future, they might refuse to transfer bequeath by thinking that their decision might not affect the children's wellbeing. The communicable and degenerative diseases, in this way, sometimes may have adverse effect on the bequest decision of this group of elderly populaces.

**Table 5.10 Elderly with Altruism towards Children's Wellbeing Bequest Motive across Economic Status in Kerala.**

<b>Economic Status</b>	<b>Significant</b>	<b>Economic Status</b>	<b>Significant</b>
Land (self-acquired)	F(29, 353) = 2.31, P = .00**	Employment	F(9,373) = 0.835, P = 0.57
House(self-acquired)	F(38,344) = 2.81, P = .00**	Contribution to Household Expenditure	F(1,381) = 2.601, P = 0.11
Jewellery	F(27,355) = 2.03, P = .00**	Health Insurance	t(381) = 2.38, P = 0.02*
Valuable vessels	F(8,374) = 1.48, P = 0.16	Non-Health Insurance	t(381) = -0.051, P = 0.96
Savings	F(1,381) = 0.011, P = 0.92	Poverty line	F(3,379) = 1.347, P = 0.26
Investment	F(1,381) = 8.60, P = 0.00**	Retirement Benefits	F(17,365) = 0.667, P = 0.76
Debt	F(2,380) = 1.603, P = 0.20	Remittance by daughter	F(17,365) = 1.248, P = 0.224)
Type of income received	F(3,379) = 2.90, P = 0.13	Remittance by son	F(17,365) = 0.630, P = 0.87

Source: Calculated by the researcher.

Note: \*Significant at the 0.01 level and \*\*Significant at the 0.05 level.

Together with the inherited property, the elderly with altruism towards children's wellbeing contribute self-acquired properties (land, jewellery, and house) for the

wellbeing of their children. They are interested in taking a health insurance scheme for meeting the unforeseen contingencies. At the same time, they maintained the ownership of house in their name and income security through small investments, which can earn returns in the future. In this way, this elderly group gives much more care to their children's / family members' welfare and relatively less financial care for themselves.

### 5.2.3 Accidental Bequest Motive

The accidental bequest group of the elderly populace accumulates assets without transferring them to the next generation. It might be either due to the concern for the welfare of future generations or due to the unawareness of writing will. In other words, the elderly with an accidental bequest motive leaves bequest behind when they die.

**Table 5.11 Mean Score of Ranks on Accidental Bequest Motive Statements.**

Statements	Mean	Standard Deviation
<b>Accidental Bequest Motive</b>	<b>3.00</b>	<b>1.2</b>
I want to leave more or all bequests to my youngest son regardless of whether he takes care of me.	3.13	1.210
I want to leave more or all bequests to my sons only	3.34	1.156
I want to leave my bequest equally to my children	2.64	1.191
I want to leave more or all bequests to my daughters only	2.88	1.228

Source: Calculated by the researcher.

Note: Rank 1: Strongly disagree .... Rank 5: Strongly agree, and the higher the mean score, the greater the agreement to the statement.

The mean score of the total ranks for the accidental lifecycle was 3, and the standard deviation was 1.2. It strengthens the observation / thought that the motives of the elderly with accidental bequests are either strategic or altruistic. They want to leave all bequeaths to their sons (3.34) even if their sons would not take care of them (3.13). It reveals the elderly's altruistic character. On the other hand, they are scared that their children will abandon them. So, they keep a strategy and have a selfish motive of transferring a bequeath in exchange for care. They wanted to bequeath more to their mostly sons rather

than daughters (2.88), and they are not ready to give equal property to their children (2.64), revealing their interest and selfish motive.

**Table 5.12 Mean Score of Ranks on Accidental Bequest Motive of the Elderly by Region, Gender, and Age Groups.**

<b>Characteristics</b>	<b>North</b>	<b>Central</b>	<b>South</b>	<b>Sample size</b>
<b>Male</b>	2.94	3.230	2.86	174
<b>Female</b>	3.10	3.160	2.75	209
<b>60-69</b>	3.02	3.130	2.8	212
<b>70-79</b>	3.06	3.270	2.9	121
<b>80+</b>	3.21	2.900	2.7	50
<b>Sample size</b>	133	139	111	383

Source: Calculated by the researcher.

Note: Rank 1: Strongly disagree .... Rank 5: Strongly agree, and the higher the mean score, the greater the agreement to the statement.

The accidental bequest motive is more prevalent in the northern and central parts of Kerala than in southern Kerala. The elderly respondents exhibit accidental motives because they fear eviction and abandonment at religious places by their children when their assets are transferred (Rajan, 2008). So, they hold on to assets. At the same time, Northern Kerala depicts more towards the altruistic behaviour of the elderly, coping with the strategic behaviour of the children, resulting in their accidental bequest motive. Also, the strategic behaviour of the elderly, combined with the altruistic behaviour of their children, will result in an accidental bequeath culture in the highly urbanised central part of Kerala. This kind of motive targets the female elderly than their male counterparts in these parts of Kerala. The old-old category practices it more than other groups because the elderly realize the truth of real caregivers, but they are unable to do the transfers.

**Table 5.13 Elderly with Accidental Bequest Motive across selected Social and Health Characteristics in Kerala.**

<b>Characteristics</b>	<b>Significant</b>	<b>Characteristics</b>	<b>Significant</b>
Religion	F(2,380) =0.653,P = 0.52	Disability due ageing	t(381)=1.508 ,P = 0.13
Social group	F(5,377) =0.818, P =0.54	Non-Communicable Diseases	F(2,380) = 3.065,P =0.048
Education	F(11,371) = 1.124, P =.34	Communicable Diseases	t(59) = -0.802 ,P =0.43
Marital status	F(3,379) = 1.543, P =0.20	Degenerative Diseases	t(381) =1.185 ,P =.24
Migrated elderly	t(381) = -2.391,P = .02*	Dependent elderly	F(2, 380) = 1.699,P = 0.18
Family type	F(5,377) = 2.39, P = .04*	Male children	F(7,375) = 1.126,P =0.35
Headship	F(2,380) = 8.741, P =.00**	Female children	F(7,375) =1.934, P =0.06
District	F(2,380)= 6.96,P=.00**	Grand children	F(19,363) =1.71, P = .03*
Place of residence	t(381)= -3.16,P=.00**	Great grand children	F(11,371) = 2.60, P = .00**
Gender	t (381) = - 0.065, P =.95	Total family members	F(39,349)=1.91,P=.00**
Age	F(2,380)= 2.588,P =.08		

Source: Calculated by the researcher.

Note: \*Significant at the 0.01 level and \*\*Significant at the 0.05 level.

In the case of accidental bequest motive of the elderly, the mean score value is 3 and the standard deviation is 1.20. There are substantial differences in the elderly's accidental bequest motive across regions, with the F-test statistic at 6.96 and significant at 0.01 level. This group of elderly populaces is relatively more seen in the central and the southern part of Kerala. As a result, and because of little rural – urban differences, the rural elderly are seen to display the characteristics of urban elderly in Kerala, particularly a selfish character and lack willingness to share the assets with their children. However,

in the northern region, it is interesting to observe that even the elderly in the urban areas portrayed the characteristics of the elderly in the rural areas. Moreover, as against the belief, it is further observed that the majority of the elderly with accidental motives in rural areas of the southern and central regions are found not willing to contribute to their children as bequeath transfers. Hence, there is an inverse relationship between the place of residence and the elderly respondents with accidental bequest motive. In the case of gender, no significant difference is visible between male and female elderly respondents with accidental bequest motives.

Realising the use and throw-away culture of the present generations (grandchildren and great - grandchildren) who may empty their assets, the elderly with accidental bequest motives are found unwilling to give away their assets. The migrated elderly had a tendency to be economically independent and they are seen purposefully engaged in the accidental bequest motive. On the other hand, migrated elderly residing with children who hold less wealth are found not willing to transfer their assets, but they receive remittance from their children (sons and daughters).

Keeping accidental bequest motives by the 'karanavar' (head of Kerala household in the traditional time periods) in the joint families is one of the reasons for the perpetuation of accidental motives and disintegration of joint families in Kerala. With an intention of enlarging family property, assets were not distributed by the 'karanavar' to his family members, which is considered as a form of accidental bequest motive. Instead, he handed over the power of holding the assets unanimously to a selected family member who would become the next 'karanavar' in the line of succession. This process of accumulating assets continued through generations over time. This kind of system

existed through the matriarchal lineage and ended up with the emergence of the patriarchal system. As a result, the extended and nuclear pair households are seen with accidental motives.

**Table 5.14 Elderly with Accidental Bequest Motive across Economic Status in Kerala.**

<b>Economic Status</b>	<b>Significant</b>	<b>Economic Status</b>	<b>Significant</b>
Health Insurance	t(381)=-0.497,P =.62	Employment	F(9,373) =2.55, P = .00**
Non-Health Insurance	t(381)=1.117,P=0.27	Land(Inherited)	F=1.216, (p=0.169)
Contribution On Household Expenditure	F=0.013, (p=0.908)	House(self-acquired)	F(38,344) =2.10, P = .00**
Poverty line	F=1.495, (p=0.222)	Jewellery	F(27,355) =1.76, P = .01*
Retirement Benefits	F(17,365) =1.530,P =.16	Valuable vessels	F(8,374) = 1.55, P=.14
Remittance by daughter	F(17,365) = 2.18, P =.00**	Savings	F=0.195, (p=0.659)
Remittance by son	F(17,365) = 2.35, P =.00**	Investment	F=2.734, (p=0.099)
Poverty line	F(3,379)=2.79,P=.04*	Debt	F=0.671, (p=0.512)
Income type	F(3,379)=3.97,P=.08*		

Source: Calculated by the researcher.

Note: \*Significant at the 0.01 level and \*\*Significant at the 0.05 level.

The employed elderly and the elderly with self-acquired land with accidental bequest motive are observed to be economically independent. On the other hand, the elderly who are BPL and Antyodaya card holders, received remittance from their children (sons and daughters) and benefits from the institutional caregivers, ie monetary and non-monetary receipts (for e.g., benefit from Public Distribution System, health assistance) which they believe that they deserve to get. Above all, it is noteworthy that they handover the ownership of their house to the next generation only after their death. With respect to jewellery, the elderly with an accidental bequest motive, handovers it to the children only after their death. Hence, they are partially selfish in character.

### 5.2.4 Strategic Bequest Motive

The “strategic life-cycle” comprehends the elderly as persons whose main concern is only about themselves and are perceived to be egoistic. These selfish parents would not have any intention to leave a bequest for their children. In case of leaving any bequest or providing any financial assistance to their children, they, of course, would expect something in return from their children like caring for them during old age in return. Informal care and support from children could be assumed as a repayment for the expenses elderly had made for their children’s wellbeing such as providing education and a better living standard (Johar, et al., 2014; Leopold & Raab, 2011). This group of elderly often expect their children to contribute either to their daily expenses or at least to their monthly expenses (Berry, 2006). In Japan, wealth transfer to adult children is less than 20 percent of the total wealth possessed by the elderly population, but elderly households would be seeking time and financial support out from their children during old age (Horioka, 2009).

**Table 5.15 Mean Score of Ranks on Strategic Bequest Motive Statements.**

<b>Statements</b>	<b>Mean</b>	<b>Standard Deviation</b>
<b>Strategic Bequest Motive</b>	<b>3.14</b>	<b>1.22</b>
It is unnecessary to contribute to my children’s monthly expenses	2.35	1.378
It is unnecessary to contribute to my children’s monthly expenses even if I can afford it	2.25	1.257
It is unnecessary to contribute to my children’s monthly expenses even if they have insufficient income for their living	4.11	1.098
It is unnecessary to take care of both the health care and living conditions of children	3.14	1.287
I gave enough education and skills expecting care in the old age	2.94	1.245
I have given education and skills to adult children as a social responsibility	3.60	1.133
I provide each children employment as a social responsibility	3.58	1.137

Source: Calculated by the researcher.

Note: Rank 1: Strongly disagree .... Rank 5: Strongly agree, and the higher the mean score, the greater the agreement to the statement.

The mean score of the total ranks for the strategic lifecycle was 3.14, and the standard deviation was 1.22. It shows that the majority of the respondents were strategic and would not contribute to their children's monthly expenses if the children had insufficient income for their living (4.11). This group of elderly think that providing education (3.6) and employment (3.58) to their children is their responsibility towards society, not towards children. Thus, they will not expect care in return in old age (2.94) for the same. On the other hand, they are expecting care in return in exchange for their contribution towards children's monthly expenses (2.35), if and only if they can afford it (2.25). The intention of being selfish among the elderly is not really strong. But Kerala experiences a slow pace of transition from altruistic to strategic bequest motives among the elderly populace.

**Table 5.16 Mean Score of Ranks on Strategic Bequest Motive of the Elderly by Region, Gender, and Age Groups.**

<b>Characteristics</b>	<b>North</b>	<b>Central</b>	<b>South</b>	<b>Sample size</b>
Male	3.07	3.53	2.8	174
Female	3.13	3.55	2.9	209
60-69	3.1	3.51	2.85	212
70-79	3.13	3.56	2.77	121
80+	3.04	3.6	2.88	50
Sample size	133	139	111	383

Source: Calculated by the researcher.

Note: Rank 1: Strongly disagree.... Rank 5: Strongly agree, and the higher the mean score, the greater the agreement to the statement.

Majority of central Kerala elderly respondents decided not to contribute to their children's monthly expenses. It is seen that the sample elderly respondents of the central Kerala with the highest mean score were more selfish than elderly respondents in southern and northern Kerala. Low level of awareness/ exposure and low financial condition may be the reason for this in the southern and northern Kerala. In general, female respondents were relatively more selfish than male respondents. This could be because women were more likely to take on the family caregiver roles and depend on their husbands and their

children for financial assistance (Ha et. al., 2006). Though the 80+ population is small in percentage, their selfish goals are stronger than those of the other two age groups.

**Table 5.17 Elderly with Strategic Bequest Motive across selected Social and Health Characteristics in Kerala.**

<b>Characteristics</b>	<b>Significant</b>	<b>Characteristics</b>	<b>Significant</b>
Religion	F(2,380) =1.182, P =.308	Disability due ageing	t (381) = - 3.65, P = .00**
Age	F(2,380) = 0.950,P =0.39	Non-Communicable Diseases	F (2,380) = 10.65,P =.00**
Gender	t (381) = -.912,P =0.36	Communicable Diseases	t (59) = -1.040,P =.30
Place of residence	t(381)= -5.99,p=.00**	Degenerative Diseases	t (381) = 1.899,P =.06
District	F(2,380)=30.01,p=.00**	Headship	F(2,380) =25.52,P =.00**
Social group	F(5,377) = 2.91, P = .01*	Dependent elderly	F(2,380) = 1.257, P = .29
Education	F(11,371) =1.86, P = .04*	Male children	F(7,375) = 2.66, P = .01*
Migrated elderly	t(381)=-2.07,p=.04*	Female children	F(7,375) = 3.31, P = .00**
Family type	F(5,377) = 6.31, P = .00**	Grand children	F(19,363) = 1.71, P = .03*
Marital status	F(3,379) = 0.392, P =0.76	Great grandchildren	F(11,371) = 2.46, P =0.01*

Source: Calculated by the researcher.

Note: \*Significant at the 0.01 level and \*\*Significant at the 0.05 level.

Strategic life cycle's mean score value is 3.14, and the standard deviation is 1.22. Financial status, the level of education and residence in urban areas might be reasons for elderly being more selfish in their approach and strategies. Mostly, elderly respondents in the northern part of Kerala are keeping a strategic motive with love and affection, whereas in the other parts of Kerala, many a times, the elderly are found snatching care with respect to their accumulated wealth because of the drastic social transformation like migration. Moreover, this study pointed out that place of residence is a significant variable with t-test statistic at- 5.99 and the p-value at 0.00, which indicates that the elderly are more selfish and strategic in the urban areas. This is due to employment, health status and the decrease in financial condition of elderly household (Belke, et al., 2014). The elderly in this strategic bequest motive group are selfish towards receiving informal old age care. They bother about the inter-generational transfer of bequeath and receive care. The researcher has found out that the number of children (son and daughter), grandchildren, and great grandchildren have significance in Kerala society with regard to elderly's strategic motive. Also, social group is a significant variable. There is literature that claims that the elderly among minority social groups lack care due to poor financial conditions (Zakkariah, 2016). Like the elderly in other bequest motive groups, variables such as family types, education, and headship play a significant role in deciding the elderly's strategic bequest motive. The elderly with disability due to ageing generate more demand for high and advanced care and support from the caregivers, which makes the elderly strategic in character with respect to bequest motives. The elderly with NCD also generate high demand for care from the informal caregivers and this makes the elderly strategic in their bequest motives. Similarly, headship of the household by the elderly is a significant variable which makes the elderly strategic. As the elderly is not willing to transfer the headship to their children, many nuclear families are seen formed in Kerala.

**Table 5.18 Elderly with Strategic Bequest Motive across Economic Status in Kerala.**

<b>Economic Status</b>	<b>Significant</b>	<b>Economic Status</b>	<b>Significant</b>
Retirement Benefits	F (17,365) = 2.546,P =0.02*	Income type	F(3,379)=14.01,p=.00**
Remittance by daughter	F(17,365) = 2.74, P = .00**	Land (Inherited)	F(53,329)= 3.08, P = .00**
Remittance by son	F(17,365) = 5.110,P = .00**	House(self-acquired)	F(38,344) = 1.70, P = .00**
Health Insurance	t(381) = 1.10,P = .27	Jewellery	F(27,355) = 1.457,P = .09
Non-Health Insurance	t(380) = -0.565,P =0.57	Valuable vessels	F(8,374) = 1.64, P = .11
Contribution to Household Expenditure	F(1,381) = 4.09, P =.04*	Savings	F(1,381) = 0.334,P = .56
Poverty line	F(3,379) = 1.680, P = .20	Investment	F(1,381) =6.08, P = .01*
Employment	F(9,373) = 3.64,P = .00**	Debt	F(2,380) =0.837,P =.43

Source: Calculated by the researcher.

Note: \*Significant at the 0.01 level and \*\*Significant at the 0.05 level.

This particular group of elderly thinks that economic independence or accumulating wealth is the reason why the informal caregivers are providing care proportionately. They are employed either by their wish or by compulsion to get care from the informal caregivers. Together with the labour income, they accumulate wealth like land and house in their lifetime. Also, they engage in investment plans to meet unforeseen health expenditure in future. In order to get sufficient care, the elderly think that they will not become a financial burden for their children and they also contribute to the household expenditure. Yet, the majority of these respondents have a selfish motive and are not willing to contribute to their children's monthly expenses. According to the BKPAI survey (2011), two-thirds of the elderly households contribute their share to the total household expenditure. On the contrary, the poor elderly in this group accept remittance from children as a part of financial support of informal old age care, when they have altruistic children who are migrated. As a result, they live in a house as nuclear pair households. This is prominent in the central part of Kerala. The retired elderly in this group keep aside their retirement benefits in the form of investment, to be transferred to their children in return for the care provided and for the overall wellbeing. More importantly, elderly with a strategic motive retained the ownership of their land and

house with themselves to get more care. This is in conformity with the observation that the elderly have a desire to leave bequests for obtaining care at the fag end of their life (Mankiw, 2014).

### 5.2.5 Social Norms and Tradition Bequest Motive

The elderly group with this motive would expect their children’s contribution to their monthly expenses, which is not related to selfishness. This behaviour is in tune with social norms and traditions which are unwritten. Jellal and Wolff (2002) observed that the bequest patterns are emulated across generations. In other words, by seeing the parents’ contribution to their parents (children’s grandparents), the parents assume that their children should provide them with financial aid during their old age, as they did (Lai, et al., 2010). More tolerant parents would only request support from their children in the absence of sufficient resources for their monthly expenses if and only if their children could afford it (Coon & Mitterer, 2010; Sakudo, 2007)

**Table 5.19 Mean Score Ranks on Social Norms and Tradition Bequest Motive Statements.**

<b>Statements</b>	<b>Mean</b>	<b>Standard Deviation</b>
<b>Social norms and tradition bequest motive</b>	<b>3.114</b>	<b>1.289</b>
It is unnecessary to contribute to my children’s monthly expenses	2.36	1.405
I provided good health to my children without expecting any returns from them	2.70	1.529
I gave good health and living conditions expecting the same in old age.	4.04	1.018
Adult children should provide health assistance to older parents.	3.46	1.181
I was committed to providing better education and skills for the eldest son	3.01	1.312

Source: Calculated by the researcher.

Note: Rank 1: Strongly disagree .... Rank 5: Strongly agree, and the higher the mean score, the greater the agreement to the statement.

It is relevant to analyse the elderly’s social norms and traditions. The table 5.19 showed that, with a standard deviation of 1.289, the mean score of the overall ranks for social norms and tradition was 3.114. It demonstrates that the elderly agreed that their children had to provide them with better living conditions (4.04) and health assistance (3.46) with

financial resource transfers/ financial assistance if the elderly could afford to offer better education (3.01), good health (2.70), and financial assistance (2.36) to children. It is a strategy played by the elderly and their children in society.

**Table 5.20 Mean Score of Ranks on Social Norms and Tradition Bequest Motive of the Elderly by Region, Gender, and Age Groups.**

Characteristics	North	Central	South	Sample size
Male	3.15	3.600	2.78	174
Female	3.13	3.240	2.88	209
60-69	3.10	3.420	2.79	212
70-79	3.16	3.440	2.83	121
80+	3.25	3.350	3.04	50
Sample size	133	139	111	383

Source: Calculated by the researcher.

Note: Rank 1: Strongly disagree .... Rank 5: Strongly agree, and the higher the mean score, the greater the agreement to the statement.

With respect to the social norms and tradition, the mean score of the total ranks for social norms and tradition is 3.114 with a standard deviation of 1.29, which points out that the majority of the respondents agreed that their children should provide financial care and support if they could afford to do so. A more significant influence of this motive is seen among males than their female counterparts. The male elderly hold assets that are relevant to this kind of strategy. On the other hand, the elderly females stock dead assets like gold, and they are the less significant power players in this kind of strategy. Regarding the age categories, the oldest old played more powerfully than the young old with respect to the social norms and traditional bequest strategies. At the same time, the power to play the strategy will increase with their age as their chance way also due to categories. The concept of culture and tradition is found to be greatly significant in northern and central parts of Kerala, as against the southern region.

**Table 5.21 Elderly with Social Norms and Tradition Bequest Motive across selected Social and Health Characteristics in Kerala.**

Characteristics	Significant	Characteristics	Significant
Religion	F=1.748, (p=0.176)	Non-Communicable Diseases	F(2,380) = 12.81, P = .00**
Social group	F=1.503, (p=0.188)	Communicable Diseases	t = 0.399, (p=0.691)
Education	F(11,371) = 2.42, P = .01*	Degenerative Diseases	t = 0.807, (p=0.420)
Marital status	F(3,379) = 3.02, P = .00**	Dependent elderly	F=1.070, (p=0.344)
Migrated elderly	t(381) = -2.11, P = .04*	Male children	F=1.013, (p=0.421)
Family type	F(5,377) = 2.49, P = .03*	Female children	F(7,375) = 3.00, P=.00**
Headship	F(2,380) = 39.58, P = .03*	Grand children	F(19,363) = 1.73, P=.03*
Age	F(2,380) = 1.706, P=0.183)	Great grandchildren	F(11,371)=1.268, (p=0.241)
Gender	t (381) = 0.662, P=0.51	Spouse	F(2,380)=4.02, p=.02*
Place of residence	t(381)=-7.27, p=.00**	Total family members	F(39,349)=1.87, p=.00**
District	F(2,380)=18.44, p=.00**	Disability due to ageing	t(381) = -3.13, P= .00**

Source: Calculated by the researcher.

Note: \*Significant at the 0.01 level and \*\*Significant at the 0.05 level.

With respect to the social norms and tradition, the mean score of the total ranks for social norms and tradition is 3.11 with a standard deviation of 1.29, which points out that the majority of the respondents agreed that their children should provide financial care and support if they could afford to do so. This group of elderly believe that the children had to support their parents financially if the elderly had any financial difficulty. For the districts, the results of ANOVA show that the F-test statistic is 18.442 with the p-value

significant at 0.05 level. This can be attributed to urbanisation, modernisation and privatisation effects and the elderly from this group have the tendency to come out of the unwritten social norms and tradition in the urban space of Kerala. Also, this character is reflected in the district wise distribution of this group of elderly. However, it is noteworthy that there is not enough evidence to claim that the variables gender, age, religion, male children and social group have differences in social norms and traditions.

Significant variation is noticed across socio- economic conditions of the elderly with the bequest motive of social norms and tradition. This happens mainly due to the pressures of culture and social norms that are insisted by society for the social well-being of the elderly. These social norms propagate that the youngest son should take care of the elderly parents and the daughter-in - law is considered to be the traditional caregiver; as daughters get married and leave to live with her husband's family. The society betrays the matrilineal system by advocating the patrilineal bequeath transfers. Majority of elderly parents show a tendency to come out of the prevailing social norms and many have come out of it due to the inadequate care received. Eventually, they depend more on their female children and grandchildren for getting care to whom the assets ought to be transferred as gift deeds. Further, elderly widows are more dependent on either their own siblings or daughters in Kerala (Rajan & Mishra, 2020). In addition to this, the elderly with ageing disabilities like hearing, vision, chewing, walking and memory loss are found to be more dependent on caregivers. Education helps the elderly including migrated ones to live independently and come out of the traditional norms, while headship receives power to follow the traditional social norms. From the traditional viewpoint, living with the spouse is considered as the happiest and comfortable life by them. Like the other groups, for this the elderly households, NCD is an obstacle in the path of their life and to help with it, they depend on health insurance mainly on RSBY.

**Table 5.22 Elderly with Social Norms and Tradition Bequest Motive across Economic Status in Kerala.**

<b>Economic Status</b>	<b>Significant</b>	<b>Economic Status</b>	<b>Significant</b>
Health Insurance	t(381) = 2.81,P =.01*	Employment	F(9,373) = 6.10,P =.00**
Non-Health Insurance	t (381) = -1.056,P = .29	Land (Inherited)	F(53,329) = 2.75,P=.00**
Contribution On Household Expenditure	F=0.191, (p=0.662)	House	F(36,346)=2.60,(p=0.014)*
Income type	F(3,379)=13.65p=.00*	Jewellery	F=1.069,(p=0.384)
Poverty line	F=0.124, (p=0.884)	Valuable vessels	F(8,374) = 2.68,P = .01*
Retirement Benefits	F=0.843, (p=0.600)	Savings	F=5.143,(p=0.024)*
Remittance by daughter	F(17,365) = 2.03,P = .01*	Investment	F=3.023, (p=0.083)
Remittance by son	F(17,365) = 4.34,P=.00**	Debt	F=1.303, (p=0.273)

Source: Calculated by the researcher.

Note: \*Significant at the 0.01 level and \*\*Significant at the 0.05 level.

The elderly with social norms and tradition transfer their property as per the social norms and tradition, even though they are well aware of the stories of abandonment by the children after receiving the assets from parents. This makes the elderly to have a strategic or accidental bequest motive in the transfer of their assets. Apart from this, the elderly are getting employed after retirement and keep savings for their future. At the same time, the remittance received from the children (especially from female children) initiated in them a special type of accidental bequests, where more wealth is transferred to the low-income children living alone. On the contrary, the elderly with social norms and tradition bequest motive, at times, displays a special strategic bequest behaviour and they may revert their decision to provide the assets to needy children (low income and children living alone) when the value of the assets like land and house appreciates. This group of elderly think that returns from employment is an asset that they need not transfer as bequeaths. Also, the income earned by them from assets, remittances and public provisionings are not transferred to their children. Mostly they used this kind of income to meet their day-to-day expenditures. Moreover, this group of elderly people place much

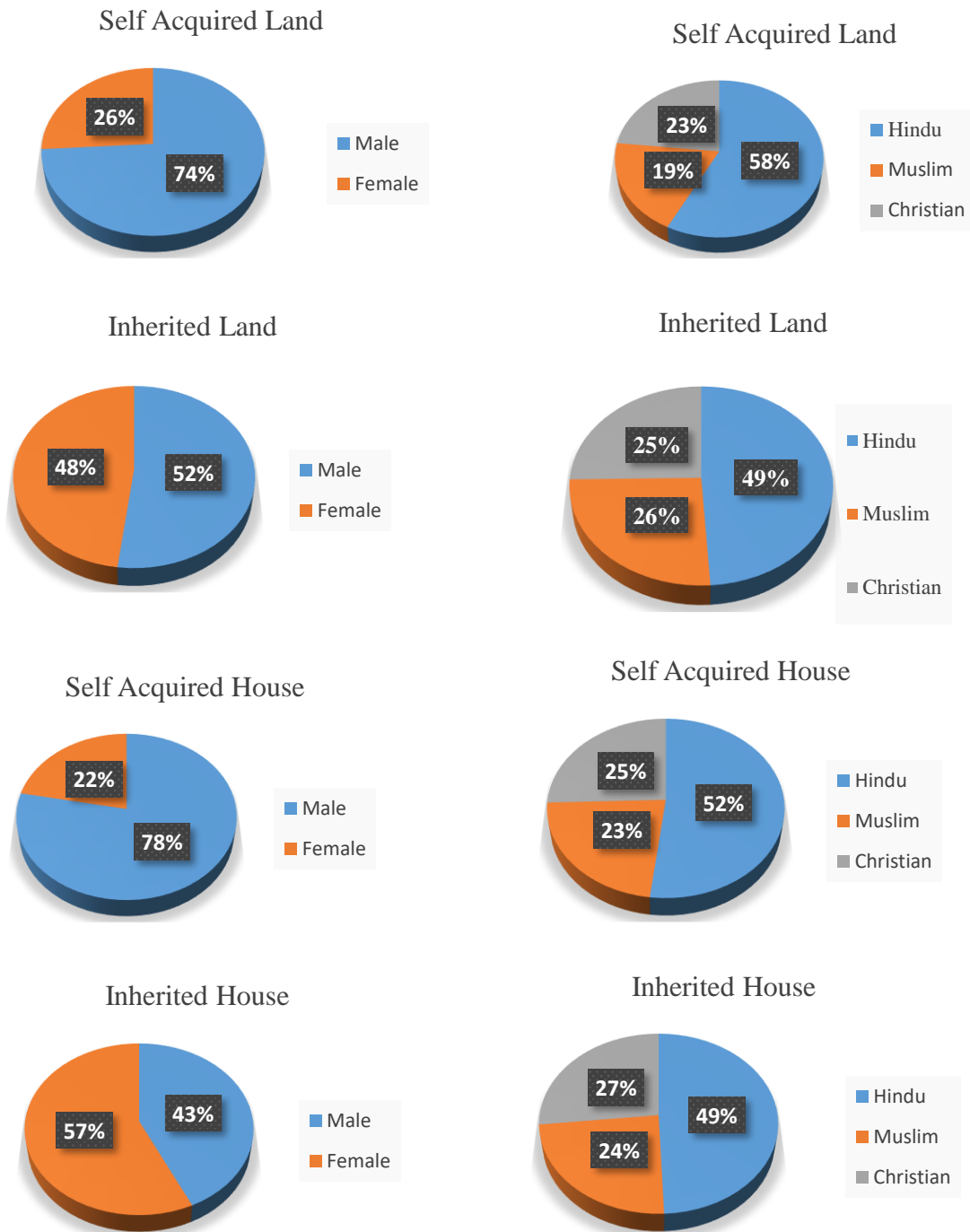
importance on their traditional assets. Valuable vessels are transferred to the next generations, as they treat them as highly precious to them and do not want to lose them. Health insurance empowers them to some extent, and the government's RSBY scheme galvanizes the poor elderly households amid costly private health insurance schemes.

### **5.3 Bequeath Distribution**

The bequest motives of the elderly capture the motives of the elderly to bequeath their assets to the next generation. But, bequeath distribution is the actual distribution of assets. Hence, bequest motive and bequeath distribution are not the same and there can be differences among elderly households in Kerala. The elderly households are practicing five kinds of lifecycle bequest motives in Kerala namely viz. pure altruism, altruism towards children's wellbeing, strategic, accidental, and social norms and tradition. These five bequest motives are classified into two bequest distributions in actual life, viz, altruistic bequeath distribution and strategic bequeath distribution. Pure altruism and altruistic well-being towards children are grouped under the altruistic bequeath distribution and; accidental and strategic bequest motives are grouped under the strategic bequeath distribution, and social norms and tradition come under either strategic bequeath or altruistic bequeath distribution in Kerala. In the present study, the immovable assets like land and house, and movable or dead assets like jewellery and valuable vessels are considered the respondents' wealth. Out of these assets, the elderly set aside a portion of assets for themselves to spend on their unforeseen expenditure during the old age, and the rest of the assets were kept as bequests to be left to their informal caregivers like spouses, sons, daughters, and grandchildren. The study considered only the present value of assets measured in Indian currency (Rupee). In this section, the researcher investigates the strategic and altruistic bequeath distribution of the elderly to their family members who are the major informal caregivers in Kerala.

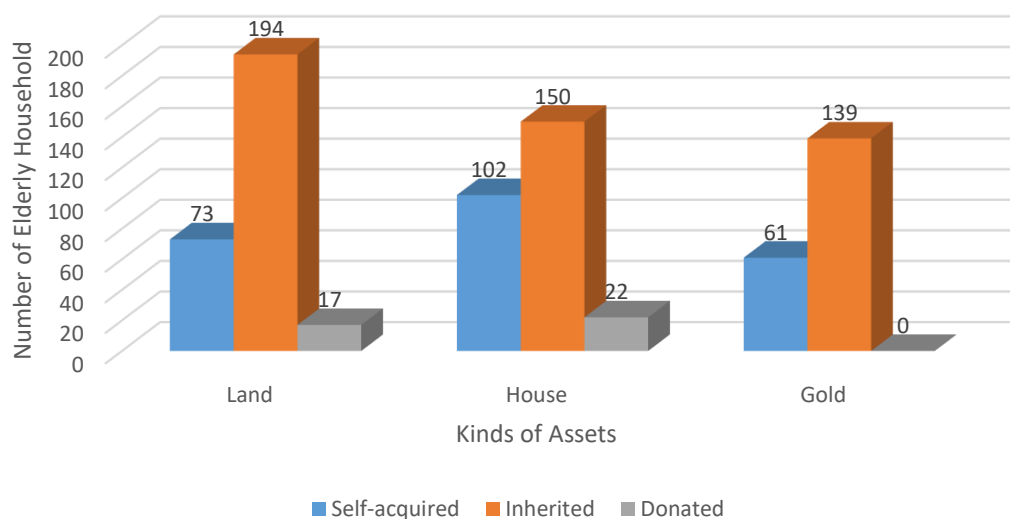
The distribution of asset holding of the sample elderly by type of acquisition (self-acquired land, inherited land and self-acquired house and inherited house) by gender, and religion is shown in Figure 5.

**Figure 5.1 Distribution of Asset Holdings of the Elderly in Kerala by the type of Acquisition- Gender and Religion**



Source: Primary Survey

**Figure 5.2 Distribution of Asset Holdings of the Elderly in Kerala by the way of Acquisition.**



Source: Primary Survey

Here, in defining assets, land includes fields and the house includes flats. The elderly household can hold land, house and gold; either self-acquired or inherited or both at a time. The assets are donated from the formal caregivers to the elderly who do not own land and house. The inherited asset holders are more than the self-acquired asset holders. The self-acquired assets are comparatively low and this may be due to the advantage of inherited assets. Among the asset holders, the land holders are large in number, and gold holders are less in number in which elderly males receive mainly the land and house from their ancestors and female elderly receive gold assets.

**Table 5.23 Bequeath Distribution Patterns to the Sample Elderly from their Previous Generation in Kerala.**

Type of Bequeath Distribution	Gold	Land	House	Total
Altruistic	108 (29)	145 (39)	121(32)	374 (100)
Strategic	31(28)	49(45)	29(27)	109 (100)

Source: Primary Survey, note: Values in brackets are percentages.

The elderly family received bequest from their previous generation, which included a variety of assets. It demonstrates that the elderly received an altruistic bequeath contribution from the prior generation. It reveals that most of the elderly in the previous generation follow the fourth ashrama of sannyasa (theory of ageing in Kerala). They have love and trust towards the children and care for their wellbeing. On the other hand, the elderly in the previous generation show strategic behaviour too, revealing their greedy or selfish nature. Among the variety of assets, the contribution of the land reveals a selfish nature than the contribution of house and gold compared the earlier periods.

**Table 5.24 Distribution of Assets to the Family Members by the Sample Elderly in Kerala: Altruistic Bequeaths.**

<b>Elderly and family members</b>	<b>Gold</b>	<b>Land</b>	<b>House</b>	<b>Sample Size</b>
Spouse	3(14.28)	9(42.86)	9(42.86)	21(100)
Sons	1(0.85)	50(42.37)	67(56.80)	118(100)
Daughters	100(85.47)	29(24.79)	7(5.98)	117(100)
Grandchildren	20(90.91)	4(18.18)	1(4.55)	22(100)

Source: Primary Survey

Note: Values in brackets are percentages

This group of the elderly would distribute their bequests mainly to their sons followed by spouses, daughters and grandchildren, as compared to other elderly bequeath distributions, and this might be attributed to Kerala's culture and altruistic influence. Moreover, this bequeath distribution of elderly parents results in financial resource transfer to children to help their children achieve lifetime achievements, and the rest of it is left as bequests to family members. According to the Hindu Succession Act, 1986 modified in 2022. The elderly parents would divide their bequests equally to all children (both sons and daughters) with good intentions. The elderly respondents received more immovable assets than moveable assets from their previous generation, even though there are more female elderly than male elderly in Kerala. The elderly transferred more gold to their daughters than they received. Hence, altruistically, the elderly transfer of bequeaths in gold is higher for daughters than sons at the time of the daughters' marriage. Contrary to this, sons receive more immovable assets as part of the tradition in Kerala.

This is because the youngest son and his family live with the elderly parents in line with the provision of care. From an intergenerational perspective, 91 percent of the grandchildren receive altruistic bequeaths, which are mainly in the form of gold.

**Table 5.25 Distribution of Assets to the Family Members by the sample elderly in Kerala: Strategic Bequeaths.**

<b>Family members of the Elderly person</b>	<b>Gold</b>	<b>Land</b>	<b>House</b>	<b>Sample Size</b>
Spouse	2 (5.40)	14 (37.84)	21 (56.76)	37 (100)
Sons	13(7.88)	81 (49.09)	71 (43.03)	165 (100)
Daughters	20 (19.80)	51 (50.50)	30 (29.70)	101 (100)
Grandchildren	44 (80)	7 (12.73)	4 (7.27)	55 (100)

Source: Primary Survey

Note: Values in brackets are percentages.

The strategic bequeath holders without doubt are leaving their bequests to sons than daughters, spouses, or grandchildren. This group of the elderly has a weak financial status as compared to the altruistic bequest group of the elderly across socio-economic conditions. The majority of female elderly in this group are less educated and highly dependent. So, they spend a significant portion of their wealth on their own needs, and the remaining is transferred to their sons as sons are expected to take care of them during old age. This is attributed to their selfish attitude (Bernheim, et al., 1985; Cox, 1987; Cox & Rank, 1992; Cox & Strak, 1995; Horioka, 2010; Leopold & Raab, 2011; Manacorda & Moretti, 2005; Yin, 2012).

The assets may or might not be given to children in the future as sale deeds and gift deeds, mainly in the form of land or houses, are transferred as strategic bequeaths rather than gold. Majority of the elderly have transferred these assets to their sons, who is expected to provide care in the future, followed by the daughters and grandchildren. Only very few people trusted their counterparts since both are aged and need mutual care. The bequeath transfer is more altruistic than strategic in nature. The strategic thinkers trusted grandchildren more than their children because Kerala is a land of ‘aging of the aged,’

which means the elderly's children are also old persons who care for them at home. They provide assets in the form of gold to their grandchildren in Kerala.

**Table 5.26 Inter-generational Transfer of Bequeath Distribution by the Elderly in Kerala. (In lakhs)**

<b>Family members of the Elderly person</b>	<b>Altruistic Bequeath</b>	<b>Strategic Bequeath</b>	<b>Total</b>
Sons	15.29	20.49	35.79
Daughters	26.35	20.75	47.10
Grandchildren	2.67	5.07	7.74

Source: Primary Survey,

Note: Values in brackets are percentages.

Between the two bequeath distributions, elderly in altruistic bequeath kept an average 41.07 lakhs rupees of the wealth for themselves for future consumption than strategic bequeath. On an average, 55.11 lakhs rupee assets were received by each elderly from the past generation, while they transfer both these assets and their own self acquired assets to the present generation. As for the rest, about 47.10 lakhs of the rupees were informed as bequest distribution to their daughters, followed by sons (35.79 lakhs), spouse (32.44 lakhs), and grandchildren (7.74 lakhs). The relatively high share for daughters is because, the said transfers are completed ones and daughters might have received share as gold and money at the time of marriage, whereas sons have received little/ no assets for the time being, and resources are yet to be transferred, of which the share of sons are usually exorbitant mainly as immovable assets. The rest of the assets, are kept aside to meet the unforeseen and unexpected expenditure in the near future by the elderly.

This study pointed out that diverse age groups had diverse perceptions of altruism toward children's well-being, selfish life cycles, and social norms and traditions. According to Kim et al. (2012), Luc and Christophe (2012), Palmer et al. (2006), and Rowlingson and McKay (2005), the age variable plays an important role in parents' resource transfer patterns. Because of lifespan uncertainty and health status, different household

behaviours have various implications on financial conditions. Selfish parents are more likely to get financial support from their children at the fag end of their lives.

On the other hand, the elderly in both altruistic and social norms and traditional groups would reduce their financial services to their children when their age increases. In fact, Kerala society faces a structural transition from the altruistic nature to strategic nature, the pace of which is expected to gain momentum in the years to come.

**CHAPTER VI**  
**ANALYSIS OF THE NEXUS BETWEEN**  
**INFORMAL OLD AGE CARE AND BEQUEST**  
**MOTIVES IN KERALA**

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## **6.1 Introduction**

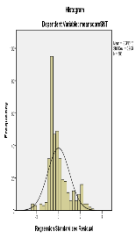
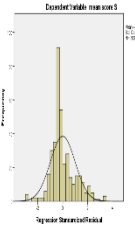
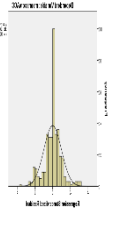
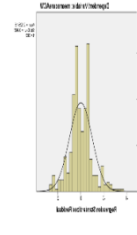
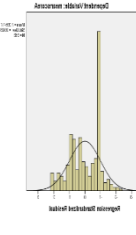
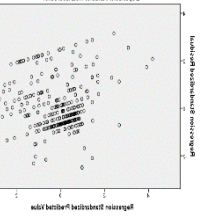
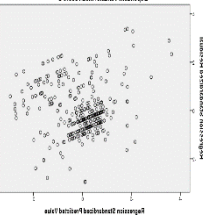
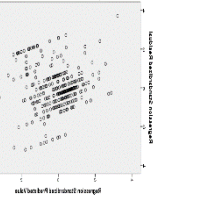
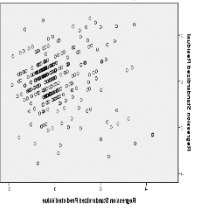
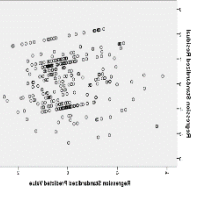
This chapter focus on the third objective of the research and analyses the relationship between the elderly's bequest motive and the informal old age care which they received from the informal caregivers. Hierarchical Multiple Regression Model (HMRM) is employed to analyse both the bequest motive and the reality of providing informal care across socio-economic groups.

## **6.2 Hypothesis Testing**

When formal old age care is not sufficient to meet the elderly's requirements, informal care is the key variable of care and bears an influence on the bequest motives. This study has identified five bequest motives namely pure altruism, altruism towards children's well-being, strategic, accidental and, social norms and tradition. Each bequest motive requires a different level of informal care from caregivers. To study the informal care from caregivers upon the bequest motive of the elderly, hypothesis H<sub>3</sub> is formulated as;

*H<sub>3</sub>: Informal old age care and bequest motive of elderly households are interrelated.*

**Table 6.1 Testing of Assumptions for Multiple Linear Regression for H<sub>3</sub>.**

<b>Assumptions</b>	<b>Social Norms and Tradition</b>	<b>Strategic</b>	<b>Accidental</b>	<b>Altruistic Wellbeing towards Children</b>	<b>Pure Altruism</b>
Durbin Watson	1.534 No Auto correlation	1.584 No Auto correlation	1.735 No Auto correlation	1.924 No Auto correlation	1.716 No Auto correlation
Multi-Collinearity	Tolerance >0.10 VIF<10.0 No Multicollinearity (Pallant, 2010)	Tolerance >0.10 VIF<10.0 No Multicollinearity (Pallant, 2010)	Tolerance >0.10 VIF<10.0 No Multicollinearity (Pallant, 2010)	Tolerance >0.10 VIF<10.0 No Multicollinearity (Pallant, 2010)	Tolerance >0.10 VIF<10.0 No Multicollinearity (Pallant, 2010)
Histogram					
Scatter plot					
	Linearity & Homoscedasticity	Linearity & Homoscedasticity	Linearity & Homoscedasticity	Linearity & Homoscedasticity	Linearity & Homoscedasticity

Source: Estimated and constructed by the researcher.

### **6.2.1 Hypothesis [H<sub>3</sub>(a)]: Informal Old age Care and Altruism towards Children's Well-being Bequest Motive**

The five components of informal old age care and altruism towards children's well-being bequest motive are tested here [H<sub>3</sub>(a)].

*H<sub>3</sub>(a): Informal Old Age Care from Children and Altruism Towards Children's Well-Being Bequest Motive are related*

The researcher's sub - hypotheses are:

*H<sub>3</sub> (ai): Informal Financial Care from children and Altruism Towards Children's Well-Being Bequest Motive are related.*

*H<sub>3</sub> (aii): Informal Social Care from children and Altruism Towards Children's Well-Being Bequest Motive are related.*

*H<sub>3</sub> (aiii): Informal Esteem Care from children and Altruism Towards Children's Well-Being Bequest Motive are related.*

*H<sub>3</sub> (aiv): Informal Informational Care from children and Altruism Towards Children's Well-Being Bequest Motive are related.*

*H<sub>3</sub> (av): Informal Emotional Care from children and Altruism Towards Children's Well-Being Bequest Motive are related.*

**Table 6.2 Relationship between Informal Old Age Care received by the Elderly and the Bequest Motive of Altruism towards Children’s Wellbeing in Kerala.**

	R	R <sup>2</sup>	F (5,377)	B	SE	β	t
(Constant)	0.44 2	0.196 **	18.332**	2.271	.132	—	17.154 **
Informal Financial care				.702	.122	.278	5.734* *
Informal Social care				.722	.252	.241	2.867* *
Informal Esteem care				-.238	.237	-.078	-1.004
Informal Informational care				-.453	.222	-.132	- 2.038*
Informal Emotional care				.776	.294	.234	2.641*

Durbin-Watson=1.924; Dependent Variable: Altruism towards Children’s Wellbeing Bequest Motive

Source: Estimated by the researcher.

Note: \*Significant 0.01 level and \*\*Significant 0.05 level.

In social science research, an R-squared between 0.10 and 0.50 (or between 10 percent and 50 percent when stated in percentage) is only acceptable when some or most of the explanatory factors are statistically significant (Ozili, 2023). The correlation coefficient of this relationship is 44.2 percent between the variables. In this model, the R squared value is 19.6 percent, higher than 10 percent. So, this model is acceptable.

For hypotheses, H<sub>3</sub> (a) [H<sub>3</sub> (ai), H<sub>3</sub> (aii), H<sub>3</sub> (aiii), H<sub>3</sub> (aiv), and H<sub>3</sub> (av)], the dependent variable was altruism towards children’s well-being bequest motive. Independent variables were informal financial care, informal social care, informal esteem care, informal informational care, and informal emotional care from children. For hypothesis H<sub>3</sub> (ai), the independent variable coefficient indicated that for each extra score increase in informal financial care, on average, altruism towards children’s well-being bequest motive score will increase by 0.702, holding all other variables constant. Hypothesis H<sub>3</sub> (ai) is supported at 0.05 level (two-tailed). For hypothesis H<sub>3</sub> (aii), the independent variable coefficient indicated that an increase in informal social care, on average, increases altruism towards children’s well-being bequest motive score by 0.722, holding all other variables constant. Hypothesis H<sub>3</sub> (aii) is supported at 0.05 level (two-tailed). For hypothesis H<sub>3</sub> (aiii), the independent variable coefficient indicated that an increase

in informal esteem care, on average, leads to decreased altruism towards children's well-being bequest motive score by -0.238, holding all other variables constant. Hypothesis H<sub>3</sub>(aiii) is not significant and not supported. For hypothesis H<sub>3</sub> (aiv), the regression coefficient indicated that for each extra score, an increase in informal informational care from children, on average, decreases altruism towards children's well-being bequest motive score by -0.453, holding all other variables constant. Hypothesis H<sub>3</sub> (aiv) is at 0.05 level (one-tailed) significant. For hypothesis H<sub>3</sub> (av), the regression coefficient indicated that for each extra score increase in informal emotional care from children, on average, altruism towards children's well-being bequest motive score will increase by 0.776, holding all other variables constant. Hypothesis H<sub>3</sub> (av) is at 0.05 (one-tailed) significant and supported.

Generally, while considering altruism toward children's well-being, the elderly in this specific bequest motive is concerned with financial, social, and emotional care from informal old age caregivers. With regard to the financial care by children, children contribute a good share to household expenditures and help the elderly meet out-of-pocket health expenditures when they are employed. In this way, children protect their elderly parents when they grow up. The altruistic behaviour of the elderly parents is reflected in the transfer of inherited and self-acquired assets to children in their needy times like employment, education, health insurance/ expenditure, and marriage. Moreover, sharing the assets through a will or other ways is considered the final responsibility of an elderly person before death in the traditional society in Kerala. Most of the elderly in this group are not ready to receive any information from children. Elderly households prefer to receive emotional care from children; this means older adults are more likely to share the household expenses and hope that children will share them when the elderly cannot spend them. The elderly are emotionally attached to their family members and like to live with all family members together. They experience love and affection from children which is the desire of the elderly persons before death. In the same way, altruistic well-being towards children bequest motive helps the elderly to receive social care, through friends and relatives especially when the children are migrated.

### **6.2.2 Hypothesis [H<sub>3</sub>(b)]: Informal Old Age Care and Pure Altruism Bequest Motive**

The five components of informal old age care and pure altruism bequest motive are tested here [H<sub>3</sub>(b)].

*H<sub>3</sub>(b): Informal Old Age Care from children and Pure Altruism Bequest Motive are related*

The researcher's sub - hypotheses are:

*H3 (bi): Informal Financial Care from children and Pure Altruism Bequest Motive are related.*

*H3 (bii): Informal Social Care from children and Pure Altruism Bequest Motive are related.*

*H3 (biii): Informal Esteem Care from children and Pure Altruism Bequest Motive are related.*

*H3 (biv): Informal Informational Care from children and Pure Altruism Bequest Motive are related.*

*H3 (bv): Informal Emotional Care from children and Pure Altruism Bequest Motive are related.*

**Table 6.3 Relationship between Informal Old age Care received and the Bequest Motive of Pure Altruism of the Elderly in Kerala.**

	<b>R</b>	<b>R<sup>2</sup></b>	<b>F</b> (5,377)	<b>B</b>	<b>SE</b>	<b>β</b>	<b>t</b>
	0.185	0.034	2.669*				
(Constant)				2.587	.225	—	<b>17.154*</b> *
Informal Financial care				.402	.208	.103	1.934
Informal Social care				1.085	.428	.234	2.538*
Informal Esteem care				-.438	.403	- .093	-1.089
Informal Informational care				.026	.378	.005	.068
Informal Emotional care				-.126	.499	- .025	-.253

Durbin-Watson=1.716; Dependent Variable: Pure Altruism Bequest Motive

Source: Estimated by the researcher.

Note: \*Significant 0.01 level and \*\*Significant 0.05 level.

Social scientists contend that individual self-interest, group dynamics, emotions, and other variables can modify and make it difficult to predict human conduct correctly, making even a single social science model insufficient. Some of the explanatory variables in the model may not have a strong or linear relationship with the dependent variable, which could reduce its R-squared goodness-of-fit. An R-squared between 0 and 0.09 (or between 0 percent and 9 percent) is too low for an empirical model in social science research. The current model's R-squared value is 3.4 percent, outside acceptable bounds. It must be declined (Ozili, 2023). However, there is an estimated correlation of 18.5 percent between the variables.

For hypotheses, H<sub>3</sub> (b) [H<sub>3</sub> (bi), H<sub>3</sub> (bii), H<sub>3</sub> (biii), H<sub>3</sub> (biv), and H<sub>3</sub> (bv)], the dependent variable was pure altruism bequest motive and the independent variables were informal financial care, informal social care, informal esteem care, informal informational care and informal emotional care from children. For hypothesis H<sub>3</sub> (bi), the independent variable coefficient indicated that for each additional score increase in informal financial care, on average, the pure altruism bequest motive score will increase by 0.402, holding

all other variables constant. Hypothesis H<sub>3</sub> (bi) is not significant and not supported. For hypothesis H<sub>3</sub> (bii), the independent variable coefficient indicated that for each added score increase in informal social care, on average, the pure altruism bequest motive score will increase by 1.085, holding all other variables constant. Hypothesis H<sub>3</sub> (bii) is supported at 0.05 level (one-tailed). For hypothesis H<sub>3</sub> (biii), the regression coefficient indicated that for each extra score increase in informal esteem care, on average, the pure altruism bequest motive score will decrease by -0.438, holding all other variables constant. Hypothesis H<sub>3</sub> (biii) is not significant and not supported. For hypothesis H<sub>3</sub> (biv), the regression coefficient indicated that for each additional score increase in informal informational care from children, on average, the pure altruism bequest motive score would increase by 0.026, holding all other variables constant. Hypothesis H<sub>3</sub> (biv) is not significant and not supported. For hypothesis H<sub>3</sub> (bv), the regression coefficient indicated that for each additional score increase in informal emotional care from children, on average, the pure altruism bequest motive score will decrease by -0.126, holding all other variables constant. Hypothesis H<sub>3</sub> (bv) is not significant and not supported.

In other words, the pure altruistic elderly households do not prefer financial, esteem, informational, and emotional care from their informal old-age caregivers. This kind of elderly household thinks that the transfer of assets to the next generation after the age of 60 years is their prime responsibility towards their past generation (elderly's parents), who transferred the assets to the sample elderly as bequeaths. They consider the transfer of assets as more important than receiving care from their children. Hence, they are not expecting anything from their children and expect a low level of emotional care. History shows that, traditionally, the elderly of Kerala followed this pattern of bequest motive. According to the Ashrama theory of ageing, the elderly person, who entered the 'fourth ashrama of sannyasa', finishes all their duties and responsibilities in this world and expects death. These responsibilities include writing 'will' for the transfer of bequeaths and debt repayments. Mostly, this group of elderly households has better financial stability to cope with their future unmet expenses during the old age, and informal financial care for their children is not a matter of concern. It is due to the high financial stability of this group of elderly households as they do not transfer the self-acquired finance / assets to their children. Consequently, the children's household savings rate will remain constant, and the amount of bequests to children will be low. However, due to the

low awareness about will, the amount of altruistic bequests would become accidental bequests as well as unclaimed bequests. In the same way, they receive greater social care as compared to informational care, which means that the elderly households in this group are more concerned with their personal image such as care and respect in society. Moreover, the elderly populace in this group often tends to avoid sharing information with their children on household decisions. The reason behind this attitude might be the age factor and allowing the younger generations to determine what they want.

### **6.2.3 Hypothesis [H<sub>3</sub>(c)]: Informal Old age Care and Accidental Bequest Motive**

The five components of informal old age care and accidental bequest motive are tested here [H<sub>3</sub>(c)].

*H<sub>3</sub>(c): Informal Old Age Care from children and Accidental Bequest Motive are related*

The researcher's sub - hypotheses are;

*H<sub>3</sub> (ci): Informal Financial Care from Children and Accidental Bequest Motive are related.*

*H<sub>3</sub> (cii): Informal Social Care from children and Accidental Bequest Motive are related.*

*H<sub>3</sub> (ciii): Informal Esteem Care from children and Accidental Bequest Motive are related.*

*H<sub>3</sub> (civ): Informal Informational Care from children and Accidental Bequest Motive are related.*

*H<sub>3</sub> (cv): Informal Emotional Care from children and Accidental Bequest Motive are related.*

**Table 6.4 Relationship between Informal Old age Care received and the Accidental Bequest Motive of the Elderly in Kerala.**

	<b>R</b>	<b>R<sup>2</sup></b>	<b>F (5,377)</b>	<b>B</b>	<b>SE</b>	<b>β</b>	<b>t</b>
	0.185	0.034	7.919 **				
(Constant)				3.117	.190		16.390**
Informal Financial care				.555	.176	.162	3.154*
Informal Social care				.145	.362	.036	.401
Informal Esteem care				-.707	.341	-.172	-2.077*
Informal Informational care				-.394	.320	-.085	-1.233
Informal Emotional care				-.179	.422	-.040	-.425

Durbin-Watson=1.717; Dependent Variable: Accidental Bequest Motive

Source: Estimated by the researcher.

Note: \*Significant at the 0.01 level and \*\*Significant at the 0.05 level.

In social sciences, individual self-interest, group dynamics, emotions, and other factors can alter and challenge to precisely forecast human behaviour, which makes even a single social science model an imperfect one. The present model has a 3.4 percent R-squared value which is an unacceptable R-squared range. It ought to be turned down (Ozili, 2023). But there is a correlation, 18.5 percent in value, between the variables estimated.

For hypotheses, H<sub>3</sub> (c) [H<sub>3</sub> (ci), H<sub>3</sub> (cii), H<sub>3</sub> (ciii), H<sub>3</sub> (civ), and H<sub>3</sub> (cv)], the dependent variable was accidental bequest motive and the independent variables were informal financial care, informal social care, informal esteem care, informal informational care and informal emotional care from children. For hypothesis H<sub>3</sub> (ci), the independent variable coefficient indicated that for each added score increase in informal financial care, on average, the accidental bequest motive score will increase by 0.555, holding all other variables constant. Hypothesis H<sub>3</sub> (ci) is supported at 0.05 level (two-tailed). For hypothesis H<sub>3</sub> (cii), the independent variable coefficient indicated that for each extra

score increase in informal social care, on average, the accidental bequest motive score will increase by 0.145, holding all other variables constant. Hypothesis H<sub>3</sub> (cii) is not significant and not supported. For hypothesis H<sub>3</sub> (ciii), the regression coefficient indicated that for each additional score increase in informal esteem care, on average, the accidental bequest motive score will decrease by -0.707, holding all other variables constant. Hypothesis H<sub>3</sub> (ciii) is significant and supported at the 0.05 level (one-tailed). For hypothesis H<sub>3</sub> (civ), the regression coefficient indicated that for each added score increase in informal informational care from children, on average, the accidental bequest motive score will decrease by -0.394, holding all other variables constant. Hypothesis H<sub>3</sub> (civ) is not significant and not supported. For hypothesis H<sub>3</sub> (cv), the regression coefficient indicated that for each additional score increase in informal emotional care, on average, the accidental bequest motive score will decrease by -0.179, holding all other variables constant. Hypothesis H<sub>3</sub> (cv) is not significant and not supported.

In the absence of proper awareness about the bequeath distribution plan, the elderly populace showcases a higher probability of holding a larger amount of financial asset that eventually turns into accidental bequests and unclaimed assets. In some cases, this group of elderly parents is cautious and alarmed by the belief that their children will abandon them after receiving the bequeaths. The accidental life cycle bequest motive is a part of the strategic lifecycle bequest motives of the elderly populace. Since the elderly populace is not willing to write a will or transfer assets, the whole assets are utilized by the elderly themselves, and eventually, they are confident enough to meet the unexpected health expenditure in the future. In the absence of transfer of assets, the elderly are free from the children's quarrels for assets. In general, a lack of confidence in financial assistance from children prompts elderly parents of accidental life-cycle groups to be more concerned about financial care for their children. On the contrary of their expectations, this study also finds out that, there is a tendency of high financial assistance to elderly parents by their children. Therefore, the financial assistance is greater than esteem care from children to elderly parents. Thus, the majority of the elderly preferred this kind of strategic bequest motive in Kerala irrespective of the gender differences.

### 6.2.4 Hypothesis [H<sub>3</sub>(d)]: Informal Old age Care and Strategic Bequest Motive

The five components of informal old age care and strategic bequest motive are tested here[H<sub>3</sub>(d)].

H<sub>3</sub>(d): *Informal Old Age Care from children and Strategic Bequest Motive are related*

The researcher's sub - hypotheses are;

H<sub>3</sub> (di): *Informal Financial Care from children and Strategic Bequest Motive are related.*

H<sub>3</sub> (dii): *Informal Social Care from children and Strategic Bequest Motive are related.*

H<sub>3</sub> (diii): *Informal Esteem Care from children and Strategic Bequest Motive are related.*

H<sub>3</sub> (div): *Informal Informational Care from children and Strategic Bequest Motive are related.*

H<sub>3</sub> (dv): *Informal Emotional Care from children and Strategic Bequest Motive are related.*

**Table 6.5 Relationship between Informal Old age Care received by the Elderly and the Bequest Motive of Strategic in Kerala.**

	<b>R</b>	<b>R<sup>2</sup></b>	<b>F(5,377)</b>	<b>B</b>	<b>SE</b>	<b>β</b>	<b>t</b>
	0.388	0.150	13.328**				
(Constant)				3.10 4	.172		18.02 **
Informal Financial care				.960	.159	.301	6.026 **
Informal Social care				.106	.328	.028	.325
Informal Esteem care				-.561	.309	-	-
Informal Informational care				.933	.289	.214	3.223 **
Informal Emotional care				-1.16		-.276	-
					.383		3.03**

Durbin-Watson=1.584; Dependent Variable: Strategic Bequest Motive

Source: Estimated by the researcher.

Note: \*Significant 0.01 level and \*\*Significant 0.05 level.

An R-squared between 0.10 and 0.50 (or between 10 percent and 50 percent when expressed in percentage) is only considered acceptable in social science research when some or most of the explanatory factors are statistically significant (Ozili, 2023). There

is a correlation of 38.8 percent between the variables. This model is acceptable because the R squared value is 15 percent, which is higher than the threshold of 10 percent.

For hypotheses, H<sub>3</sub> (d) [H<sub>3</sub> (di), H<sub>3</sub> (dii), H<sub>3</sub> (diii), H<sub>3</sub> (div), and H<sub>3</sub> (dv)], the dependent variable was strategic bequest motive and the independent variables were informal financial care, informal social care, informal esteem care, informal informational care and informal emotional care from children. For hypothesis H<sub>3</sub> (di), the independent variable coefficient indicated that for each added score increase in informal financial care, on average, the strategic bequest motive score will increase by 0.960, holding all other variables constant. Hypothesis H<sub>3</sub> (di) is significant and supported at 0.05 level (two-tailed). For hypothesis H<sub>3</sub> (dii), the independent variable coefficient indicated that for each extra score increase in informal social care, on average, the strategic bequest motive score will increase by 0.106, holding all other variables constant. Hypothesis H<sub>3</sub> (dii) is not significant and not supported. For hypothesis H<sub>3</sub> (diii), the regression coefficient indicated that for each additional score increase in informal esteem care, on average, the strategic bequest motive score will decrease by -0.561, holding all other variables constant. Hypothesis H<sub>3</sub> (diii) is not significant and not supported. For hypothesis H<sub>3</sub> (div), the regression coefficient indicated that for each added score increase in informal informational care from children, on average, the strategic bequest motive score will increase by 0.933, holding all other variables constant. Hypothesis H<sub>3</sub> (div) is supported at 0.05 level (two-tailed). For hypothesis H<sub>3</sub> (dv), the regression coefficient indicated that for each additional score increase in informal emotional care, on average, the strategic bequest motive score will decrease by -1.160, holding all other variables constant. Hypothesis H<sub>3</sub> (dv) is supported at 0.05 level (two-tailed).

The elderly parents in a strategic life-cycle are concerned with financial care for their children since they have poor financial status. This study believes that the children might not have strong financial ability. So, the children might have to spend more time on their work to provide financial assistance to their elderly parents. That is, financial assistance is higher than the informational and emotional care from children to elderly parents. In the strategic life cycle, elderly parents are found not to require social care. They think of transferring as much of the assets they can to provide care in return. They are interested in receiving information from their children and are completely unaware / ignorant about

the outside world. These selfish-minded elderly populace considers only their well-being than those who are taking care of them. But, in their old age, they eagerly desire to receive care from others that they cannot buy from the market directly. At this stage, they even forget to take care of their own emotional well-being and come out of the emotional attachments with the caregivers. Majority of the female elderly populace comes under this category because they follow a relatively narrow-minded behaviour pattern in their old age. Majority of the females are dependent and, this behaviour may be because of little or no assets, that too obtained very late as inheritance/ due to death of spouse. Even among the elderly women who hold assets, interestingly, the researcher (Malayala Manorama, 2018) has reviewed that a mother kept Rs.10 lakhs as an auction for the person who is willing to take care of her in old age. Ironically, she had three sons and one daughter, and all of them were living in Kerala at that time.

### **6.2.5 Hypothesis [H<sub>3</sub>(e)]: Informal Old Age Care and Social Norms and Tradition Bequest Motive**

The five components of informal old age care and social norms and tradition bequest motive are tested here[H<sub>3</sub>(e)].

*H<sub>3</sub>(e): Informal Old Age Care from Children and Social Norms and Tradition Bequest Motive are related*

The researcher's sub - hypotheses are;

*H<sub>3</sub> (ei): Informal Financial Care from children and Social Norms and Tradition Bequest Motive are related.*

*H<sub>3</sub> (eii): Informal Social Care from children and Social Norms and Tradition Bequest Motive are related.*

*H<sub>3</sub> (eiii): Informal Esteem Care from children and Social Norms and Tradition Bequest Motive are related.*

*H<sub>3</sub> (eiv): Informal Informational Care from children and Social Norms and Tradition Bequest Motive are related.*

*H<sub>3</sub> (ev): Informal Emotional Care from children and Social Norms and Tradition Bequest Motive are related.*

**Table 6.6 Relationship between Informal Old age Care received and the Social Norms and Tradition Bequest Motive of the Elderly in Kerala.**

	<b>R</b>	<b>R<sup>2</sup></b>	<b>F(5,377)</b>	<b>B</b>	<b>SE</b>	<b>β</b>	<b>t</b>
	0.27	0.073	5.981 **				
	1						
(Constant)				2.903	.185		15.717**
Informal Financial care				.752	.171	.229	4.401**
Informal Social care				.218	.351	.056	.621
Informal Esteem care				-.490	.331	-.124	-1.482
Informal Informational care				.971	.310	.217	3.130**
Informal Emotional care				-.830	.410	-.193	-2.024*

Durbin-Watson=1.534; Dependent Variable: Social Norms and Tradition Bequest Motive

Source: Estimated by the researcher.

Note: \*Significant 0.01 level and \*\*Significant 0.05 level.

The result of the regression that analysed the relationship between informal old age care and social norms and tradition bequest motive is shown in table 6.6. The R-squared range of the current model, which is 7.3 percent, is inadequate. It should be rejected (Ozili, 2023). However, there is an estimated connection between the variables of 27.1 percent.

For hypotheses, H<sub>3</sub> (e) [H<sub>3</sub> (ei), H<sub>3</sub> (eii), H<sub>3</sub> (eiii), H<sub>3</sub> (eiv), and H<sub>3</sub> (ev),], the dependent variable is social norms and tradition bequest motive, and the independent variables are informal financial care, informal social care, informal esteem care, informal informational care, and informal emotional care from children. This group of elderly demanded emotional, esteem, social, informational, and financial resource transfers from the informal caregivers in their fag end of life (Horioka, 2009). Moreover, the kinds of assistance from their children directly depend on the older parents' needs and availability of public resources (Nakajima & Telyukova, 2013; Lee & Xiao, 1998). Consequently, the relationship with informational care, emotional care, social care, esteem care, and financial care for children can be positively or negatively correlated.

For hypothesis H<sub>3</sub> (ei), the independent variable coefficient indicated that for each added score increase in informal financial care, on average, social norms and tradition bequest motive score will increase by 0.752, holding all other variables constant. Hypothesis H<sub>3</sub> (ei) is significant and supported at 0.05 level (two-tailed). For hypothesis H<sub>3</sub> (eii), the independent variable coefficient indicated that for each additional score increase in informal social care, on average, the social norms and tradition bequest motive score will increase by 0.218, holding all other variables constant. Hypothesis H<sub>3</sub> (eii) is not significant and not supported. For hypothesis H<sub>3</sub> (eiii), the regression coefficient indicated that for each extra score increase in informal esteem care, on average, social norms and tradition bequest motive score will decrease by -0.490, holding all other variables constant. Hypothesis H<sub>3</sub> (eiii) is not significant and not supported. For hypothesis H<sub>3</sub> (eiv), the regression coefficient indicated that for each extra score increase in informal informational care from children, on average, social norms and tradition bequest motive score will increase by 0.971 holding all other variables constant. Hypothesis H<sub>3</sub> (eiv) is supported at 0.05 level (one-tailed). For hypothesis H<sub>3</sub> (ev), the regression coefficient indicated that for each additional score increase in informal emotional care, on average, social norms and tradition bequest motive score will decrease by -0.830, holding all other variables constant. Hypothesis H<sub>3</sub> (ev) is not significant and not supported.

Based on social norms and tradition, people lie amidst altruism and strategic models. This group of elderly is keen on sharing household information with their children, but lacks self-esteem, self-confidence, or sense of direction. Regarding financial care, this elderly population receives financial assistance from their children, and this might be due to the tradition and not because of their poor financial status. As with financial assistance, they received informational assistance from the caregivers. They received the basic information of life but not complete information always. As a result, they pretend to be emotionally attached, but in reality, they are not. The higher probability of this elderly group holding accumulated wealth is their ignorance about writing will, which might become an accidental bequeath and unclaimed bequeath if they don't have a proper distribution plan.

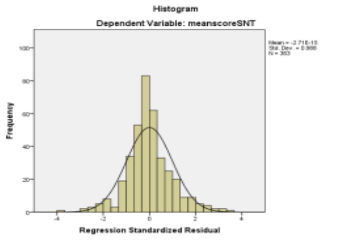
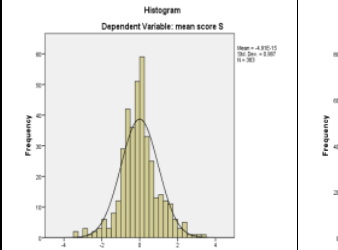
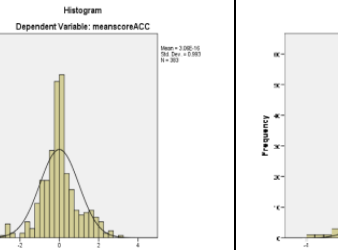
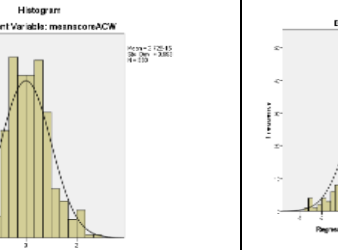

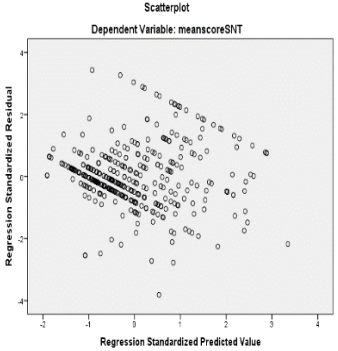
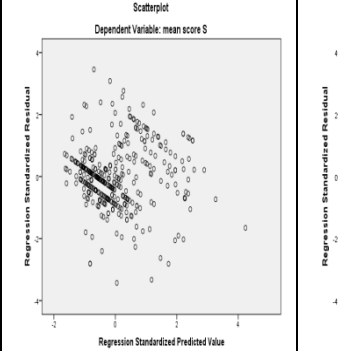
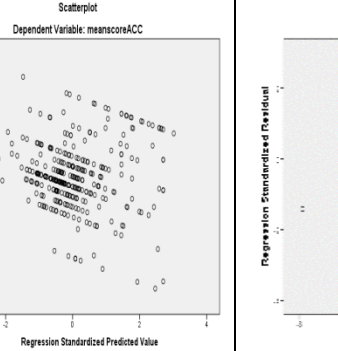
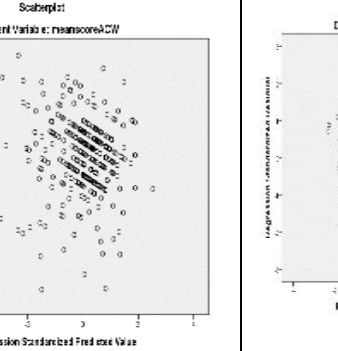

To summarize, the elderly household's pattern of bequest motives is influenced by financial, emotional, esteem, and social care from children and others. Many studies (Alessie, et al., 2014; Leopold & Raab, 2011; Koh & MacDonald, 2006; Schwarz, 2006; Caputo, 2002; Lillard & Willis, 1997; Loury, 1981; Becker & Tomes, 1986; Cox, 1987; Bernheim, et al., 1985) have observed that elderly household's bequest motives and informal old age care from children had a strong relationship, either directly or indirectly.

### **6.3 Factors that Influence the Relationship between Informal Old age Care and Bequest Motive**

The study has also examined the factors that significantly influenced the bequest motives of the elderly in receiving informal old age care. A Hierarchical Multiple Regression (HMR) analysis is employed for this analysis in the context of Kerala. In other words, a hierarchical multiple regression analysis has been used to examine the relationship between the bequest's motives of the elderly populace across different socio-economic status and the level of informal old age care received. To study the influence of socio-economic status of elderly upon the relation between informal care received and the bequest motive of elderly, hypothesis H<sub>4</sub> is formulated as:

*H<sub>4</sub>: The Socio-Economic Status of the elderly has a significant influence on the relationship between the Bequest Motive of The Elderly and the Informal Old Age Care received*

**Table 6.7 Assumptions Testing for Hierarchical Multiple Regression for H4.**

Assumptions	Social Norms and Tradition bequest motive	Strategic bequest motive	Accidental bequest motive	Altruistic Wellbeing towards children bequest motive	Pure Altruism bequest motive
<b>Durbin Watson</b>	1.676 No autocorrelation	1.651 No autocorrelation	1.773 No autocorrelation	1.864 No autocorrelation	1.844 No auto correlation
<b>Multi-collinearty</b>	Tolerance >0.10 VIF<10.0 No Multi Collinearity (Pallant, 2010)	Tolerance >0.10 VIF<10.0 No Multi Collinearity (Pallant, 2010)	Tolerance >0.10 VIF<10.0 No Multi Collinearity (Pallant, 2010)	Tolerance >0.10 VIF<10.0 No Multi Collinearity (Pallant, 2010)	Tolerance >0.10 VIF<10.0 No Multi Collinearity (Pallant, 2010)
<b>Histogram</b>					
<b>Scatter plot</b>					
	Linearity & homoscedasticity	Linearity & homoscedasticity	Linearity & homoscedasticity	Linearity & homoscedasticity	Linearity & homoscedasticity

Source: Estimated and constructed by the researcher.

This is another step forward for the theoretical understanding of the important constructs of bequest motives and informal old age care in Kerala. The present analysis has been conducted to explore the predictor or control variables that influence the linear relationship between the elderly's bequest behaviour (examined in chapter 5) and informal old age care, which they receive in return. The diagnostic tests were conducted and the assumptions of Hierarchical Multiple Regression (HMR) Model such as normality, linearity, autocorrelation, multicollinearity, and homoscedasticity were met. Step one of each model analysis is the predictor variables, and step two analyses the effect of both the predictor variables and independent variables of informal old age care on the respective bequest motive. The F - statistics of ANOVA show that the study conducted was significant in each model. Each of the five models satisfies the assumptions for fitting the model. Utilizing the hierarchical multiple regression analysis with the elderly's bequest motive as the outcome variable, the statistical models can explain 2.6 percent, 7.7 percent, 13.9 percent, 6.6 percent, and 2.5 percent of variations in the pure altruism bequest motives, accidental bequest motives, altruistic towards children's wellbeing bequest motives, strategic bequest motives and social norms and tradition bequest motives respectively.

**Table 6.8 HMRM result (a) of Informal Old Age Care and Pure Altruistic Bequest Motive.**

	<b>R</b>	<b>R<sup>2</sup></b>	<b>R<sup>2</sup> Chan ge</b>	<b>F</b>	<b>B</b>	<b>SE</b>	<b>β</b>	<b>t</b>
STEP1	.347**	.121**		8.605** (6,376)				
Constant					2.413	.171		14.079
Headship					.125	.063	.102	2.005
Education level					.072	.023	.154**	3.091**
Total Grandchildren					.039	.011	.168**	3.370**
NCD elderly					.120	.053	.112*	2.271*
Kind of Income					.130	.049	.133**	2.685*
Contribute to Household's Expenditure					-.210	.104	-.102*	-2.024*
STEP2	.383**	.147**	.026**	9.217** (7,375)				
Constant					1.978	.212		9.310**
Headship					.143	.062	.117*	2.317*
Education level					.059	.023	.126*	2.522*
Total Grandchildren					.034	.011	.149*	2.997**
NCD elderly					.159	.054	.149*	2.970**
Kind of Income					.133	.048	.136*	2.767**
Contribute to Household's Expenditure					-.252	.103	-.123*	-2.449*
Informal Social care					.787	.232	.170*	3.385**

Dependent variable = Pure Altruism Bequest Motive, Durbin-Watson=1.844

Source: Estimated by the researcher.

Note: \*Significant 0.01 level and \*\*Significant 0.05 level.

In the first step, six socio-economic factors, which is correlated with pure altruistic bequest motive, were entered as predictors. This model was statistically significant with  $F(6,376) = 8.605$ ;  $P < .001$  and explained 34.7 percent of the pure altruistic bequest motive variance. After the entry of Informal social care (ISOCI) at step 2 the total

variation explained by the model as a whole was 38.3 percent [F (7,375) = 9.217; P< .001]. The introduction of ISOCI explained an additional 14.7 percent of the variance in pure altruism bequest motive, after controlling the socio-economic factors (R<sup>2</sup> change = .026; F (1,375) = 11.458; P, .001). In the final adjusted model, all seven predictor variables were statistically significant, with ISOCI recording beta value ( $\beta$  =.17; P<.01) which is higher than both the total number of grandchildren and NCD ( $\beta$  =.15; P<.01), various kinds of income received (( $\beta$  =.14; P<.01), level of education (( $\beta$  =.13; P <.01), and contribution to household expenditure and headship (( $\beta$  =.12; P <.02). Hence, the socio-economic factors like household expenditure contribution, NCD, kinds of income, education, total number of grandchildren, and informal social care, are the controlling factors which determine the relationship between pure altruistic bequest motive and informal old age care in Kerala.

**Table 6.9 Result (b) of Informal Old Age Care and Altruism towards Children's Wellbeing Bequest Motive.**

	R	R <sup>2</sup>	R <sup>2</sup> Change	F	B	SE	$\beta$	t
STEP1	.275**	.075**		10.306** (3,379)				
Constant					3.164	.085		37.204**
Family Type					.082	.020	.200**	4.032
Degenerative Diseases					-.155	.064	-.120*	-2.433
Investment					-.698	.264	-.131**	-2.645
STEP2	.464**	.215**	.139**	20.631** (5,377)				
Constant					2.241	.138		16.284**
Family Type					.057	.019	.140**	3.015
Degenerative Diseases					-.106	.060	-.082	-1.775
Investment					-.606	.245	-.114**	-2.472
Informal Social care					.838	.139	.280**	6.010
Informal Financial care					.730	.118	.289**	6.201

Dependent variable = Altruism towards Children's Wellbeing Bequest Motive, Durbin-Watson=1.864

Source: Estimated by the researcher.

Note: \*Significant 0.01 level and \*\*Significant 0.05 level.

In the first step three socio-economic factors, which are correlated with altruism towards children's wellbeing bequest motive, were selected and entered as predictors, namely; family type, degenerative diseases, and investment pattern. This model was statistically

significant with  $F(3,379) = 10.306$ ;  $P < .001$  and explained 27.5 percent of the variance in altruism towards children's well-being bequest motive. All three socio-economic factors made a significant, unique contribution to the model. After entry of the social informal old age care (SOCI) and financial informal old age care (FOCI), at step 2, the total variance explained by the model as a whole was 46.4 percent [ $F(5,377) = 20.631$ ;  $P < .001$ ]. The introduction of SOCI and FOCI, explained an additional 21.5 percent of the variance in altruism towards children's well-being bequest motive, after controlling the socio-economic factors [ $R^2$  change = .14;  $F(5,377) = 20.63$ ;  $P < .001$ ]. In the final adjusted model, all five predictor variables were statistically significant, with SOCI recording beta value ( $\beta = .28$ ;  $P < .001$ ) than family type ( $\beta = .14$ ;  $P < .01$ ), and investment pattern ( $\beta = -.11$ ;  $P < .05$ ), and FOCI recording beta value ( $\beta = .29$ ;  $P < .001$ ). Hence, socio-economic factors like family type, investment pattern, informal social care, and informal financial care are the controlling factors determining the relationship between altruism towards children's well-being, bequest motive, and informal old age care in Kerala.

**Table 6.10 HMRM result (c) of Informal Old age Care and Accidental Bequest Motive.**

	R	R <sup>2</sup>	R <sup>2</sup> Change	F	B	SE	$\beta$	t
STEP1	.256**	.066**		8.894** (3,379)				
Constant					2.674	.162		16.470**
District					-.112	.048	-.115*	-2.318
Place of residence					.280	.092	.151**	3.026
Head of the Household					.174	.054	.162**	3.245
STEP2	.378**	.143**	.077**	12.539** (5,377)				
Constant					2.605	.229		11.367**
District					-.086	.047	-.088*	-1.819
Place of residence					.251	.090	.136**	2.789
Head of the Household					.169	.052	.157**	3.289
Informal Financial care					.622	.165	.182**	3.768
Informal Esteem care					-.784	.203	.190**	-3.854

Dependent variable = Accidental Bequest Motive, Durbin-Watson=1.773

Source: Estimated by the researcher.

Note: \*Significant 0.01 level and \*\*Significant 0.05 level.

In the first step, three socio-economic factors, which is correlated with accidental bequest motive, were entered as predictors. This model was statistically significant  $F(3,379) = 8.894$ ;  $P < .001$  and explained 25.6 percent of the variance in accidental bequest motive. The three socio-economic factors made a significant unique contribution to the model. After entry of the financial informal old age care (FOCI) and esteem informal old age care (EOCI) at step 2 the total variance explained by the model a whole was 37.8 percent [ $F(5,377) = 12.539$ ;  $P < .001$ ]. The introduction of FOCI and EOCI explained an additional 14.3 percent of the variance in accidental bequest motive, after controlling the socio-economic factors ( $R^2$  change = .07;  $F(5,377) = 12.539$ ;  $P < .001$ ). In the final adjusted model, five out of four predictor variables were statistically significant, with EOCI recording beta value ( $\beta = .19$ ;  $P < .001$ ) than FOCI ( $\beta = .18$ ;  $P < .001$ ), headship ( $\beta = .16$ ;  $P < .01$ ), and place of residence ( $\beta = .14$ ;  $P < .01$ ). So, the accidental bequest motive in relation with informal old age care predicted the variables like informal financial and informal esteem care, along with socio-economic factors like headship and place of residence.

**Table 6.11 HMRM result (d) of Informal Old age Care and Strategic Bequest Motive.**

	<b>R</b>	<b>R<sup>2</sup></b>	<b>R<sup>2</sup> Change</b>	<b>F</b>	<b>B</b>	<b>SE</b>	<b>β</b>	<b>t</b>
STEP1	.526**	.277**		20.531** (7,375)				
Constant					2.319	.165		14.036* *
District					-.124	.040	-.136**	-3.075
Place of residence					.407	.077	.235**	5.274
Head of the Household					.182	.046	.181**	3.962
Contribute to Household's Expenditure					-.191	.076	-.114**	-2.515
Kinds of Income					.138	.037	.173**	3.789
Female Children					.099	.030	.146**	3.268
Remittance By Son					5.200E	.000	.194**	4.292
Step2	.586**	.343**	.066**	19.452** (10,372)				
Constant					2.187	.229		9.548**
District					-.117	.039	-.128**	-3.02
Place of residence					.391	.077	.225**	5.10 4

Head of the Household	.154	.045	.153**	3.43
Contribute to Household's Expenditure	-.106	.074	-.063	-1.43
Kinds of Income	.111	.035	.139**	3.13
Female Children	.107	.029	.157**	3.668
Remittance By Son	4.088E	.000	.153**	3.459
Informal Financial Care	.785	.145	.246**	5.396
Informal Emotional Care	-.811	.241	-.193**	-3.358
Informal Informational Care	.418	.250	.096	1.674

---

Dependent variable = Strategic Bequest Motive, Durbin-Watson=1.651

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Source: Estimated by the researcher.

Note: \*Significant 0.01 level and \*\*Significant 0.05 level.

In the first step seven socio-economic factors, which is correlated with strategic bequest motive, were selected and entered as predictors, namely; district, place of residence, headship, contribution to household's expenditure, kinds of income, female children, and remittance by son. This model was statistically significant  $F(7,375) = 20.531$ ;  $P < .001$  and explained 52.6 percent of the variance in strategic bequest motive. All the seven socio economic factors made a significant unique contribution to the model. After entry of the emotional informal old age care (EMOCI), informational informal old age care (IOCI), and financial informal old age care (FOCI), at step 2 the total variance explained by the model a whole was 58.6 percent [ $F(10,372) = 19.452$ ;  $P < .001$ ]. The introduction of EMOCI, IOCI, and FOCI, explained an additional 34.3 percent of variance in strategic bequest motive, after controlling the socio-economic factors [ $R^2$  change = .66;  $F(10,372) = 19.452$ ;  $P < .001$ ]. In the final adjusted model all ten predictor variables were statistically significant, with FOCI recording beta value ( $\beta = .246$ ;  $P < .001$ ) higher than place of residence ( $\beta = .225$ ;  $P < .001$ ), EMOCI ( $\beta = -.193$ ;  $P < .001$ ), number of female children ( $\beta = -.157$ ;  $P < .01$ ), remittance by son and headship ( $\beta = .153$ ;  $P < .01$ ), kinds of income ( $\beta = .139$ ;  $P < .01$ ), and district ( $\beta = -.128$ ;  $P < .01$ ). Hence, the socio-economic factors like district, number of female children, place of residence, the remittance by son, headship, kinds of income, and informal emotional care and informal financial care, are the

controlling factors which determine the relationship between strategic bequest motive and informal old age care in Kerala.

**Table 6.12 HMRM result (e) of Informal Old age Care and Social Norms and Tradition Bequest Motive.**

	R	R <sup>2</sup>	R <sup>2</sup> Change	F	B	SE	β	t
STEP1	.603**	.364**		26.721 ** (8,374)				
Constant					1.500	.185		8.1**
Place of residence					.521	.077	.293**	6.774
Headship					.250	.045	.242**	5.579
kind of income					.160	.036	.194**	4.408
Remittance by Son					4.228E	.000	.154**	3.607
District					-.158	.039	-.169**	-4.055
Family type					.081	.023	.152**	3.563
NCD elderly					.157	.039	.175**	4.000
Employment					.036	.010	.158**	3.647
Step2	.623**	.388**	.025**	26.311** (9,373)				
Constant					1.201	.197		6.09**
Place of residence					.538	.076	.302**	7.113
Headship					.249	.044	.241**	5.656
kind of income					.135	.036	.165**	3.741
Remittance by Son					3.718E	.000	.135**	3.209
District:					-.161	.038	-.173**	-4.216
Family type					.069	.023	.129**	3.046
NCD elderly					.166	.039	.185**	4.306
Employment					.037	.010	.161**	3.776
Informal Financial Care					.536	.138	.164**	3.875

Dependent variable = Social Norms and Tradition Bequest Motive, Durbin-Watson=1.676

Source: Estimated by the researcher. ,note: \*Significant 0.01 level and \*\*Significant 0.05 level.

In the first step eight socio-economic factors, which is correlated with social norms and tradition bequest motive, were selected and entered as predictors, namely; district, place of residence, headship, kinds of income, family type, NCD, remittance by Son and employment. This model was statistically significant  $F(8,374) = 26.721$ ;  $P < .001$  and explained 60.3 percent of the variance in social norms and traditional bequest motive. All the eight socio economic factors made a significant unique contribution to the model. After entering the financial informal old age care (FOCI), at step 2, the total variance explained by the model as a whole was 62.3 percent [ $F(9,373) = 26.311$ ;  $P < .001$ ]. The introduction of FOCI explained an additional 2.5 percent of variance in social norms and tradition bequest motive after controlling the socio-economic factors [ $R^2$  change = .025;  $F(9,373) = 26.311$ ;  $P < .001$ ]. In the final adjusted model, all nine predictor variables were statistically significant, with place of residence recording beta value ( $\beta = .302$ ;  $P < .001$ ) than headship ( $\beta = .241$ ;  $P < .001$ ), NCD ( $\beta = .185$ ;  $P < .001$ ), district ( $\beta = .173$ ;  $P < .001$ ), kind of income ( $\beta = .165$ ;  $P < .001$ ), FOCI ( $\beta = .164$ ;  $P < .001$ ), employment ( $\beta = .161$ ;  $P < .001$ ), the remittance by son ( $\beta = .135$ ;  $P < .01$ ), and family type ( $\beta = .129$ ;  $P < .01$ ). Hence, the socio-economic factors like district, NCD, employment, family type, place of residence, remittance by son, headship, kinds of income, and informal financial care, are the controlling factors which determine the relationship between social norms and tradition bequest motive and, the informal old age care in Kerala.

From the above analysis, it is observed that the Altruism towards children's well-being bequest motive predicts higher variation due to the different socio-economic status of the elderly in Kerala, followed by the accidental and strategic motive for the elderly. Kerala's elderly are seekers of children's future welfare, but the long-life expectancy, huge health expenditure, and structural reformations demand old age care to be satisfied. As a result, they are seen to change their motive from altruistic to strategic, particularly in the coming days. The study explored the main control variables of the elderly's socioeconomic status such, as headship, education, employment, land, house, investment, saving, family type, degenerative diseases, disability due to ageing, marital status, migration, region, and place of residence, share on household expenditure, number of male, female, grandchildren and great-grandchildren, remittance rendered by children, and health insurance. To conclude, the elderly's socio-economic status has a significant influence on the relationship of bequest motive on informal old age care in Kerala.

To conclude, the five kinds of life cycle bequest motives are noticed among the elderly populace in Kerala. The present study identified the ACW and strategic bequest motive behaviour of Kerala elderly households. Each person's socio-economic status is significant in determining these bequest motives. Again, in reality, a relationship existed between the bequest motive of the elderly and informal old age care, which they receive in return. More meaningfully, there is a triangular relationship between them. That is, the elderly raise the demand for informal old age care, which is linearly dependent on their bequest motive and is controlled by their socio-economic status in Kerala (Figure -2.1). Like the bequest motives, bequeath transfers predict the structural transformation from altruistic to strategic character. The bequeath transfer to the sample elderly shows an altruistic nature, while bequeath transfers from the sample elderly respondents to their family members reflected a strategic nature.

## **CHAPTER VII**

### **ELDERLY'S ECONOMIC INDEPENDENCE**

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## **7.1 Introduction**

This chapter provides the economic dependency of Kerala's elderly populace across the heterogeneous socio-economic milieus of the society. The National Transfers Accounts (NTA) Model is used to measure the Life Cycle Deficit (LCD) and Life Cycle Surplus (LCS) of the elderly populace. Based on this, the researcher identified the emerging group of economically independent elderly populace in Kerala. Also, by employing the Binary Logistic Regression (BLR) model, this section gives insight into the increasing rate of the economically independent elderly populace (James, 1994). In this way, the present chapter satisfies the fourth objective of the study.

## **7.2 NTA Model of Life Cycle Deficit (LCD)**

An economic dependency ratio focuses on the role of age-specific levels of production and consumption (Narayana, 2010). Mason et al. (2006) showed the difference between consumption and, labour and non-labour income and coined the LCD, which indicates a measure of the age-specific level of economic dependency. For the elderly populace, the LCD is positive; that is, the average consumption in these ages exceeds average labour and non-labour income, whereas the LCD is negative during the working years when labour income is higher than consumption. Another possibility of enhancing a negative life cycle deficit (LCD) is when an elderly person earns labour income and becomes a Life Cycle surplus person. This phenomenon is captured in the context of old age in Kerala. Multiplication of the age-specific per capita income with the corresponding population numbers sums up all age groups with an LCD (either positive or negative). In the present study, the researcher obtains a measure for the total economic dependency of the elderly populace. And so, this model endogenously defines the stages of the life cycle. Sanderson and Scherbov (2013) emphasized the importance of such measures by focusing on chronological age limits in population ageing. The concept of LCD and data on age-specific consumption are taken from the NTA project, which is an extension of the United Nations System of National Accounts (UNSNA). The NTA model measures each age group's labour and asset income, the redistribution of income through public and private transfers, and the usage of disposable resources for consumption and saving. The present research analyses the distribution of these variables over old age groups, estimated using administrative and survey data. UN (2013) and Lee and Mason (2011)

have explained elaborately the methodology of the NTA model. It is important to note that the NTA measures the economic activities of individuals in a given year, and the age patterns signify a cross-sectional glimpse of the economic activities of each age group, which does not characterise the concrete life course pattern of an average individual. The life cycle deficit NTA is based on an accounting identity that asserts that the resources used for consumption (C) and saving (S) are equal to the disposable income for each individual, and the age group that is composed of labour income ( $Y_L$ ), asset income ( $Y_A$ ) and net transfer inflows ( $\tau$ ).

$$C + S = Y_L + Y_A + \tau \quad \dots\dots\dots (7.1.1)$$

The difference between consumption and labour income in the NTA model at each age proposes a measure for the average economic dependency if it is positive, or the economic ability to support others if it is negative. An elderly person cannot recall the net transfer inflows accurately. So, a reorganization of the terms in the NTA model of accounting identity (1) can also be derived as follows:

$$\{C - Y_L\} \text{ life cycle deficit} = \{Y_A - S\} \text{ age reallocations} \dots\dots\dots (7.1.2)$$

A complete methodology of the NTA model is available in NTA (Narayana, 2010). With the help of this available model, the researcher identifies the emergence of a particular category: the economically independent elderly populace in Kerala through the life cycle deficit analysis. LCD is defined as:

$$\text{Life cycle deficit} = C - (Y_L + Y_A) \dots\dots\dots (7.1.3)$$

Where the consumption (C) is the addition of both Private Transfers ( $Pri_T$ ) provided by the informal caregivers and Public Transfers ( $Pub_T$ ) provided by the formal caregivers in the form of social pensions.

$Y_L$  denotes labour income that the elderly earned during their old age.

$Y_A$  denote the income that the elderly receive from the assets in the form of interest, rent, profit, and wages (earned from rearing livestock).

Based on the NTA model of LCD, the researcher has arrived at certain equations for calculating the LCD of the elderly populace in Kerala as given below:

Life cycle deficit with private transfers =  $(Pri_T) - (Y_L + Y_A)$  ..... (7.1.4)

Life cycle deficit with public transfers =  $(Pub_T) - (Y_L + Y_A)$  ..... (7.1.5)

Life cycle deficit in terms of labour income =  $C - Y_L$  ..... (7.1.6)

Life cycle deficit in terms of income from assets =  $C - Y_A$  ..... (7.1.7)

Hence, Life cycle deficit of an elderly person =  $C - (Y_L + Y_A)$  ..... (7.1.8)

### 7.3 Assumptions

The assumption of the LCD model of Narayana (2010) formulated for all working age groups in the Indian context is slightly modified by the researcher and used in this research in the context of Kerala elderly populace.

1. Each elderly person is regarded as the fundamental analytic unit.
2. All transactions are considered as flowing to and from elderly persons and are categorised based on individuals' age.
3. The Model describes the age pattern of actual behaviour. There are no specific motives or behaviours assumed for intergenerational transfers.
4. Private transfers are evaluated based on pre-tax consumption, and indirect taxes are insignificant. Different components of private transfers are measured as remittance to the elderly by informal caregivers like spouses, sons/daughters, grandchildren, friends and relatives.
5. Public transfers are measured as retirement and social pension transfers by the government, NGOs and others (formal caregivers).
6. An elderly household head is assumed to own all assets.
7. Inflows and outflows are cash transfers.
8. Tax rates do not differ according to age.

### 7.4 Analysis of Economically Independent Elderly in Kerala- Life Cycle Deficit (LCD) / Life Cycle Surplus (LCS)

The elderly population transfers their assets to their children and grandchildren. Debt is also transferred between them in the same way. According to the World Population Ageing Report (2019), the elderly secure their financial well-being through accumulated savings, family transfers and increased aggregate capital accumulation.

The present study explains that the elderly spend from four different sources of income, viz, public transfers, private transfers, income from assets and labour income for their consumption. The analysis assumes that pension, old age pension and contributions from NGOs and other institutional caregivers are received by the elderly as public transfers. On the other hand, remittances from sons, spouses, daughters, grandchildren, friends and relatives are considered as private transfers. Moreover, interest on savings, investment, profit from firm/ business, rent on land/ flat/ house, and earning from livestock are regarded as income from own assets and wealth, whereas salary and wages come under labour income.

#### 7.4.1 Labour Income

Kerala has the highest life expectancy among the Indian states with a life expectancy of 72.50 years for males and 77.90 years for females (SRS, 2018). In Kerala, after retirement, the elderly are employed to meet their future expenses either because of compulsion or due to interest, to avoid boredom. This is one of the main reasons for the emerging group of economically independent elderly in Kerala

**Table 7.1 Distribution of the Elderly Respondents who received Labour Income across Age, Gender and Place of residence.**

Characteristics		No Income	Income less than Rs. 2000	Income between Rs.2000 and Rs. 10,000	Total
Age	60+	137 (64.6)	71 (33.5)	4(1.9)	212(100)
	70+	98 (81)	19 (15.7)	4 (3.3)	121(100)
	80+	45 (90)	5 (10)	0	50(100)
Total		280 (73.1)	95(24.8)	8 (2.1)	383 (100)
Gender	Male	104 (59.8)	63 (36.2)	7 (4)	174(100)
	Female	176 (84.2)	32 (15.3)	1 (0.5)	209(100)
Total		280 (73.1)	95(24.8)	8 (2.1)	383 (100)
Place of Residence	Rural	200 (71.2)	76 (27.1)	5 (1.7)	281(100)
	Urban	80 (78.4)	19 (18.6)	3 (3)	102(100)
Total		280 (73.1)	95(24.8)	8 (2.1)	383 (100)

Source: Primary Survey.

Note: Values in brackets are percentages

The researcher has divided the labour income of the elderly into three groups, viz, those without income, with income less than Rs. 2000, and with income between Rs.2000 and Rs.10,000. More than half of the sample population belongs the category of the young old age group. As the elderly is employed after retirement, the labour income received as salary and wages are low. The researcher found that 130 sample elderly (34 percent) are employed (chapter 4). Though employed, 7.1 percent of the sample elderly is found unwilling to reveal their labour income (private individual has a right to not to reveal it). The researcher has observed that, the number of elderly labour income receivers who are employed either by compulsion or by their wish, and who revealed labour income is 103 (26.9 percent) and this is in conformity with the findings of the BKPAI Survey which registered elderly employment as 26.2 percent (2011). In the young old category, 33.5 percent work for an income level less than Rs. 2000. In the old-old category, 15.7 percent received an income level less than Rs. 2000 and all the elderly in the oldest old group received an income level of less than Rs. 2000 which is pathetic, and a matter of great concern because the elderly are struggling and working for a meagre income at the fag end of their life. It is a sad state of affairs that 24.8 percent of the elderly are working for less than Rs. 2000, reflecting the extent of vulnerability and uncertainty in their lives. The female elderly who earn income is very low and except one, all female elderly receive less than Rs 2000. Regarding place of residence, the elderly who earn labour income in the urban areas are relatively low. This may be due to the relatively high employment opportunities in the rural areas.

#### **7.4.2 Public Transfers**

Formally, the elderly receive care in terms of income security, provided through the social pension. This is the security that the government can provide to the elderly in their fag end of life. Most elderly people are social pensioners, as they currently receive Rs. 1600 per person for 60+ and the 80+ receive Rs. 1800 on a monthly basis, though the payments are not regular and delayed.

**Table 7.2 Distribution of the Elderly Respondents by Public Transfers across Age, Gender, and Place of residence.**

Characteristics		Old Age Pension	Widow Pension	Other Social Pensions	Retirement Pension	Contribution from NGO and others
Age	60+	123 (58.9)	56 (52.3)	3 (27.3)	14(33.3)	1 (33.3)
	70+	62 (29.7)	34(31.8))	7 (63.6)	18(42.9)	1 (33.3)
	80+	24 (11.4)	17(15.9)	1 (9.1)	10 (23.8)	1 (33.3)
Total		209(100)	107(100)	11(100)	42(100)	3(100)
Gender	Male	126 (60.3)	0	6 (54.5)	22(52.4)	3 (100)
	Female	83 (39.7)	107(100)	5 (45.5)	20 (47.6)	0
Total		209(100)	107(100)	11(100)	42(100)	3(100)
Place of Residence	Rural	165 (78.9)	80 (74.8)	7 (63.6)	22(52.4)	1 (33.3)
	Urban	44 (21.1)	27 (25.2)	4 (36.4)	20 (47.6)	2 (66.7)
Total		209(100)	107(100)	11(100)	42(100)	3(100)

Source: Primary Survey

Note: Values in brackets are percentages

Compared to the governmental provision of social security in terms of income, the role of non-governmental organisations is meagre. Rajan and Pal (2018) prove that the number of widows is increasing at an increasing rate due to the long-life expectancy of women. However, the researcher observed unnecessary lag in implementation and in receiving social pension. Most of the rural elderly households responded that they are denied the old age pension on grounds like government job of their children, more number of elderly in a house, retired from a government job, and so on including political interest. Hence, they apply for social pensions like coir job pensions, Tailor's union pensions, and so on, which are relatively easy to receive for meeting daily expenses. Above all, the pension amount is meagre and insufficient to meet the daily life expenses, and their per-head income needs are higher than the pension amount. In particular, NGOs provide healthcare facilities to the 80+ categories, and these facilities are mainly seen in urban areas. Thus, even though public transfers are equal to everyone as per the law, the

elderly are categorised according to their socio-economic status for the provisioning of public transfers.

### 7.4.3 Private Transfers

Traditionally, the elderly depended on family members for care, especially on their sons. At the same time, the research finds some interesting changes in the distribution of private transfers to the elderly in society.

**Table 7.3 Distribution of Elderly and by Remittance received from Informal Caregivers across Age, Place of residence and Gender.**

Characteristics		Son	Daughter	Spouse	Grandchildren	Friends and Relatives
Age	60+	76(50.67)	48 (50)	7 (53.8)	12 (38.7)	16 (47)
	70+	55(36.66)	36 (37.5)	5 (38.5)	12 (38.7)	12 (35.3)
	80+	19 (12.67)	12 (12.5)	1 (7.7)	7 (22.6)	6 (17.7)
Total		150(100)	96 (100)	13(100)	31 (100)	34(100)
Gender	Male	57 (38)	56 (58.33)	5 (38.5)	4 (12.9)	12 (35.3)
	Female	93 (62)	40 (41.67)	8 (61.5)	27 (87.1)	22 (64.7)
Total		150(100)	96(100)	13(100)	31(100)	34(100)
Place of Residence	Rural	105(70)	66 (68.8)	6 (46.2)	25 (80.65)	22 (64.7)
	Urban	45 (30)	30 (31.2)	7 (53.8)	6 (19.35)	12 (35.3)
Total		150(100)	96(100)	13(100)	31(100)	34(100)

Source: Primary Survey.

Note: Values in brackets are percentages.

As per the social norms and tradition, sons are the informal financial caregivers in the family. It is noteworthy that the daughters have a significant role in the provision of financial care to the elderly, apart from their traditional roles as physical and emotional caregivers. Spouses are also old; hence, they are unable to work and provide financial support during their dissaving stage of life. Hence, children provide a significant share of financial remittance to meet the elderly's expenses. In the case of gender, the female elderly receive more financial support from caregivers. They often receive it from sons

rather than daughters, who show their emotional attachment and comfort. The urban elderly are relatively disadvantaged to receive financial support from caregivers. On the other hand, rural people consider it their prime responsibility to respect the elderly and support them, which leads to provision of financial support. In this way, private transfers to the elderly are essential as the public transfers are inadequate, especially in the context of the exponential growth rate of the elderly.

#### 7.4.4 Income from Assets

The Indian elderly are observed to fall into the income from asset dominant criteria (chapter 3). Also, whether Kerala's elderly populace is dependent on assets is yet to be discovered.

**Table 7.4 Major forms of Income from Assets received by the Elderly by Age, Gender and Place of residence.**

Characteristics		Interest	Profit	Rent	Earnings from Livestock
Age	60+	11 (50)	1 (58.06)	8 (50)	26 (55.32)
	70+	10 (45.5)	13 (41.94)	8 (50)	17 (36.17)
	80+	1 (4.5)	0	0	4 (8.51)
Total		22(100)	31(100)	16(100)	47(100)
Gender	Male	11 (50)	22 (70.97)	7 (43.8)	21 (44.68)
	Female	11 (50)	9 (29.03)	9 (56.2)	26 (55.32)
Total		22(100)	31(100)	16(100)	47(100)
Place of residence	Rural	11 (50)	25 (80.6)	10 (62.5)	32 (68.09)
	Urban	11 (50)	6 (19.4)	6 (37.5)	15 (31.91)
Total		22(100)	31(100)	16(100)	47(100)

Source: Primary Survey.

Note: Values in brackets are percentages

Among the major income they received, earning from livestock is an important source of income. The researcher observed that females are more productive than male elderly people with respect to earnings from livestock. Also, some female elderly received rent

when they got old, especially the widows who owned houses, transferred by their spouse by will (De Jong, 2011). However, the elderly aged above 80 do not receive any income as rent. Some male elderly are entrepreneurs who own and operate businesses and earn a profit, especially those aged 70 and above. Thus, the researcher discovered that the Kerala elderly depend highly on public transfers followed by labour income, private transfers and income from assets.

### **7.5 Measurement of the Elderly’s Economic Independence across their Life Cycle in Kerala**

Primarily, the researcher assumes that an elderly household has two stages of life in society; before 60 years of age and after 60 years of age. According to the life cycle hypothesis, before the age of sixty, a person is considered to be in the stage of working and saving period (Average Propensity to Consume > Marginal Propensity to Consume), and after the age of sixty, it is the dissaving period (Average Propensity to Consume < Marginal Propensity to Consume) The measurement of economic dependence of the elderly before 60 years of age and after 60 years of age is based on the following equations of the NTA model (section 7.1).

$$\text{Life cycle deficit with private transfers} = (\text{Pri}_T) - (Y_L + Y_A) \dots\dots\dots (7.4.1)$$

$$\text{Life cycle deficit with public transfers} = (\text{Pub}_T) - (Y_L + Y_A) \dots\dots\dots (7.4.2)$$

$$\text{Life cycle deficit in terms of labour income} = C - Y_L \dots\dots\dots (7.4.3)$$

$$\text{Life cycle deficit in terms of income from assets} = C - Y_A \dots\dots\dots (7.4.4)$$

$$\text{Hence, Life cycle deficit of an elderly person} = C - (Y_L + Y_A) \dots\dots\dots (7.4.5)$$

**Table 7.5 Economic Dependence of the Elderly Before 60 years of Age in Kerala.**

<b>Life Cycle Deficit (LCD)/ Life Cycle Surplu s (LCS)</b>	<b>Private Transfers (Eqn-7.4.1)</b>	<b>Public Transfers (Eqn-7.4.2)</b>	<b>Labour Income (Eqn-7.4.3)</b>	<b>Income from Assets (Eqn-7.4.4)</b>	<b>LCD/LCS Labour Income and Income from Assets (Eqn-7.4.5)</b>
LCD	214 (56)	219 (57.2)	160 (41.8)	317(82.8)	209 (54.6)
LCS	169 (44)	164 (42.8)	223 (58.2)	66 (17.2)	174 (45.4)
Total	383(100)	383(100)	383(100)	383(100)	383(100)

Source: Primary Survey.

Note: Values in brackets are percentages.

The labour income creates economic independence among the sample elderly before 60 years of age and 58 percent of the sample elderly are economically independent. This is treated as the first demographic dividend in literature (Mason, 2005). Before 60 years of age, labour income receivers are independent as they use it for their own consumption and for the welfare of their children /families. They enjoyed the surplus /independence more, before getting old. However, in the case of economic dependence calculated from income from assets, the majority are in the deficit group before they get old because they have to meet many expenses including the construction of a house, education and marriage of children and so on. In sum, the elderly's economic dependence calculated based on labour income and income from assets shows that the majority belong to the deficit group (54.6 percent). In addition, it can be observed from Table 7.5 that if the consumption is met from either private transfers or public transfers, the higher the economic dependence before 60 years of age. Thus, most of the sample elderly are dependent on their labour income before 60 years of age in Kerala.

**Table 7.6 Economic Dependence of the Elderly in Kerala After 60 years of Age in Kerala.**

<b>Life Cycle Deficit (LCD)/ Life Cycle Surplus (LCS)</b>	<b>Private Transfers (Eqn-7.4.1)</b>	<b>Public Transfers (Eqn-7.4.2)</b>	<b>Labour Income (Eqn-7.4.3)</b>	<b>Income from Assets (Eqn-7.4.4)</b>	<b>Labour Income and Income from Assets (Eqn-7.4.5)</b>
LCD	218 (56.9)	230 (60)	296 (77.3)	150 (39.2)	258(67.4)
LCS	165 (43.1)	153 (40)	87 (22.7)	233 (60.8)	125(32.6)
Total	383(100)	383(100)	383(100)	383(100)	383(100)

Source: Primary Survey.

Note: Values in brackets are percentages.

Most of the elderly receive reasonable income from assets, and this forms the base for economic independence after 60 years of age. This is christened as the second demographic dividend (Ogawa et al., 2009) in return for receiving informal old age care. Among the labour income receivers after the age of 60, only 22.7 percent are getting surplus/ economic independence. The labour income receivers aged 60 and above fall in the deficit/ economically dependent group because they work as labourers or receive labour income by compulsion, not by their wishes. This is in contrast to the observed behaviour of the sample elderly before the age of 60, where they belong to the surplus group in the labour income category. Irrespective of before and after 60 years of age, the elderly belong to the dependence group when labour income and income from assets are considered together. A comparison of surplus /dependence that they enjoyed before and after age 60 shows that most of them were economically independent before age 60. The economic dependence has increased after 60 years of age when viewed from the point of private remittance and public transfers, and hence more deficit is seen after 60 years of age.

## 7.6 Economic Dependence of the Elderly by Age, Gender and Regions

The economic dependence of the elderly varies across age, gender, and the geographical region where they live.

**Table 7.7 Elderly's Economic Independence across Age, Gender, Place of Residence, and Regions.**

Characteristics	Life Cycle Deficit (LCD)/ Life Cycle Surplus (LCS)		Total
	LCD	LCS	
<b>Age</b>			
60+	128(60.4)	84(39.6)	212(100)
70+	86(71.1)	35(28.9)	121(100)
80+	44(88)	6(12)	50(100)
Total	258 (67.4)	125(32.6)	383(100)
<b>Gender</b>	<b>LCD</b>	<b>LCS</b>	<b>Total</b>
Male	88(50.6)	86(49.4)	174(100)
Female	170(81.3)	39(18.7)	209(100)
Total	258 (67.4)	125(32.6)	383(100)
<b>Regions</b>	<b>LCD</b>	<b>LCS</b>	<b>Total</b>
South	90(67.7)	43(32.3)	133(100)
Central	89(64)	50(36)	139(100)
North	79(71.2)	32(28.8)	111(100)
Total	258 (67.4)	125(32.6)	383(100)

Source: Primary Survey.

Note: Values in brackets are percentages.

In Kerala, the people after the age of 60 fall into the dissaving period of life. Compared to the 70+ and 80+ groups, the 60+ group reflects relatively high economic independence as they have just started the dissaving period and expect more years of life and many are able to work. The female elderly are heavily dependent and financially vulnerable and the process of marginalization of the marginalized elderly women is observed from the data when compared to their male counterparts. However, across the regions, the elderly

in central Kerala reflect a relatively high economic independence followed by the elderly in southern Kerala. The study has already observed that strategic bequest motives are relatively more prevalent in the central and southern regions, which made the elderly hold their assets in their own names. Also, this relatively high economic independence in the central and southern regions can partially be attributed to urbanization and related better employment prospects. On the other hand, altruism towards children's well-being bequest motive is more prominent among the elderly of northern Kerala and the elderly incur expenditure and transfer assets for the wellbeing of their children, which resulted in the low representation in the life cycle surplus group.

**7.7 Factors that determine the Economic Independence of the Elderly Respondents**

From the primary data collected, the researcher arrives at an emerging and growing group of economically independent elderly households in Kerala. The researcher employed the binary logistic regression analysis to find out the factors/ determinants of their economic independence, hypothesis H<sub>5</sub> is formulated as;

*H<sub>5</sub>: The Socio-Economic conditions of the elderly influence the Economic Dependence/ Independence of the elderly in Kerala.*

In the logit regression model, the dependent variable is data coded as 1 or 0, with 1 indicating the participation of the elderly in activities that contribute to the economic independence of the elderly populace. And 0 represents the participation of the elderly in activities that contribute to the economic dependence of the elderly populace.

$$\text{Prob (event)} = 1/1+e^{-z} \dots\dots\dots (7.6.1)$$

Where Z is  $\beta_0 + \beta_1x_1 + \beta_2x_2 + \dots\dots\dots + \beta_px_p$  and x are predictors.

Many socio-economic variables were examined to trace the influence on the economic dependence/ independence of the elderly and, the significant variables are explained below. The logistic regression can be rearranged into a linear form by converting the probability into Log odds as follows:

$$\text{Logistic log \{Prob (event)/ Prob (no event)\} = } \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_p X_p \dots \text{ (7.6.2)}$$

Where  $b_1 = \text{LCS}$ ,  $b_0 = \text{LCD}$

$X_1 = \text{Salary / wages received}$

$X_2 = \text{Remittance by son}$

$X_3 = \text{Livestock earnings}$

$X_4 = \text{Inherited land}$

$X_5 = \text{Healthy generation (1=yes, 0=no)}$

**Table 7. 8 Results of Logistic Regression Model.**

Selected Variables	B	S.E.	Wald	df	Sig.	Exp(B)
Constant	-3.818	.801	22.721	1	.000	.022
60+			5.799	2	.050	
70+	1.291	.674	3.667	1	.050	3.637
Healthy generation	2.435	.715	11.606	1	.001	11.417
Remittance by Son	-.002	.001	11.693	1	.001	.998
Livestock	.001	.000	9.577	1	.002	1.001
Inherited land	.010	.004	5.535	1	.019	1.010
Salary	.001	.000	32.585	1	.000	1.001

Source: Estimated by the researcher.

Note: 1% confidence level, 5% confidence levels.

$$\text{Economic independence of elderly person} = - 3.818 + 0.001 \text{ salary} - 0.002 \text{ Remittance by Son} + 0.001 \text{ Livestock} + 0.010 \text{ Inherited land} + 2.435 \text{ Healthy generation} \dots \text{ (7.6.3)}$$

The researcher has already observed that 33 percent of the elderly are economically independent as against 22 percent of economically independent elderly by another researcher (James, 2004) in section 7.5 (p.225) This emerging group will also increase its landscape in the present and upcoming centuries and this elderly is christened as the ‘Second Demographic Dividend’ (Ogawa et al., 2009). Certain factors determine the

economic independence of the elderly populace, and the researcher has found these factors using Binary Logistic Regression.

Among the age categories, the young old and old-old categories influence the elderly's economic independence compared to the oldest old because the oldest old category is less in number, poor in health, and low in working capacity. Moreover, the oldest old think about death rather than being economically independent, and the young old marked the highest percentage in the elderly populace. Another factor for determining the elderly's economic independence lies in the health condition of the elderly, who are as healthy as their past generation (in terms of absences of degenerative diseases). As a result, these elderly are more productive and achieve his/ her economic independence. According to the social norms and tradition, children, especially the sons, are the real strength of an elderly person in Kerala society. The elderly usually take care of their children. Then, the daughters get married and become a part of another family, whereas the son and his family become a part of an elderly household. Consequently, the remittance from the son and from the daughters in the dissaving period of the elderly, makes the elderly economically independent. Most of the time, there is a tendency for sons to migrate, and eventually, the healthy elderly will run the family expenditure. When considering the responsibilities towards elderly care, the son will remit money at regular intervals. Ernakulam district in Kerala with high migration and urbanisation has the largest remittances to elderly parents (Kerala Migration Report, 2018), and the researcher experienced this kind of economically independent elderly households mostly in Ernakulam district.

The Census Report of India (2011) registered that most of the elderly households are working in the informal sector, probably agriculture and allied sectors. They take care of livestock like cows, ducks, chickens, fish, and so on, both as a part of income generation and habit / leisure activity, providing them an income with economic independence. Compared to the past, the elderly in Kerala have the tendency to be employed after retirement age. It is because of the healthy life cycle and the effects of modernization, long life expectancy, and low mortality rate. The elderly are called the second demographic dividend because they work and earn money apart from their accumulated money. Hence, the salary and wages can help them stand on their own and economically

independent. Inherited immovable property like land from the past generation gave a base for engaging in economically produce activities and this contributed to the elderly's economic independence. This is treated as value capital for doing more economic activities and enables them to take a lead role in society and in their emergence as an entrepreneur. To conclude, the economic independence of an elderly person is determined by factors like age, healthy generation, remittance by sons, salary or wages received after the age of 60, earnings from the livestock, and the inherited land.

### 7.8 Old Age Care and Economically Independent Elderly Populace in Kerala

The old age care received mainly refers to the informal care received by the elderly (chapter 4). The researcher observes that the economic independence of the elderly and the level of care received are interrelated. In other words, the researcher observes that the elderly in a way, are forced to be economically independent to receive a high level of informal old age care.

**Table 7.9 Life Cycle Deficit / Life Cycle Surplus and Informal Old Age Care in Kerala.**

Sources of Income		Informal old age care			Total
		Low	Medium	High	
<b>Private Transfers (7.4.1)</b>	LCD	19(8.7)	177(81.2)	22 (10.1)	218 (100)
	LCS	9 (5.5)	133 (80.6)	23(13.9)	165 (100)
Total		28 (7.4)	310 (80.9)	45 (11.7)	383 (100)
<b>Public Transfers (7.4.2)</b>	LCD	21(9.1)	186 (80.9)	23 (10)	230 (100)
	LCS	7(4.6)	124 (81)	22 (14.4)	153 (100)
Total		28 (7.4)	310 (80.9)	45 (11.7)	383 (100)
<b>Labour Income (7.4.3)</b>	LCD	24(8.5)	234 (83.3)	23(8.2)	281(100)
	LCS	4(4.6)	76(87.4)	7(8)	87(100)
Total		28 (7.4)	310 (80.9)	45 (11.7)	383 (100)
<b>Income from Assets (7.4.4)</b>	LCD	14(9.3)	119(79.3)	17 (11.4)	150(100)
	LCS	14(6)	191(82)	28 (12)	233(100)
Total		28 (7.4)	310 (80.9)	45 (11.7)	383 (100)
<b>Labour Income and Income from Assets (7.4.5)</b>	LCD	23(8.9)	203(78.7)	32(12.4)	258(100)
	LCS	5(4)	107 (85.6)	13(10.4)	125(100)
Total		28 (7.4)	310 (80.9)	45 (11.7)	383 (100)

Source: Primary Survey

Note: Values in brackets are percentages.

The economic independence measured in terms of the Life Cycle Surplus of the elderly persons in Kerala is shown in Table 7.9. With respect to private transfers, the percentage of the elderly with LCS who receive low care is relatively low and the percentage of the elderly who receive high-level care is relatively high. Either they keep a strategic motive, or their children deeply fall into an altruistic nature when providing care. If informal caregivers cannot fulfil the needs of the growing grey populace, formal care appears to be an alternative to some extent. Hence, the public transfers received by the elderly (85.38 percent) as old age pension, widow pension, pension from retirement, pension received from Coir Board, NGOs, and others (stitching units) are considered here. Like private transfers, with public transfers, the percentage of the elderly with LCS who receive low care is relatively low, and the percentage of the elderly who receive high-level care is relatively high. LCD calculation from labour income also provides high-level care, but there are few elderly labour income receivers. It is noteworthy that the economic independence estimated by LCS from the income from assets provides a high level of care, and a relatively low percentage of elderly with assets are found to receive a low level of care. Finally, one-third of the population (33 percent) is economically independent, and those who are independent will receive a high level of informal care. Hence, economic independence becomes a milestone in the life of the elderly in Kerala.

**Table 7.10 Life Cycle Deficit / Life Cycle Surplus and Old Age Care (Formal & Informal) in Kerala.**

Sources of Income	Old Age Care			Total
	LCD/LCS	Low	Medium	
<b>Private Transfers (7.4.1)</b>	LCD	67 (30.7)	151(69.3)	218(100)
	LCS	31 (18.8)	134 (81.2)	165(100)
Total		98(25.6)	285 (74.4)	383(100)
<b>Public Transfers (7.4.2)</b>	LCD	73 (31.7)	157 (68.3)	230(100)
	LCS	25 (16.3)	128 (83.7)	153(100)
Total		98(25.6)	285 (74.4)	383(100)
<b>Labour Income (7.4.3)</b>	LCD	83 (28)	213 (72)	296(100)
	LCS	15 (17.2)	72 (82.8)	87(100)
Total		98(25.6)	285 (74.4)	383(100)
<b>Income From Assets (7.4.4)</b>	LCD	45 (30)	105 (70)	150(100)
	LCS	53 (22.8)	180 (77.2)	233(100)
Total		98(25.6)	285 (74.4)	383(100)
<b>Labour Income and Income from Assets (7.4.5)</b>	LCD	79 (30.6)	179 (69.4)	258(100)
	LCS	19 (15.2)	106 (84.8)	125(100)
Total		98(25.6)	285 (74.4)	383(100)

Source: Primary Survey, note: Values in brackets are percentages

Table 7.10 explains the economic independence of the elderly and the total old age care received (formal as well as informal). The economically deficit group (LCD) of the elderly receive a low level of old age care. In contrast, the economically surplus group (LCS) are found relatively few in the low-level care and more in the medium level of care. This behaviour and pattern are seen in the elderly with economic independence from their labour income, income from assets, and both together. In other words, medium-level old age care is found more among the elderly with economic independence from private and public transfers. At the same time, when LCD is calculated from public transfers, the elderly receive a low level of old age care from the government. Also, it was observed from Table 4.19 (p.152) that none of the sample elderly received high-level formal care. Thus, the old age formal care of the government and support mechanism is inadequate in absorbing the growing grey populace.

**Table 7.11 Life Cycle Deficit / Life Cycle Surplus and Old Age Care Gap in Kerala.**

Sources of Income	Old Age Care Gap			Total
	LCD// LCS	Medium Care Gap	High Care Gap	
<b>Private Transfers (7.4.1)</b>	LCD	142 (65.1)	76 (34.9)	218(10z0)
	LCS	127 (77)	38 (23)	165(100)
Total		269(70)	114(30)	383(100)
<b>Public Transfers (7.4.2)</b>	LCD	147 (63.9)	83 (36.1)	230(100)
	LCS	122 (79.7)	31 (20.3)	153(100)
Total		269(70)	114(30)	383(100)
<b>Labour Income (7.4.3)</b>	LCD	200 (67.6)	96 (32.4)	296(100)
	LCS	69 (79.3)	18 (20.7)	87(100)
Total		269(70)	114(30)	383(100)
<b>Income From Assets (7.4.4)</b>	LCD	100 (66.7)	50 (33.3)	150(100)
	LCS	169 (72.5)	64 (27.5)	233(100)
Total		269(70)	114(30)	383(100)
<b>Labour Income and Income from Assets (7.4.5)</b>	LCD	169 (65.5)	89 (34.5)	258(100)
	LCS	100 (80)	25 (20)	125(100)
Total		269(70)	114(30)	383(100)

Source: Primary Survey.

Note: Values in brackets are percentages.

None of the sample elderly experienced a low-level old age care gap, revealing that either a medium or high-level old age care gap exists among the Kerala elderly populace. The high old age care gap is relatively more prevalent among each deficit group. On the other hand, economically independent elderly persons are found to experience a medium old age care gap and are relatively few in the high care gap category. Thus, it can be concluded that the elderly's economic independence can be a prime factor in reducing the old age care gap in Kerala.

Thus, the chapter concludes that an emerging group of economically independent elderly people exists in Kerala. Also, they are expected to increase in the near future. The factors determining the elderly's economic independence are age, healthy generation, remittance by son, earning from livestock, inherited land, and salary and wages of the elderly populace. Elderly independence has a huge impact on the elderly's bequest motive and informal old age care. In other words, the economic independence of the elderly helps to bridge the old age care gap and, the Kerala elderly populace will be 'an asset, not a burden' (James, 2004) to the society.

# **CHAPTER VIII**

## **FINDINGS AND CONCLUSION**

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## 8.1 Summary

This research entitled ‘Analysis of Elderly, Bequests’ and Care in Kerala’ is an attempt to explore the nexus between the elderly’s informal old age care and the pattern of bequest motive, as well as the state of economic independence. Though there are few studies on elderly bequests in the international context, there is a dearth of studies that relates informal old age care and the pattern of bequest motive. This assumes special significance in the context of Kerala with the highest life expectancy and with the highest number of elderly in India and the present study fills the gap. The main objective of the research is to analyse the interrelationship between the care received by the elderly, both formal and informal, and the corresponding pattern of their bequest motives, which is spread around their socio-economic status in society. Also, the economic independence of the elderly affects the relationship mentioned above. Formal old age care is equally available to all the elderly citizens in the country, but informal old age care variations is prevalent in the society depending upon socio- economic conditions and the elderly’s bequest motives.

This study purports to analyse the nexus between the bequest motive of the elderly, and the care provided to them by informal institutions across socio-economic groups and genders and examines the role of institutional caregivers in providing old age care in Kerala. Also, the research examines the role of economic independence of the elderly in the provisioning of care to the elderly. The study made use of both primary and secondary data. Secondary data have been collected from various data sources like World Population Ageing report 2017, Help Age India 2014, Building a Knowledge Base on Population Ageing India (BKPAI) Survey 2011, NSSO reports of 52<sup>nd</sup> and 60<sup>th</sup> rounds in 1985-86 and 2004-05, Kerala Ageing Survey (2013, 2016, & 2019), Census Reports of India (2001-2011) and Longitudinal Ageing Survey of India (LASI-2018). Primary data are collected from selected districts of Kerala, viz, Kozhikode, Thiruvananthapuram and Ernakulam. Based on the Census 2011, Multi -stage random sampling was used to collect data and 383 representative elderly samples were taken for this survey. Since the economic and non-economic activities of aged people belonging to different socio-economic classes were to be identified, a multi- stage sampling was adopted. The respondents to the household schedule included any usual resident or non-resident

member above age 15 years as informal caregiver, while in the case of the individual or elderly household schedule all those aged 60 and above in the sampled households are the respondents who are interviewed. The survey uses an interview schedule. To measure informal old age care and formal old age care, the researcher constructed indices like INOCI (Informal Old Age Care Index) and FOCI (Formal Old Age Care Index) based on the UNDP methodology, 2013. To examine the interrelationship between both kinds of care, Karl Pearson's correlation coefficient was employed. Also, Multiple Regression analysis was used to identify old age care as the outcome of mutually inclusive factors of old age care. The elderly's Bequest motives are spread over the sampled data. It means that an elderly person's bequest motive is not only to insist on one particular motive but also mixed up with all the other motives together. So, the researcher employed a mean score value to derive the magnitude, size, and characteristics in which these motives were spread across the socio-economic fabric of the society. To identify it, the researcher used the Independent 't' test for grouping variables two- and one-way ANOVA for grouping variables more than two. To measure and identify the economic independence/dependence of Kerala's elderly populace, the researcher employed the NTA (National Transfer Accounts) Model of Life Cycle Deficit (LCD). Also, the researcher exercised Binary Logistic Regression analysis to identify the factors responsible for the elderly's economic independence. To satisfy the nexus between the elderly's informal old age care which they received from informal caregivers, a Multiple Linear Regression Analysis is applied. Finally, to investigate the factors that influence the interrelationship between informal old age care and bequest motives of the elderly, a Hierarchical Multiple Regression Model was assigned. Besides the primary data measurement methods, a set of secondary data analysis methods like the Exponential growth rate estimation and projection, Economic OADR estimation, Population Pyramid (Age- Sex), percentage and proportional analysis, pie diagrams, bar charts, bivariate and multivariate tables are employed.

## **8.2 Summary of Major Findings**

The study observed that the elderly categories like young old, rural and female elderly receive more informal care than others. This result is aligned with the observation of Glasgow (2000). As the age level increases, the old age care gap increases due to higher

needs and wants to be satisfied, especially to meet health expenses and transfer of property to children for receiving informal care. Institutional caregivers, especially the government, provide formal care to fill this informal care gap. Unfortunately, on account of the exponential growth rate of the elderly populace in Kerala, the formal old age care is also inadequate and a burden to the government. Japan experimented with the policy of formal old age care, but they returned to the informal old age care, realising that formal old age care was burdensome and, informal old age care is more convenient and effective (Ogawa et. al., 2009).

In addition to the four bequest motive patterns observed in the literature, viz, Strategic, Purely Altruistic, Accidental, and Social Norms and Tradition; the study has added one more bequest motive pattern, Altruistic Wellbeing towards children. Each motive has unique characteristics in terms of socio-economic status, informal old age care, and economic independence. This research found that the elderly in Kerala are more likely to follow the strategic bequest model and altruistic well-being towards children bequest model but they are tilting away from the pure altruism, accidental, and social norms and tradition bequest models. This result is in line with the observations of Lakshmanasamy (2012) that elderly parents and children were involved in exchange motives. The present study observed that strategic bequest motive and accidental motive are relatively high in the central part of Kerala. De Jong (2011) in his study on widows has already observed that in central Kerala, accidental bequest motives are relatively higher than other bequest motives. The study has employed mean score values in the estimation of the five bequest motives, which are often mixed up with the respective socio- economic condition of the elderly in Kerala. This observation has been made by Alessie et al. (2014), and he mentions that the mixed bequest motive might be more appropriate to describe a particular scenario or group of people.

The elderly who fall in the Altruistic Well-being towards Children Model have positive effects on the elderly's socio-economic status but negative effects on informal care received from children. More specifically, the elderly with higher financial ability tend to feel less satisfied when transferring money and assets to their caregivers (children), and they prefer to receive informal informational care rather than informal financial care. Secondly, the elderly under the Strategic Life-cycle Model exhibit a positive association

with the informal financial and informal informational care, whereas they are negatively associated with informal emotional care from their children. Financial aid from children to the elderly might be assumed as repayment due to parental investment (Johar et al., 2014; Leopold & Raab, 2011). Thirdly, elderly bequest motives, skewed towards the Social Norms and Traditional Model, have a positive relationship with informal financial and informal informational care. However, it is negatively related to informal emotional care. Horioka (2009) opined that the elderly always demand emotional, informational and financial care from their family members when they are getting old due to the values of a culture (Stankov, 2011; Stankov & Knezevic, 2005).

The ever-growing elderly population in Kerala (Census, 2011) are seeking care that cannot be bought from the market or the economy (Sreeroopa, 2016). The old age care is the amalgamation of informal and formal old age care (Aronson & Neysmith, 1996). Therefore, the old age care gap is a blend of the informal old age care gap and the formal old age care gap. The formal caregivers are government, NGOs, community and private individuals and informal caregivers are family members, relatives, friends and neighbours. The study made an attempt to measure the care perspective through statements (thirty-two statements for informal old age care and twenty-eight programmes for formal old age care) using a Likert scale, rather than asking them directly. The ageing of the elderly creates a financial and emotional care deficiency and the study observed that 25.6 percent of the elderly receive a low level of informal care. This is observed mostly in the case of rural elderly people and males. The income of the elderly is associated with higher levels of care than is the case with wealth. However, they still accumulate wealth to receive income from wealth and are called the 'Second Demographic Dividend' (Narayana, 2011). Contrary to Sarmistha Pal's observation (2006), that residential care and the quantum of immovable assets are interrelated; the present study finds that immovable assets like land and houses are not that important in the provision of care. Moreover, moveable assets like jewellery and valuable vessels are considered part of the accumulated assets in care provision.

The elderly receive relatively higher care from migrated sons than from migrated females, which can be due to more informal financial care from sons than informal emotional care from daughters. Migrated Great Grandchildren (GGC) deliver a high level

of care to the elderly as they are not physically present. Due to migration effects, the elderly opined that migrant children and Great Grandchildren are better caretakers of the elderly in Kerala. The divorced/ separated children staying with the elderly and the professional ability of the generations of elderly is found to enhance care for the respondent elderly. The elderly who have more than two sons are observed to receive high levels of care when compared with the elderly who have more than two daughters and relatively high care is received by the elderly when more sons stay with them. At the same time, the elderly with at least one daughter or two daughters received a relatively higher level of care than those with at least one or two sons. Though relatively less in magnitude, it gives great hope that daughters are emerging as vehicles of a high level of old age care in Kerala with below replacement level of fertility. Thus, in contrast to the traditional view that sons and their spouses were the care providers to the elderly, this research is in tune with the findings of James (2004) that the traditional pattern has slightly changed with daughters emerging as care providers and the credibility of daughter in the provision of care is identified and desired by the elderly community.

The majority of the respondents reported receiving a medium level of care (80.9 percent), while 7.3 percent received low informal old age care and 11.7 percent received high-level informal care during old age. This distribution, coupled with the increasing health expenditure and ageing of the aged generations, creates a financial and emotional care deficiency not only for the sample elderly but also for the informal caregivers who are aged 60 and above. Interestingly, the elderly were found to be somewhat hesitant in revealing this care deficiency. Interestingly, the elderly are found to receive a high level of informal care when they are investors rather than savers. The researcher agrees with the opinion of the economist Tobin (1965) that the elderly are not dis-savers. The Kerala government has taken the initiative to encourage saving and investment behaviour of the elderly in society. On the other hand, the elderly loan (debt) holders are small in number and experience difficulties in availing loans.

The northern part of Kerala registered high levels of care from the informal caregivers who provided relatively high respect, resulting in a high level of informal care received by the elderly. The highly dependent groups, like the oldest old, have received relatively high levels of informal old age care. Relatively higher levels of care in the urban areas

than in the rural counterpart of Kerala are also verified. It is observed that the elderly among Muslims receive high levels of care in Kerala. Except for the general category, all the other social groups enjoy relatively high levels of care. Based on marital status, the married and the widows /widowers get high levels of care. Also, the elderly who have migrated are seen to have high informal care. It is interesting to observe that high levels of care are received by the elderly if they are the head of the household. The elderly receive high care when they are a joint family member or a member of an extended family.

The researcher rediscovers that the elderly are not single but are accompanied by at least one more dependent throwing light on the greying nature of the society. The percentage of elderly who are disabled by birth/ disabled by birth and ageing, are low among those who receive relatively high care. The elderly opined to receive a high level of care with Non-Communicable Diseases when compared with Communicable Diseases. Majority of the elderly with degenerative diseases receive low levels of care. The study highlights the role of family dynamics in informal care provision. It is found that newly married couples often take on the responsibility of caring for family members, especially the elderly. This familial support significantly reduces the likelihood of a care gap, emphasizing the importance of family in the care of the elderly.

The percentage of elderly who receive low care is relatively high among the APL category. It is observed that the majority of the high-care receivers were from the BPL category, followed by Antyodaya card holders. It is observed that health insurance brings a higher level of care than non-health insurance due to the constraints imposed by the insurance companies on age and related morbidities. In addition, the elderly who are the taxpayers and retired are found to get care. The elderly who are retired and employed receive relatively high care because they are financially secure on account of retirement benefits and present personal income. On the other hand, the elderly housewife's enjoyment of the high level of care is due to economic dependence. It is interesting to note that low levels of care are seen among those elderly who contribute to household expenditure. The study is in conformity with the observation of the Building a Knowledge Base on Population Ageing India (BKPAI) Survey (2011) that over half of

the elderly (54.9 percent) pay for household expenses and this research finds that 72.2 percent of the sample elderly contribute to household expenses.

Inherited land holders are found to receive a high level of old age care. Similarly, self-acquired land holders, though relatively few in number, are also found to receive a high level of care. In the case of ownership of a house, the majority are in the self-acquired category and receive a high level of care. In short, immovable assets have an influence on informal old age care. This observation from the field re-establishes that leaving of bequeaths/ savings by the elderly itself is a powerful strategic motive to get informal care from children, as observed by Berniham et.al (1985). Most moveable asset holders are female elderly populace in Kerala, particularly jewellery and valuable vessels. Most of them came to the possession of these at the time of their marriage. In essence, the possession of inherited movable assets is fairly acknowledged for getting informal old age care. Compared with the national data (National Transfer Accounts (NTA), 2019), the researcher observes that Kerala's elderly populace is less eligible to reap benefits from the second demographic dividend due to the possession of mainly unproductive assets and less proportion of elderly having income-generating assets. In short, the elderly who receive higher levels of old age care are the owners of income from assets, unlike private transfers (care received from informal caregivers). In the future, with a precautionary motive, the Kerala elderly populace is expected to gain the second demographic dividend /accumulation of capital in line with national trends.

Informal emotional care and informal esteem care provisions are closely linked with the birth of great grandchildren. A relatively higher level of informal esteem care (17.9 percent) was received by the elderly who have great-grandchildren, than the elderly with grandchildren (12.6 percent) and children (12 percent). The elderly receiving a low level of care is relatively high when provided by the children, either because their children are aged sixty and above (an aged person takes care of another aged person), or busy with their own life, or children do not wish to provide care. In the case of elderly living with children and grandchildren, they get many kinds of high levels of informal care, including technological, informational, and esteem care.

The more sons staying with the elderly, the more care they receive. Though women are the traditional caregivers, the credibility of daughters in the provision of care is identified and desired by the elderly community, indicating a transition from daughter-in-laws to daughters. Like the sons, daughters are vehicles of a higher level of old age care, but less proportionately than sons. Elderly with divorced/ separated children, especially with daughters staying with the elderly, are found to receive high levels of care. The elderly receive relatively higher care from migrated sons than from migrated females, which can be due to more informal financial care from sons than informal emotional care from daughters. Due to migration effects, the elderly opined that migrant children and great grandchildren are better caretakers of the elderly in Kerala. Migrated Great Grandchildren (GGC) deliver a high level of care to the elderly while they are not physically present. The professional ability of the generations is found to enhance care for the elderly. It is high in the case of the elderly with children and grandchildren.

The utilisation of formal care programmes depends on the attitude, independence and optimistic behaviour of the elderly person (Bardhan, 2015). Most of the elderly are aware of their rights and concessions but the majority of them don't fully or partially utilize it. The respondent elderly who are aware of their rights and concessions opined that they utilize formal care and are satisfied with the formal care provided. But, the exponential growth rate of the elderly population cannot be fully and efficiently absorbed by the government, leading to a turnpike effect that the care is demanded from the informal caregivers, as it was in the past. This is in line with the study conducted in Japan by Ogawa et. al (2009) that low levels of care by the government made the elderly seek more care from their family members (Ogawa et. al, 2009). Kerala's elderly populace has also shown a tendency to return to families and society to receive informal care.

The enforcement of the Maintenance and Welfare of Parents and Senior Citizens (Amendment) Act (MWSPS) Act (2007, modified in 2019) can prove instrumental in bridging the formal care gap of elderly in the future. Lack of awareness among the elderly citizens about formal old age care may result in low level of utilisation and in improper management and implementation of the programmes meant for the enforcement of the rights of elderly citizens. This also contributes to a high level of formal old age care gap. In nutshell, old age care is determined by the factors like informal social care, informal

esteem care, informal emotional care, informal informational care and informal financial care by the informal caregivers and; the awareness of formal care and utilization. Researchers agree that formal as well as informal old age care of the elderly are the two sides of a coin (Cantor, 1983).

Among the respondents, none of the elderly received high formal care. The majority (93.2 percent) received a low level of formal care and the rest received a medium level of formal care. The oldest old category and females which need the highest care, received relatively low formal care. The rural elderly also received a low level of formal care, maybe because of relatively low socio-economic transformation and awareness. As the old age pension is usually given to only one elderly person, the situation of low formal old age care for the elderly can happen in households with more than one elderly, as they are non-receivers of social pension. Among the age categories, hexagenarians and across gender, females are found to receive low care. The elderly widows also fall in the category of low formal level of care. With respect to social pensions for the elderly (old age pension and widow pension), the beneficiaries are mainly from the Economically Weaker Section (EWS) and Other Backward Class (OBC) categories. In contrast to the south and central regions of Kerala where formal care was relatively high, the elderly of northern Kerala experienced low formal care but high informal care.

The elderly household's health expenditure is higher than other age groups and this can be a reason for the increase in Kerala's total public expenditure against the national average. To reduce the expenditure on the health of the elderly, the government has introduced many programs like the geriatric care project, palliative care project, Madhuram, and so on. In line with the study conducted by Sri Chithira Thirunal Institute of Medical Science in 2017, Kerala elderly experienced a high level of multiple NCD in their life span. But, none of our oldest old (80+) samples received a high level of formal care. The researcher has observed that the elderly with multiple NCDs received low levels of formal old age care and suggests the need for improvement in the provision of formal old age care in the future.

Social status plays a crucial role in old age care. The more the social status given to the elderly by the informal caregivers such as the family members, friends, neighbourhood,

and relatives; the more is the old age care received. Children who are living with the elderly household often provide informational services to their elderly parents during the old age (Lee, 1999). But many times, it is incomplete information provision in Kerala. This case may be due to the demographic transition of the State, where aged 60+ are taking care of their elderly parents. Emotionally, the elderly populace is attached with the informal caregivers. Furthermore, technological assistance can improve the informal esteem old age care received by the elderly in Kerala.

The Kerala elderly experienced a high and medium level of care gap for the older parents in which the formal care gap is more than informal care gap. Hence, the old age care gap is the mirror image of the old age care index. Across regions, the lowest care gap is experienced by Southern Kerala than Central and Northern Kerala, attributed mainly to the relatively high formal care in the Southern region. Technological advancement in telecommunications (e.g. Internet and smartphone) provided mainly by the family members can help the elderly to acquire information about formal care programmes. Technological advancement bridges the gap between older parents and their adult children in terms of informal informational old age care (communication and sharing information) and the older parents feel that they are still useful, important, and loved by their children (informal esteem old age care). The research found that parents who received more formal old age care in the form of social pensions, such as old age pensions, widow pensions, disability pensions, and so on, were less likely to receive financial assistance from their children (informal caregivers). The elderly populace receives informal informational and esteem care from the caregivers and this is found to influence formal old age care and vice versa, though the strength of the relationship is weak. The NGOs ('Magic' in Ernakulam district) and private individuals and communities are instrumental in the provision of formal old age care. Noteworthy, though the elderly receive financial support from formal old age caregivers like government, NGOs, communities and private individuals; it is meagre, irregular and untimely and often fails to meet the health needs of the elderly.

Even though each widow receives care through the widow pension scheme, it is not focused on the widowers. Above all, the researcher noticed elderly have not received any income, which means they are not receivers of any social pension of formal care. This

low level of formal care and a medium level of informal care creates indeterminate low level of old age care and a high level of old age care gap among elderly novices, unequally distributed according to their socio-economic status. Also, the formal care gap is higher than the informal care gap. The present study observes the absence of a significant relationship between formal and informal old age care. Hence, the informal old age care plays a prominent role in the elderly care in Kerala. Thus, the research proves that old age care is meaningfully informal old age care for elderly households in Kerala.

The elderly in both Altruistic and; Social Norms and Tradition groups would reduce their financial services to their children when their age increases. On the other hand, selfish parents with Strategic motives are more likely to get informal financial care from their children at the fag end of their life. The present study observes that Kerala elderly novices confirmed Altruism towards Children's Well-Being, followed by Pure Altruism, Strategic, Social Norms and Tradition and, Accidental bequest motives respectively. Thus, five life cycle models of bequest motives are noticed among the elderly population in Kerala. Altruism towards Children's Well-Being and strategic life cycle models are more applicable than social norms and traditional models. The strategic life-cycle model, which focuses on the financial exchange from their children, and the altruism towards children's well-being model, which shows the thumb of the rule of children's preference, especially sons, are two research outputs of Lillard and Willis (1997) and Alma'amun (2009, 2010, 2012). Along with these, Social Norms and Traditions, focus on the behaviour of the elderly who leave more bequests to their children, especially their sons living with them. This finding resembles with Horioka's (2002) and Wakabayashi's (2009) observations, and a new profile of the spectrum of the Kerala elderly's bequest motives has been introduced through the study in the context of Kerala.

The study reveals that there was no significant difference across age and gender in the respondents' perception of pure altruism. This might be due to similar thoughts of the elderly regarding their desire to leave a bequest to their children. In the perception of pure altruism across the regions, there is a significant difference. The pure altruistic elderly households are positive thinkers and hence the elderly with better education sustain equal property to their daughters and grandchildren. It is mainly reflected in the level of education, family headship, number of female children and grandchildren and;

the stay of the elderly with their children. Incidence of poverty, employment, self-acquired land, house, jewellery, savings, elderly's contribution to household expenses and type of income received by the elderly are found to be significant variables used to capture the economic status of the elderly with pure altruism.

To lessen their children's financial burden and assist them in becoming economically independent, most of the respondents would leave a bequest to their children and provide wealth. The elderly would leave their properties to their children, possibly due to rising housing costs of their children. Older parents with the motive of 'altruism towards children's wellbeing' provide financial assistance to help their children to become economically independent and self-sufficient. This behaviour is relatively high among the 60 -70 age group. This may be either due to the completed settlement of the children of the 70 + and above elderly or due to the inability of the elderly (70+ and above) to contribute to children's well-being on account of increased health expenditure during old age. Except for northern Kerala, male elderly have greater influence than female elderly when it comes to ensuring the well-being of children. Level of education, family headship, incidence of Communicable Diseases (CD) and Degenerative Diseases (DD), family type, ownership of the house and marital status. self-acquired land, house, jewellery, and investment by the elderly are found to be significant among the variables used to capture the economic status of the elderly with altruism towards children.

The accidental bequest group of the elderly populace accumulates assets without transferring them to the next generation. It might be either due to the concern for the welfare of future generations or due to the unawareness of writing will. In other words, the elderly with an accidental bequest motive leave bequest behind when they die. This adds strength to the observation that the motives of the elderly with accidental bequests are either strategic or altruistic. They trusted mostly sons than their daughters. The accidental bequest motive is more prevalent in the Northern and Central parts of Kerala than in Southern Kerala. Northern Kerala depicts more towards the altruistic behaviour of the elderly, coping with the strategic behaviour of the children, resulting in their accidental bequest motive. Also, the strategic behaviour of the elderly, combined with the altruistic behaviour of their children, results in an accidental bequeath culture in the highly urbanised Central part of Kerala. This kind of motive is found more true in the

case of female elderly and the old-old category. Family headship, number of grandchildren and great-grandchildren, migration of the elderly, family type, district, total number of family members and place of residence, incidence of poverty, employment, self-acquired house, jewellery, remittance by daughter and son and type of income received by the elderly are found to be significant among the variables used to capture the economic status of the elderly with accidental motive.

The “strategic life-cycle” comprehends the elderly as persons whose main concern is only about themselves and are perceived to be egoistic. These selfish parents would not have any intention to leave a bequest for their children. Elderly who are strategic would not contribute to their children’s monthly expenses even if their children had insufficient income for their living. Hence, they will not expect care in return in their old age. A slow transition from altruistic to strategic bequest motives among the elderly populace is seen in Kerala, particularly in Central Kerala. This incidence is relatively high among the female elderly when compared with males, maybe on account of relatively low assets (many times only jewellery), unemployment and high life expectancy for women. On account of high health expenditures, most of the oldest old (80+) population also belongs to this category. Family headship, number of sons, daughters, grandchildren and great-grandchildren, migration of the elderly, family type, district, disability due to ageing, non-communicable diseases, social group, educational status and place of residence, elderly’s contribution to household expenditure, land ownership, investment behaviour, retirement benefits received, level of employment, remittance by daughters and sons and, the type of income received by the elderly are found to be significant among the variables used to capture the socio-economic status of the elderly with strategic bequest motive.

The elderly group with the motive of Social Norms and Tradition would expect their children’s contribution to their monthly expenses, which is not related to selfishness. This behaviour is in tune with social norms and traditions which are unwritten. Jellal and Wolff (2002), Lai, et al. (2010) opined that the children had to provide the elderly with better living conditions and health assistance with financial resource transfers (financial assistance), if the elderly could afford to offer a better education for their children. Male elderly are more found to depict this behaviour when compared to their female counterparts. The concept of culture and tradition is of great significance in Northern and

Central parts of Kerala. Family headship, marital status, number of spouses, daughters, grandchildren and great-grandchildren, total family members, migration status of the elderly, family type, district, disability due to ageing, non-communicable diseases, educational status and place of residence, health insurance, land ownership, savings, employment, remittance by daughters and sons and, the type of income received by the elderly are found to be significant among the variables used to capture the socio-economic status of the elderly with social norms and traditional bequest motive.

This study observes that bequeath transfers depict a structural transformation from altruistic to strategic character and it is predicted that this trend will be on the increase in the future. From an intergenerational perspective, this research concludes that the bequeath transfer of the parents of the elderly shows an altruistic nature, while bequeath transfers by the respondent elderly to his/ her family members reflect a more strategic nature. It is evident that the elderly bequest motive and the bequeath transfers are processed in opposite directions. However, many times, the attitude of the elderly will not match with their actions due to the fear of getting care from children. The five bequest motives are classified into two bequest distributions in actual life, viz, altruistic bequeath distribution and strategic bequeath distribution. The inherited asset holders are more than the total number of self-acquired asset holders among the elderly. Among the asset holders, the landholders are more in number, when compared with those who hold gold. It is noteworthy that the elderly males receive mainly the land and house from their ancestors and the female elderly receive assets such as gold, which is highly liquid. Mostly, the respondent elderly received altruistic bequeath contributions from their previous generations. But, among the variety of assets received, the bequeath contribution of the land reveals a strategic nature when compared with the bequeath contribution as house and gold in the earlier periods. The respondent elderly received more immovable assets than moveable assets from their previous generation. In contrast to this, the respondent elderly transferred liquid assets mainly in the form of gold to their daughters, rather than immovable assets and; the gold sovereigns bequeathed to their daughters were higher than what they received from their forefathers. Hence, the sample elderly's transfer of bequeaths in gold is relatively more for daughters than sons, mainly at the time of the daughters' marriage. In other words, sons receive more immovable assets as part of the unwritten traditions and norms. From an intergenerational aspect, 90

percent of the grandchildren of the sample elderly received altruistic bequeaths in the form of gold.

The elderly with strategic bequests mostly leave their bequests to sons rather than daughters, spouses, or grandchildren. Mostly, this group of the elderly has a weak financial status. The assets may or may not be given to children in the future as sale deeds and gift deeds, especially in the case of land or houses. Most have transferred their assets to their sons, who provide care in the future, followed by their daughters and grandchildren. However, the incidence of strategic bequest transfers is less than the altruistic transfers. Interestingly, some strategic thinkers trusted grandchildren more than their children and gave gold as a gift to them to receive care.

The researcher observed that the elderly's demand for informal old age care is linearly dependent on their bequest motive, which is controlled by their respective socio-economic status. In other words, each bequest motive is linearly dependent on the kinds of informal old age care. The elderly who are Altruistic toward Children's Well-Being is concerned with informal financial care, informal social care, and informal emotional care from informal old age caregivers. With regard to the financial care of children, children contribute a good share to household expenditures and help the elderly meet out-of-pocket health expenditures when they are employed. The altruistic behaviour of the elderly parents is reflected in the transfer of inherited and self-acquired assets to children in their needy times, like during employment, education, marriage and house construction. Moreover, sharing the assets through a will or other ways is considered the final responsibility of an elderly person before death. Elderly households prefer to receive emotional care from children, remain attached to their family members and love to live with all family members together. In the same way, altruistic well-being towards children's bequest motive helps the elderly to receive social care through friends and relatives, especially when the children are migrated.

The accidental elderly households do not prefer informal financial care, informal esteem care, informal informational care, and informal emotional care from their informal old-age caregivers and they are found to receive more informal social care, indicative of their concern with their personal image such as care and respect in society. In the absence of

proper awareness about the bequeath distribution plan, the elderly populace showcases a higher probability of holding a larger amount of financial assets that eventually turns into accidental bequests and unclaimed assets. In some cases, this group of elderly parents is cautious and alarmed by the belief that their children will abandon them after receiving the bequeaths. Hence, the accidental life cycle bequest motive is a part of the strategic lifecycle bequest motives of the elderly populace. Irrespective of gender, majority of the elderly preferred this kind of accidental bequest motive in Kerala. Since the elderly populace is not willing to write a will or transfer their assets, the whole assets are utilised by the elderly themselves, and eventually, they are confident enough to meet the unexpected health expenditure in the future, without much quarrels for assets by children. This study also finds that, there is a tendency of high financial assistance to the elderly parents by their children, and the financial assistance is greater than the informal esteem care from children.

The elderly parents in a strategic life-cycle are very much concerned with informal financial care for their children since children have poor financial status. Based on the literature and the constructs developed by the researcher, it is observed that the children might not have strong financial ability, and hence, children might have to spend more time on their work to provide financial assistance to their elderly parents. That is, financial assistance is higher than the informal informational and informal emotional care from children to elderly parents. In the strategic life cycle, elderly parents are found not to their children so that children require informal social care. They think of transferring as much of the assets they can to their children so that children provide care in return. They are only interested in receiving information from their children and are less updated about the outside world. These selfish-minded elderly populace considers only their well-being than those who are taking care of them. But, in their old age, they really desire to receive care from others that they cannot buy from the market directly. The demand for care is of great importance to them and they even forget to take care of their own emotional well-being and come out of the emotional attachments with the caregivers. Majority of the female elderly populace comes under this category because they seem to have a relatively narrow-minded behaviour pattern in their old age. This may be because, majority of the females are dependent and lack assets to demand care or because of little/no assets, that too obtained very late as inheritance/ due to death of spouse. The

researcher reviewed the news that a mother advertised Rs.10 lakh as an auction price for her children who are willing to take care in her old age. Ironically, she had three sons and one daughter, and all of them were living in Kerala at that time (Malayala Manorama, 2018).

Social Norms and Tradition group of elderly demanded informal emotional care, informal esteem care, informal social care, informal informational care and financial resource transfers from the informal caregivers (Horioka, 2009) and the kinds of assistance received from their children directly depend on the older parents' needs and lack of public resources (Nakajima & Telyukova, 2013; Lee & Xiao, 1998). Consequently, the relationship between informal informational care, informal emotional care, informal social care, informal esteem care, and informal financial care for children can be positively or negatively correlated. Based on social norms and tradition, this group of elderly falls between altruism and strategic models. This group of elderly is keen on sharing household information with their children, but lacks self-esteem, self-confidence, or direction. Regarding informal financial care, this group of elderly receives financial assistance from their children, might be due to tradition and not because of their poor financial status. They also received informational assistance. The highest probability of this elderly group holding vast wealth is their ignorance about writing will, which might become an accidental bequeath and unclaimed bequeath if they don't have a proper distribution plan.

Socio-economic status is the controlling element in the analysis of the relationship between informal old age care and bequest motives. The elderly with the 'altruistic well-being of children bequest motive' and the 'informal financial care and informal social care' received by them are positively related to the type of family. However, it is inversely related to the investment and the incidence of degenerative diseases. On the other hand, the relationship between 'Pure Altruistic elderly' and their provision of 'informal social care' is positively influenced by headship, education, number of grandchildren, NCD, and kinds of income received, whereas the contribution to the household expenses shows a negative influence. However, the strategic elderly satisfy their financial and emotional care needs and their socio-economic status such as place of residence, headship, kinds of income received, number of female children, remittance

rendered by son and district are found significant. Moreover, the elderly's accidental bequest motive and relation with informal financial care and informal esteem care is controlled by place of residence and headship. Finally, the Social Norms and Traditions of the elderly and financial care are controlled by place of residence, headship, kinds of income received, remittance by son, family type, incidence of NCD, employment, and district (inversely). In this way, the researcher proves the triangular relationship between the old age population (old age dependency as a proxy variable), informal old age care (familial care as a proxy variable) and, the bequest motive (socio-economic status as a proxy variable).

The age-specific level of production and consumption is explained by the economic dependency ratio of old age (the proxy variable), using the concept of life cycle deficit (LCD). The elderly experience a Life Cycle Deficit when the average consumption is greater than average income in old age and a Life Cycle Surplus in working age. Interestingly, the Kerala elderly novice revealed a negative Life Cycle Deficit when they get old. The life cycle hypothesis says that the elderly transfer their assets to the next generations, and increased levels of health expenditure led to dissaving of the elderly. However, the present study employed the empirical National Transfer Account model of Life Cycle Deficit and found that most of the respondent elderly are in the saving stage, in tune with the observations of the World Population Ageing Report (2019). An economically independent elderly populace has emerged in Kerala - the land of 'greying population', women and migration. Among the states of India, this share is expected to increase in the future on account of high life expectancy, particularly of women and the migration of youngsters.

The Life Cycle Deficit analysis has two integral components, viz, production and consumption. Primarily, the study reconfirms the findings of Sanitha et al. (2019) that labour income of the elderly has become a prominent factor in Kerala. Also, this research cannot deny the findings of the BKPAI survey (2011) that the elderly in Kerala are employed either by compulsion or by their own interest. In line with this, the researcher observes that this behaviour of the elderly is to bridge the Old Age Care Gap that they face. Secondly, the majority of the elderly population in the nation depends on public transfers (Narayana, 2011). Yet, a good proportion of them are unaware and non-

receivers. Thirdly, due to the social transformation and migration effects, private transfers are highly accomplished to fulfil the care needs of the elderly in Kerala. Finally, irrespective of age, gender and place of residence, the research outcome aligns with the observations of the World Population Ageing Report (2019) that as the pattern and affinity to income from assets is more or less similar in Kerala, it is the labour income that determines the economic independence before age 60 (first demographic dividend), whereas it is income from assets that determines the economic independence after age 60 (second demographic dividend). Hence, the study draws that the tendency to be employed and accumulate assets for income, have formed a newly emerging economically independent group of elderly households in Kerala.

The study reconfirms the observation of James (2004) that 33 percent of elderly in Kerala belong to group termed the “Second Demographic Dividend”. The socio - economic factors found determining the elderly’s economic independence are inherited land, salary and wages, remittance by son, earning from livestock and absence of degenerative diseases. Also, as migration has hit Central Kerala more (Kerala Migration Report, 2018), the elderly in this region are more found to depend on their own resources to a greater extent through economic independence and this has been the route to bridge the old age care gap to an extent. The measurement of economically independent elderly using the National Transfer Account model of Life Cycle Deficit helps to understand the Life Cycle Deficit / Life Cycle Surplus from labour income, and address the deficit gap, by bringing in high informal care. The income measurement from assets has a slightly lesser impact than labour income levels. Though the Life Cycle Deficit / Life Cycle Surplus measurement of economic independence private and public transfers are more or less equally important, sometimes the former is greater in magnitude than the latter. In essence, the accumulation of assets and labour income led to higher informal care needs and the dynamic game within the elderly household between the elderly and the informal caregivers has contributed to the economic independence of the elderly, leading to the observation that the elderly populace is ‘an asset, not a burden’ in Kerala.

According to the World Population Ageing Report (2019), the elderly secure their financial well-being through accumulated savings, family transfers and increased aggregate capital accumulation. The researcher observed that 34 percent of the employed

elderly earn a monthly labour income and 7.1 percent of the sample elderly are not ready to reveal their labour income. In the young old category, 74.7 percent work for an income level less than Rs. 2000 whereas in the old-old category, it is 20 percent and in the oldest old group, it is 5.3 percent (Chapter 7). The elderly are struggling for a meagre income at the fag end of their life. This is the pathetic state of affairs in the most developed state of Kerala, indicative of a situation, that is expected to emerge in the rest of the parts of the country as they undergo demographic transition. Except one, all female elderly receive less than Rs 2000. Across place of residence, the elderly who earn labour income in the urban areas are relatively low, may be due to more employment opportunities in the rural areas.

Regarding public transfers, the researcher observed unnecessary lag in implementation and in receiving social pensions. Most of the rural elderly households respond that they are denied the old age pension due to the government job of their children, presence of multiple elderly in a house, earning a retirement pension, social category and political affiliation. Hence, they apply for social pensions like job specific pensions (coir), Tailor's union pensions, and so on, which are relatively easy to get. Above all, the pension amount is too meagre and insufficient to meet the daily life expenses, whereas their per-head income needs are higher than the formal pension amount. In particular, NGOs provide healthcare facilities to the oldest old (80+) categories, and these facilities are mainly seen in urban areas.

Children provide a significant share of financial remittance to meet the elderly's expenses, treated as the private transfers. The female elderly receive more financial support from caregivers. They often receive it from their daughters than from their sons, who show more emotional attachment. The rural people consider it their prime responsibility to respect the elderly and support them, which leads to provision of relatively more financial support in the rural areas as opposed to the urban areas. Private transfers are essential and the integral component of transfers to the elderly in size, as the public transfers are inadequate, especially in the context of the exponential growth rate of the elderly. Regarding income from assets, livestock is an important source of income for female elderly and some widows receive rent from the houses transferred by their spouse (De Jong, 2011). But the elderly aged above 80 are not found to receive any

income as rent and some male elderly are entrepreneurs who own and operate businesses and earn profit, especially those aged 70 and above. Thus, it is discovered that the Kerala elderly depend highly on public transfers followed by labour income, private transfers and finally income from assets.

Among the elderly labour income receivers, only 22.7 percent are getting surplus/economic independence. Irrespective of before and after 60 years of age, the elderly belong to the dependence group when labour income and income from assets are considered together. A comparison of surplus/ independence that they enjoyed before and after age 60 shows that most of them were economically independent before age 60. The economic dependence has increased after 60 years of age when viewed from the point of private remittance and public transfers, and hence more deficit after 60 years of age. In Kerala, as elsewhere, people after the age of 60 fall into the dissaving period of life. The female elderly are heavily dependent and financially vulnerable and the process of marginalization of the marginalized elderly women is intensified and is observed from the data, when compared with their male counterparts. However, across the regions, the elderly in Central Kerala reflect a relatively high economic independence followed by the elderly in Southern Kerala. The study has already observed that strategic bequest motives are relatively more prevalent in the Central and Southern regions, which made the elderly hold their assets in their own names. Also, this relatively high economic independence in the Central and Southern regions can partially be attributed to urbanization and related better employment prospects. On the other hand, altruism towards children's well-being bequest motive is more prominent among the elderly of Northern Kerala and the elderly incur expenditure and transfer assets for the wellbeing of their children, which resulted in their relatively low representation in the life cycle surplus group. The economic independence of an elderly person is determined by factors like age, healthy generation, remittance by sons, salary or wages received after the age of 60, earnings from livestock, and inherited land.

### **8.3 Implications of the Study**

This research is on a very pressing socio-economic issue of the elderly of Kerala, indicative of the national scenario as well in the coming years. The findings of this

research have direct and indirect implications for public policymakers, mainly for the Government of Kerala and the local authorities. On the one hand, due to demographic transition and the resultant below-replacement levels of fertility along with affluence and disintegration of the joint family system, the traditional system of informal care has faded. On the other hand, highly favourable sex ratios and life expectancy particularly for women along with high female education increases the demand for care. The gender dimension of dependency and vulnerability is even worse because except for a few women, a majority do not have their own income and assets other than a few with the most liquid asset gold. Women, the traditional informal caregivers are more left behind in the fag end of life, mostly as widows and facing multiple vulnerabilities because of migrated children and little or no human capital/ income/ assets for life. Lack of endowments and support mechanisms paves way not only for dependency and vulnerability but also for exploitation, violence and distress. Hence, the following suggestions are made.

Firstly, realising the effect of demographic transition, concerted effort to build an 'elderly care economy' from that of a 'child care economy' has to be a prime concern of the policymakers.

Secondly, 'Time Bank', a novel concept adopted from Switzerland, can be made applicable to address the matter of old aged in Kerala and at the national level. The concept seems well founded to be practiced. People can render their services to the needy free of payments in money, but can put their time spent in the 'time banks' and earn 'time credits', and when they cannot navigate in their old age, they can withdraw it using 'time bank cards', as someone else will be there in the time banks to render help to the elderly who are in need.

Thirdly, especially for non-receivers of public transfers, the government could expand the coverage of the beneficiaries, increase the financial support, and provide help at door steps to improve the elderly's financial and health status. This policy may boost the economy and increase the well-being and happiness of society.

Fourthly, for the private sector, the government could strongly encourage employers and employees, especially those working in the informal sector, to participate in the Private

Rented Sector (PRS). To increase the PRS participation rates, various incentives such as guaranteed returns, bonuses, and insurance benefits can be considered for better retirement conditions among the elderly in Kerala.

Finally, this research understands that time and financial resource transfers between elderly parents and children positively impact both parties regarding social security. Public policymakers should encourage a co-residence system between the elderly and future generations. Through the co-residence living arrangement, the elderly will receive more time and financial resource transfers from their children, and simultaneously, the elderly can also act as caregivers within the family and help married children look after their children and grandchildren. This is highly consequential for the betterment of the elderly as they feel that they are still valuable and essential in the family and can help their children. From the gerontology point of view, this will improve old age well-being in terms of physical, mental and financial health. This encouragement might indirectly help the government save or reduce significant spending on financial assistance and medical expenses for the elderly. To promote co-residence between elderly parents and adult children, the government could consider giving some rewards or subsidies on household expenses such as utility bills, and assessments, and reduce rent as an incentive for adult children to stay with their elderly parents. Also, like maternal/ paternal leave, the provision of a fixed number of days of 'parental leave' for caring for the parents can bridge the old age care gap. Furthermore, as the elderly in the co-residence system, feel more comfortable, they even will be willing to reduce the reserve amount for future consumption and reduce the incidence of accidental bequest unproductive unclaimed bequests. Moreover, this might reduce the conflict between family members due to accidental bequests.

The findings of this thesis have positive effects, on businesses. Firstly, this study discovered that more than 70.0 percent of the respondents claimed they were still healthy and productive. Private sectors could consider re-employing the retired hands, and this could not only improve the elderly households' financial status and savings, but will keep them engaged and boost self-esteem and morale of the elderly, besides stimulating the economy. Secondly, this study observed that older parents reserve and set apart about one-third of their wealth for future consumption, representing a vast untapped resources

and business opportunity for the elderly. This research suggests medical insurance, medical care, nursing, organic foods, estate planning, micro investment and travelling, counselling of the elderly and bereavement care as some potential products/ areas for an elderly person, where the elderly themselves can think of investing. Thirdly, this research found that the elderly distribute about two-thirds of their wealth to their family members. On average, about 7.0 percent of their wealth is allocated to their grandchildren as education funds, and hence there are prospects for insurance agencies/ companies for floating educational plans.

This research observed that elderly households in Kerala exhibit altruism towards children's well-being model, altruism model, strategic life-cycle model, and accidental model, but are far from the social norms and traditions model. This study believes that mixed bequest motives may be a new phenomenon/ scenario/ direction for researchers to continue monitoring the elderly households' bequest motives from time to time. Secondly, among the five sub-variables of informal old age care, namely informal financial old age care, informal informational old age care, informal emotional old age care, and informal esteem care, only esteem and emotional care have a negative relationship with their respective bequest motives. However, no substantial evidence exists to verify the relationship between formal and informal care. As a result, the relationship between formal and informal care can be positive or negative. Therefore, this study discerns the relationship between formal and informal care is a two-way interaction. Thirdly, researchers who are interested to focus on the aged population are encouraged to work on the bequest practices and bequest distribution patterns of the elderly based on new indicators to determine the older group's behaviour. This research provides valuable information in filling the research gap about the older population; particularly, the elderly's behaviour, perception / motives and bequest distribution patterns. Furthermore, the intergenerational financial resource transfers and their effect on bequest motives were conducted in Japan, China and the United States, but with minimum information on their applicability in the context of India.

#### **8.4 Limitations of the Study and Suggestions for Future Research**

One of the constraints on the research is the nature of cross-sectional data. The longitudinal data allows the researcher to record and gauge the relationship between

variables throughout several periods, ensuring a careful explanation of the research findings especially when large number of variables are involved. In particular, the health of the elderly and ageing may affect their reasons for leaving a legacy. When combined with a society that welcomes technology, the elderly's perception may change even more quickly than the researchers had anticipated. This study suggested that the researchers keep an eye on the elderly people's bequest intentions and occasional care. This study made the case that researchers might study older persons longitudinally in terms of their bequest intentions and distribution patterns without financial constraints. The paucity of literature, research and authentic data on elderly at the national and Kerala context was a hurdle. The literature that is available is skewed more towards descriptive and qualitative studies pertinent to Kerala's old age care and bequest objectives. Additionally, it was challenging that Kerala has never conducted a quantitative analysis on the distribution of senior citizens' bequests. Another limitation was in differentiating the mixed pattern of bequest motives and the nature of informal old age care. For the elderly, the bequest motives are clustered and show a mixed nature. Hence, applying cluster analysis will provide a clear-cut insight into the nature of clusters and which group receives more care. This limitation is also a suggestion for future research.

The next challenge was in quantifying old-age care from a purely qualitative variable. The upcoming researchers can give a quantitative measurement and interpretation of old age care, just like the Nobel laureates of 2021 who did on poverty measurement in Economics. In this way, the researcher suggests that the present study is the first milestone in this new attempt in the Indian context. The interrelationship between bequest motives and old age care can be further investigated in a macroeconomic perspective, incorporating potential areas like debt, investment, medical care, and elderly products that public policymakers, businesses, and researchers can research.

## **8.5 Conclusion**

Old age care is determined by factors like the informal social care, informal esteem care, informal emotional care, informal informational care and informal financial care by the informal caregivers and; the awareness of formal care and utilization. This research observes that formal as well as informal old age care of the elderly are the two sides of a

coin. The elderly's bequest motives have a significant association with their socio-economic status, viz, employment, type of income, ownership of moveable and immovable assets, saving, investment, region, marital status, incidence of non-communicable diseases and degenerative diseases, children staying with the elderly, contribution by the elderly to the household expenditure, remittances, headship of the household, education, type of family, number of family members, number and sex composition of children, grandchildren, and great-grandchildren. The control variables depicting the elderly's socio-economic status influence the relationship between bequest motive and informal old age care in Kerala. Except for strategic bequest motives, age and gender do not influence bequest motives. Age plays an important role in parents' resource transfers and, the study points out that different age groups had diverse perceptions of altruism towards children's well-being, selfish life cycles, and social norms and traditions. On account of lifespan uncertainty and health status, different household behaviours have various implications on the financial condition. The elderly with strategic motives are more likely to get financial support from their children. On the other hand, the elderly in both altruistic and social norms and traditional groups would reduce their financial services to their children when their age increases. However, at times, the attitude of the elderly fails to match their actions due to the fear of getting care from children.

A structural transition among the elderly populace from an altruistic nature to that of a strategic nature is underway. Among the five life cycle bequest motives, the present study identified 'altruism towards children's well-being' followed by 'strategic bequest' as more prevalent among the elderly populace of Kerala. The elderly's socio-economic status has a significant influence on their bequest motives. Basically, the elderly are well-wishers of their children, but uncertainty about life, high life expectancy, huge health expenditure, structural transformations and the state of affairs of 'elderly taking care of their elderly parents' demand high old age care and, hence a change in the bequest motive of the elderly from altruistic to strategic is observed in Kerala. Mostly, the respondent elderly received altruistic bequeath contribution from their previous generations. However, among the variety of assets bequeathed, a strategic nature is revealed in the case of land when compared with the transfers made as house and gold by their forefathers. Interestingly, the bequeath transfers by the respondent elderly to his/ her

family members reflect a more strategic nature. The gender dimension of bequeaths by type of assets transferred have serious implications. Except a few, most women are forced to leave their family and move away from their native place with the commencement of marriage, often glorified with gifting of highly liquid assets including gold. The respondent elderly, both males and females, received more immovable assets than moveable assets from their previous generations. In contrast to this, the respondent elderly transferred liquid assets mainly in the form of gold to their daughters, rather than immovable assets. Also, the gold sovereigns bequeathed to their daughters were higher than what they received from their forefathers and gold became the main asset transferred to the daughters. This practice of giving liquid assets to women in essence, transforms as the greatest wedge of women from immovable assets and basic endowments; and forms the base of lifelong deprivation and gender inequality. In essence, from an intergenerational perspective, sons receive more immovable assets as part of the unwritten tradition and norms. The elderly receive income and returns from assets, and this forms the base for economic independence after 60 years of age. This accumulation christened as the 'second demographic dividend' forms the base for demand/ receiving informal old age care in return. One-third of the sample elderly is found economically independent and it is determined by factors like age, healthy generation, remittance by sons, salary or wages received after the age of 60, earnings from the livestock, and the inherited land.

To conclude, an inextricable relationship exists between the bequest motive of the elderly and the informal old age care received in return. Thus, the researcher establishes the triangular relationship between the old age population (old age dependency as a proxy variable), informal old age care (familial care as a proxy variable) and, the bequest motive (socio-economic status as a proxy variable).

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# Appendix

# Appendix-I



## Appendix-II

### Socio- Economic Condition of an Elderly Household across Age, Gender, and Place of Residence in Kerala

Age	Gender		Total	Place of Residence		Total
	Male	Female		Rural	Urban	
60+	98 (46.2)	114 (53.8)	212 (100)	169 (79.7)	43 (20.3)	212 (100)
70+	54 (44.6)	67 (55.4)	121 (100)	78 (64.5)	43 (35.5)	121 (100)
80+	22 (44)	28 (56)	50(100)	34 (68)	16 (32)	50(100)
<b>Total</b>	174 (45.4)	209 (54.6)	383 (100)	281 (73.4)	102 (26.6)	383 (100)

Characteristics	Age			Total	Gender		Total	Place of residence		Total
	60+	70+	80+		Male	Female		Rural	Urban	
Ernakulam	75 (54)	47(33.8)	17(12.2)	139 (100)	63(45.3)	76(54.7)	139 (100)	103(74.1)	36(25.9)	139 (100)
Kozhikode	49(44.1)	45(40.5)	17(15.3)	111(100)	50(45)	61(55)	111(100)	85(76.6)	26(23.4)	111(100)
Thiruvananthapuram	88(66.2)	29(21.8)	16(12)	133(100)	61(45.9)	72(54.1)	133(100)	93(69.9)	40(30.1)	133(100)
Total	212(55.4)	121(31.6)	50(13.1)	383(100)	174(45.4)	209(54.6)	383(100)	281(73.4)	102(26.6)	383(100)
Religion	60+	70+	80+	Total	Male	Female	Total	Rural	Urban	Total
Hindu	102(54)	59(31.2)	28(14.8)	189(100)	86(45.5)	103(54.5)	189(100)	136(72)	53(28)	189(100)

Muslim	44(51.2)	31(36)	11(12.8)	86(100)	36(41.9)	50(58.1)	86(100)	71(82.6)	15(17.4)	86(100)
Christian	66(61.1)	31(28.7)	11(10.2)	108(100)	52(48.1)	56(51.9)	108(100)	74(68.5)	34(31.5)	108(100)
Total	212(55.4)	121(31.6)	50(13.1)	383(100)	174(45.4)	209(54.6)	383(100)	281(73.4)	102(26.6)	383(100)
<b>Social group</b>	<b>60+</b>	<b>70+</b>	<b>80+</b>	<b>Total</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>Rural</b>	<b>Urban</b>	<b>Total</b>
Scheduled caste	32(62.7)	14(27.5)	5(9.8)	51(100)	17(33.3)	34(66.7)	51(100)	43(84.3)	8(15.7)	51(100)
Scheduled tribe	2(40)	2(40)	1(20)	5(100)	0	5(100)	5(100)	2(40)	3(60)	5(100)
OBC	67(50.4)	46(34.6)	20(15)	133(100)	63(47.4)	70(52.6)	133(100)	98(73.7)	35(26.3)	133(100)
General	100(57.5)	52(29.9)	22(12.6)	174(100)	88(50.6)	86(49.4)	174(100)	125(71.8)	49(28.2)	174(100)
EWS	7(53.8)	4(30.8)	2(15.4)	13(100)	4(30.8)	9(69.2)	13(100)	6(46.2)	7(53.8)	13(100)
OEC	4(57.1)	3(42.9)	0	7(100)	2(28.6)	5(71.4)	7(100)	7(100)	0	7(100)
Total	212(55.4)	121(31.6)	50(13.1)	383(100)	174(45.4)	209(54.6)	383(100)	281(73.4)	102(26.6)	383(100)
<b>Family type</b>	<b>60+</b>	<b>70+</b>	<b>80+</b>	<b>Total</b>	<b>Male</b>	<b>Femal e</b>	<b>Total</b>	<b>Rural</b>	<b>Urban</b>	<b>Total</b>
Single member family	11 (44)	12(48)	2(8)	25 (100)	4(16)	21(84)	25 (100)	12(48)	13(52)	25 (100)
Nuclear pair household	33 (46.5)	29(40.8 )	9(12.7 )	71 (100)	47(66.2 )	24 (33.8)	71 (100)	46(64.8 )	25(35.2 )	71 (100)
Extended family	13 (36.1)	19(52.8 )	4(11.1 )	36 (100)	13(36.1 )	23 (63.9)	36 (100)	25(69.4 )	11(30.6 )	36 (100)
Nuclear family	87 (58.8)	39(26.4 )	22 (14.9)	148 (100)	63(42.6 )	85 (57.4)	148 (100)	116(78.4)	32(21.6 )	148 (100)

Joint family	29 (82.9)	4(11.4)	2 (5.7)	35 (100)	21(60)	14 (40)	35 (100)	30(85.7 )	5(14.3)	35(100 )
broken nuclear	39 (57.4)	18(26.5 )	11(16. 2)	68 (100)	26(38.2 )	42 (61.8)	68 (100)	52(76.5 )	16(23.5 )	68(100 )
<b>Total</b>	212(55.4)	121(31.6)	50(13.1)	383(100)	174(45.4)	209(54.6)	383(100)	281(73.4)	102(26.6)	383(100)
<b>Migrated elderly</b>	<b>60+</b>	<b>70+</b>	<b>80+</b>	<b>Total</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>Rural</b>	<b>Urban</b>	<b>Total</b>
Yes	27 (51.9)	20(38.5)	5(9.6)	52(100)	19(36.5)	33(63.5)	52(100)	37(71.2)	15(28.8)	52(100)
No	185(55.9)	101(30.5)	45(13.6)	331(100)	155(46.8)	176(53.2)	331(100)	244(73.7)	87(26.3)	331(100)
Total	212(55.4)	121(31.6)	50(13.1)	383 (100)	174 (45.4)	209 (54.6)	383 (100)	281 (73.4)	102 (26.6)	383 (100)
<b>Elderly as Head of the Household</b>	<b>60+</b>	<b>70+</b>	<b>80+</b>	<b>Total</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>Rural</b>	<b>Urban</b>	<b>Total</b>
Yes Partially	100(64.1)	39(25)	17(10.9)	156(100)	69(44.2)	87(55.8)	156(100)	132(84.6)	24(15.4)	156(100)
Yes Fully	74(54.8)	47(34.8)	14(10.4)	135(100)	81(60)	54(40)	135(100)	85(63)	50(37)	135(100)
No	38(41.3)	35(38)	19(20.7)	92(100)	24(26.1)	68(73.9)	92(100)	64(69.6)	28(30.4)	92(100)
Total	212(55.4)	121(31.6)	50(13.1)	383 (100)	174 (45.4)	209 (54.6)	383 (100)	281 (73.4)	102 (26.6)	383 (100)
<b>Present marital status</b>	<b>60+</b>	<b>70+</b>	<b>80+</b>	<b>Total</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>Rural</b>	<b>Urban</b>	<b>Total</b>
single	1(50)	1(50)	0	2(100)	0	2(100)	2(100)	2(100)	0	2(100)
Married	114(58.2)	60(30.6)	22(11.2)	196(100)	141(71.9)	55(28.1)	196(100)	143(73)	53(27)	196(100)
Widow/widower	90(50.8)	59(33.4)	28(15.8)	177(100)	32(18.1)	145(81.9)	177(100)	129(72.9)	48(27.1)	177(100)
Divorced/Separate d	7(87.5)	1(12.5)	0	8(100)	1(12.5)	7(87.5)	8(100)	7(87.5)	1(12.5)	8(100)
Total	212(55.4)	121(31.6)	50(13.1)	383 (100)	174 (45.4)	209 (54.6)	383 (100)	281 (73.4)	102 (26.6)	383 (100)

<b>Level of Education</b>	<b>60+</b>	<b>70+</b>	<b>80+</b>	<b>Total</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>Rural</b>	<b>Urban</b>	<b>Total</b>
Illiterate	12(31.6)	16(42.1)	10(26.3)	38(100)	9(23.7)	29(76.3)	38(100)	31(81.6)	7(18.4)	38(100)
Literate without school education	0	0	1(100)	1(100)	0	1(100)	1(100)	0	1(100)	1(100)
Below Primary	27(56.3)	15(31.3)	6(12.5)	48(100)	15(31.3)	33(68.8)	48(100)	41(85.4)	7(14.6)	48(100)
Primary	41(51.3)	24(30)	15(18.8)	80(100)	31(38.8)	49(61.3)	80(100)	55(68.8)	25(31.3)	80(100)
Middle	55(57.3)	35(36.5)	6(6.3)	96(100)	49(51)	47(49)	96(100)	74(77.1)	22(22.9)	96(100)
Secondary	54(72)	13(17.3)	8(10.7)	75(100)	38(50.7)	37(49.3)	75(100)	63(84)	12(16)	75(100)
Higher Secondary	10(62.5)	5(31.3)	1(6.3)	16(100)	11(68.8)	5(31.3)	16(100)	9(56.3)	7(43.8)	16(100)
Graduate	5(45.5)	6(54.5)	0	11(100)	8(72.7)	3(27.3)	11(100)	3(27.3)	8(72.7)	11(100)
Post graduate	1(100)	0	0	1(100)	1(100)	0	1(100)	0	1(100)	1(100)
Professional Degree	3(30)	4(40)	3(30)	10(100)	8(80)	2(20)	10(100)	2(20)	8(80)	10(100)
Professional PG	1(33.3)	2(66.7)	0	3(100)	2(66.7)	1(33.3)	3(100)	1(33.3)	2(66.7)	3(100)
Diploma.	3(75)	1(25)	0	4(100)	2(50)	2(50)	4(100)	2(50)	2(50)	4(100)
<b>Total</b>	<b>212(55.4)</b>	<b>121(31.6)</b>	<b>50(13.1)</b>	<b>383 (100)</b>	<b>174 (45.4)</b>	<b>209 (54.6)</b>	<b>383 (100)</b>	<b>281 (73.4)</b>	<b>102 (26.6)</b>	<b>383 (100)</b>

## Appendix-III

### ELDERLY HOUSEHOLD SCHEDULE

Dear Elderly Respondent,

Myself, Twinkle Wilson. C, is a full time Research Scholar in the Department of Economics, University of Calicut, Dr. John Matthai Centre, Aranattukara, Thrissur. I am doing research on the topic “Analysis of Elderly Bequests’ and Care in Kerala”. Hence, I am approaching you for the purpose of collection of data related to the elderly household. The interview will usually take about 30 minutes to complete. The information provided will only be used for research work. Your name or other details provided will not appear in any part of the study record or any other report. Participation in the survey is voluntary and information provided will be valuable and all personal details will be kept confidential during the research work and after. You have the right to say ‘yes’ or ‘no’ to participate and also to answer or refuse any questions. We would be very happy to have your consent to participate in this interview and therefore kindly solicit your co-operation.

State:		Ward no. :		*Current place of residence (R-1, U-2):	
*District:		City/ town /village		*Native place of residence (R-1, U-2):	
Block no.:		House no. :		Survey date	

### Section 1: Respondent’s Background

Name of the Elderly respondent & House name:

Contact number (10 digit) :

A <sub>1</sub> . Age .....	A <sub>2</sub> Gender <input type="checkbox"/> 1. Male <input type="checkbox"/> 2. Female <input type="checkbox"/> 3. Trans Gender	A <sub>3</sub> Religion: <input type="checkbox"/> 1. Hindu <input type="checkbox"/> 2. Muslim <input type="checkbox"/> 3. Christian <input type="checkbox"/> 5. No religion <input type="checkbox"/> 4. Others (specify) .....	A <sub>4</sub> Social group to which you belong to <input type="checkbox"/> 1. SC <input type="checkbox"/> 2. ST <input type="checkbox"/> 3. Other Backward Caste <input type="checkbox"/> 4. General <input type="checkbox"/> 5. EWS 6. OEC
A <sub>5</sub> . Do you have a ration card?	A <sub>5.1</sub> . If yes, what kind it is?	A <sub>5.2</sub> what is the colour of the ration card?	A <sub>6</sub> . How many members are aged 60 and above in your household?

Yes / no	<input type="checkbox"/> APL card <input type="checkbox"/> BPL card <input type="checkbox"/> Antyodaya/ similar card	1.White ,2. Yellow ,3.Blue ,4.Red	.....
A <sub>7</sub> . Are you disabled by birth? Yes/no	A <sub>7.1</sub> Specify the disability .....	A <sub>8</sub> Are you head of the household? 1-Yes Partially, 2-Yes Fully, 0-No	A <sub>9</sub> Are you migrated elderly? Yes / no
A <sub>9.1</sub> . If yes, what kind of migration? 1Outside India, 2Inter- State, 3Inter District, 4From Rural to Urban, 5From Urban To Rural, 6From Rural To Semi Urban Area		A <sub>9.2</sub> . What was the main reason for your migration from the native place? 01Health related, 02 Better living conditions, 03economic, 04 other family related, 05 displacement06 insecurity, 07 marriage, 08 retired/transferred,09 for getting care, 10 religious priorities,11 for Employment, 12. Conflict, 13. Death of spouse, 14. Relatives or children nearby, 96 other .....	

A <sub>10</sub> . Present marital status :		
<input type="checkbox"/> 1. Single <input type="checkbox"/> 2. Married <input type="checkbox"/> 3. Widow/widower <input type="checkbox"/> 4.Divorced/Separated <input type="checkbox"/> 5. Unwed mother <input type="checkbox"/> 6. Livingtogether		
A <sub>11</sub> Education level of the elderly respondent <input type="checkbox"/> 0. Illiterate <input type="checkbox"/> 1. Below primary <input type="checkbox"/> 2. Primary <input type="checkbox"/> 3. Middle <input type="checkbox"/> 4. Secondary 5. Higher secondary <input type="checkbox"/> 6. Graduate <input type="checkbox"/> 7. Post graduate (PG) <input type="checkbox"/> 8. Professional Degree, 9. Literate without school education, 10. Professional PG, 11. Diploma.	A <sub>11.1</sub> Number of years of education completed? .....	A <sub>12</sub> Have you ever worked in your life time? : Yes / No
Employed		Unemployed
Before 60 Years Old	After 60 Years Old	
<input type="checkbox"/> 1. Govt. employee <input type="checkbox"/> 2. Private sector employee <input type="checkbox"/> 3. Employer paid family worker  <input type="checkbox"/> 5. Self-employed <input type="checkbox"/> 6. Daily wage earner <input type="checkbox"/> 7. Retired <input type="checkbox"/> 8 voluntarily retired <input type="checkbox"/> 9. Others (specify).....	1. Employed full time <input type="checkbox"/> 2. Employed part time <input type="checkbox"/> 3. Retired & employed fulltime  <input type="checkbox"/> 4. Retired & employed part time <input type="checkbox"/> 5. retired& not employed <input type="checkbox"/> 6. Employer  <input type="checkbox"/> 7. Own account worker <input type="checkbox"/> 8. paid family worker <input type="checkbox"/> 9. Daily wage earner <input type="checkbox"/> 10. Others (specify).....	1. Housewife/ homemaker, 2. Could not find a job 3. Do voluntary work 4. Health problems 5. Disabled 6. Have to take care of family member (elderly) 7. Do not have the economic need 8. Parents / spouse did not let me 9. Religious reasons 10. For getting care 11. Child

		care _____ _____
<p>A<sub>13</sub> Does your family live with you at present location?</p> <p>1. No, I live alone, 2. No, I live alone due to migration, 3. No, I am a migrated (replaced) elderly household, 4.No, I live alone and children close by, 5. Yes, with my spouse, 6. Yes, with my spouse due to migration 7. Yes, with spouse and children, 8. Yes, with spouse only and children close by, 9. Yes, with all family members 10. Yes with my children only, 11. Yes, with my children and grandchildren, 12. Yes with relatives, 13. Yes with some non-relatives( friends) 14. yes with my daughters and grandchildren 15, yes with my children only</p>	<p>A<sub>14</sub> Counting you, how many family members lives in your household? .....</p> <p>(Write the corresponding number in boxes)</p> <p>1. Parents <input type="checkbox"/></p> <p>2. Spouse <input type="checkbox"/></p> <p>3. Children- son <input type="checkbox"/></p> <p>4. Children- daughters' <input type="checkbox"/></p> <p>5. daughter/ son -In laws <input type="checkbox"/></p> <p>6. Grandchildren <input type="checkbox"/></p>	<p>A<sub>14.1</sub> total number of non-family members live with you? .....</p> <p>7. Relative's <input type="checkbox"/></p> <p>8. Friend's <input type="checkbox"/></p> <p>9. Servant's <input type="checkbox"/></p> <p>10. Home nurses <input type="checkbox"/></p>
<p>A<sub>15</sub> Approximately, what is the total monthly income of your family (including yourself)?</p> <p>Rs.....</p>	<p>A<sub>16</sub>.In what kind of ownership is the house in which you are living?</p> <p><input type="checkbox"/> 1. Rented <input type="checkbox"/> 2. By self <input type="checkbox"/> 3. Spouse <input type="checkbox"/> 4. Children 5. Grandchildren <input type="checkbox"/> 6. Employer, 7. Friends and relatives <input type="checkbox"/> 8. govt., 9. NGO, 10. Religious communities, 11. Daughter/Son -in laws, 12. Inherited</p>	

**A<sub>17</sub>. Household Facilities**

<p>1. How would you define this accommodation?</p> <p>Pucca <input type="checkbox"/> 2. Semi- pucca <input type="checkbox"/> 3. Kutchra <input type="checkbox"/> 4. Jhuggi-Jhopri <input type="checkbox"/> 5. Others (specify).....</p>	<p>2. Main source of cooking fuel?</p> <p><input type="checkbox"/> LPG/GAS <input type="checkbox"/> Electricity</p> <p><input type="checkbox"/> Kerosene/ Diesel <input type="checkbox"/> Wood/ Coal/ Cow Dung <input type="checkbox"/> Bio- Gas/ Bio- Waste <input type="checkbox"/> No Food Cooked At House <input type="checkbox"/> Others</p>	<p>3. Source of drinking water?</p> <p><input type="checkbox"/> Tapped water <input type="checkbox"/> public tap <input type="checkbox"/> Tapped water inside residential premise <input type="checkbox"/> borehole <input type="checkbox"/> well</p>
<p>4. Source of lighting within the household?</p> <p><input type="checkbox"/> K.S.E.B <input type="checkbox"/> Private connection</p> <p><input type="checkbox"/> Kerosene Lamp</p> <p><input type="checkbox"/> Candle Light</p> <p><input type="checkbox"/> Street Light/ Public Utilities</p>	<p>5. Source of toilet facility?</p> <p><input type="checkbox"/> Within the house <input type="checkbox"/> outside the house <input type="checkbox"/> far from the house <input type="checkbox"/> attached to own bedroom <input type="checkbox"/> facilities next to the bed <input type="checkbox"/> elderly diaper</p>	

<input type="checkbox"/> Other Sources	
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A<sub>18</sub>. Tick the Amenities that you have in your household and put the number in the boxes.

<input type="checkbox"/> Online Account	<input type="checkbox"/> Gas Stove or Connection	<input type="checkbox"/> Smart Phone	<input type="checkbox"/> European Toilet	<input type="checkbox"/> Two-Wheeler
<input type="checkbox"/> Internet	<input type="checkbox"/> AC Cooler	<input type="checkbox"/> Lcd/Led/Television	<input type="checkbox"/> Own Bedroom	<input type="checkbox"/> Four Wheeler
<input type="checkbox"/> ATM card	<input type="checkbox"/> Induction Stove	<input type="checkbox"/> Own mobile phone	<input type="checkbox"/> Own Toilet	<input type="checkbox"/> Gym facilities
<input type="checkbox"/> Own bank account	<input type="checkbox"/> Washing Machine	<input type="checkbox"/> Normal Phone/Land Phone	<input type="checkbox"/> Own prayer room	<input type="checkbox"/> Bi - Cycle
<input type="checkbox"/> post office saving account	<input type="checkbox"/> Refrigerator	<input type="checkbox"/> Computer	<input type="checkbox"/> Own recreation room	<input type="checkbox"/> Cattles
	<input type="checkbox"/> Grinder/ Mixer	<input type="checkbox"/> Radio/ Transistor		
	<input type="checkbox"/> Heater	<input type="checkbox"/> Sewing Machine		

### Section 2: Elderly Bequeath and Intergenerational Ties

#### Information related to the family members of the elderly household

Reside/ migrate if Migrated specify the place (13)										
Monthly Income (12)										
Occupation (11)										
Educational Status (10)										
Marital Status (9)										
Alive/ Dead (8)										
Gender (7)										
Age (6)										
Total Great-Grand Children (5)										
Total Grant Children (4)										
Total Children (3)										
Relation With Elderly Respondent (2)										
Name (1)										
No	1	2	3	4	5	6	7	8	9	10

<p>B1. Family type?</p> <p>1. Single member family, 2. Nuclear pair household, 3. Extended family, 4. Nuclear family, 5. Joint family, 6. broken nuclear</p>	<p>B1.1 Is there any newly married couple with you?</p> <p>Yes/ No</p> <p>B1.1.1 If yes, how long have they been in your household?</p> <p>.....</p>	<p>B1.2 How many years passed since last marriage happened?</p> <p>.....</p>
<p>B2. At present, how many generations do your family consists off? (Tick the number more than two if possible)</p> <p>1 grant parents, 2 parents, 3 children, 4 grant children, 5 grant – grant children</p>	<p>B2.1 Which are the generations with you now? (Tick the number more than two if possible)</p> <p>1 grant parents, 2 parents, 3 children, 4 grant children, 5 grant – grant children</p>	<p>B2.2 If you are not living with the generation, then why? (Specify the reason)-----</p> <p>-----</p> <p>-----</p> <p>-----</p> <p>-----</p> <p>-----</p> <p>-----</p>

B3. How agreeable are you with the following statements? Please CIRCLE the most appropriate number.

The meaning of the scale: 1 2 3 4 5 strongly disagree, Disagree, neither disagree nor agree, Agree, Strongly agree, respectively.

Response of different kinds of persons	Elderly respondent					Children/Others				
	1	2	3	4	5	1	2	3	4	5
1. Adult children should provide financial assistance to older parents										
2. Adult children should provide financial assistance to their older parents only if they have good relationship										
3. Adult children should provide financial assistance to their older parents only when they have insufficient income for their living										
4. Adult children should provide financial assistance only when they can afford it										
5. Older parents should will their properties to their children										
6. Older parents should provide financial assistance to help their children become economically independent										
7. Older parents should provide financial assistance whenever they can afford it										
8. I want to leave as large a bequest as possible to my children										
9. I plan to leave something										
10. I want to leave more or all bequests to my children who are with lower income.										
11. I plan to leave a bequest regardless whether my children take care of me										
12. I plan to leave a bequest regardless of whether my children carry on the family business										
13. I want to leave more or all bequests to my children regardless whether my children take care of me										
14. I want to leave more or all bequests to my children regardless of whether they will carry on the family business										
15. I want to leave my bequest equally to my children										
16. I provided good health to my children without expecting any returns from them										
17. All of them take care of the family business in the old age										

18. Other than a special effort ,I plan to leave behind whatever assets happen to be left over	1	2	3	4	5	1	2	3	4	5
19. It is unnecessary to leave a bequest under any circumstances	1	2	3	4	5	1	2	3	4	5
20. It unnecessary to take care of both the health care and living conditions	1	2	3	4	5	1	2	3	4	5
21. I want to leave more or all bequests to my youngest son regardless whether he takes care of me	1	2	3	4	5	1	2	3	4	5
22. I want to leave more or all bequests to my sons	1	2	3	4	5	1	2	3	4	5
23. I want to leave more or all bequests to my daughters	1	2	3	4	5	1	2	3	4	5
24. Adult children should provide health assistance to older parents	1	2	3	4	5	1	2	3	4	5
25. I was committed to provide better education and skills for the eldest son	1	2	3	4	5	1	2	3	4	5
26. I have given education and skills to adult children as a social responsibility.	1	2	3	4	5	1	2	3	4	5
27. I provide each children employment as a responsibility	1	2	3	4	5	1	2	3	4	5
28. It is unnecessary to contribute to my children’s monthly expenses	1	2	3	4	5	1	2	3	4	5
29 It unnecessary to contribute to my children’s monthly expenses even I can afford it	1	2	3	4	5	1	2	3	4	5
30. It unnecessary to contribute to my children’s monthly expenses even if they have insufficient income for their living	1	2	3	4	5	1	2	3	4	5
31 I gave good health and living conditions expecting the same in the old age.	1	2	3	4	5	1	2	3	4	5
32. I gave enough education and skills expecting care in the old age.	1	2	3	4	5	1	2	3	4	5

**Health**

B<sub>4</sub>. Do you face any disabilities related to ageing? Yes / No

B<sub>4.1</sub> If yes, what kind of disability?

1.Type Of Disability	2.Intensity Of Disability	3.Kind Of Disability Aid	1.Type Of Disability	2. Intensity	3.Kind Of Disability Aid

				Of Disability	
<input type="checkbox"/> Hearing		<input type="checkbox"/> hearing aid	<input type="checkbox"/> cognition		<input type="checkbox"/> walking stick, <input type="checkbox"/> wheel chairs
<input type="checkbox"/> vision		<input type="checkbox"/> Spectacles	<input type="checkbox"/> memories		<input type="checkbox"/> wheel chairs
<input type="checkbox"/> mobility,		<input type="checkbox"/> walking stick, <input type="checkbox"/> wheel chairs	<input type="checkbox"/> chewing		<input type="checkbox"/> Dentures

Code for 2as; 25% disability as 1, 50% as 2, 75% as 3 and 100% as 4

B<sub>5</sub>. Habits that influence health condition of the elderly household?

Habits	Frequency of use	Intensity of addiction	Expenditure/m onth	Health problem	Health expenditure
Smoking					
Alcohol					
Narcotics					
Betel leaves chewing					
Sneezing powder					

25% Intensity of Addiction as 1, 50% as 2, 75% as 3 and 100% as 4

B<sub>5.1</sub> Habits that influence health condition of the elderly household?

B<sub>6</sub> Do, you have the practice of keeping health records? Y/N

B<sub>6.1</sub> Do you took the vaccination of Covid 19? Yes / No

B<sub>6.2</sub> if yes, details of it? Free (.....)/Paid, Rs.....

B<sub>7</sub>. Do you have any chronic health problem? Yes / No

B<sub>7.1</sub>. If yes, please fill more than two if possible

(1) NCD - Code 1 : 1. High Blood Pressure, 2. Cardiovascular disease, 3. Cancer,4. Arthritis, 5. Thyroid, 6. Diabetics7 Urinary problem., 8. Chronic respiratory illnesses, 9. Chronic illnesses of the digestive tract, 10. Kidney problems, 11. High cholesterol 12. Chronic skin problems 13. Cataract, 14. Malignant tumours 16, Anaemia and other haematological diseases, 17. Depression, 18. Anxiety.	
(1) CD -1. COVID-19, 2. NIPHA VIRUS, 3. DENGUE fever, 4. Leptospirosis, 5. Hepatitis, 6. Malaria, 7. Chicken Pox, 8. Small pox, 9. Water borne diseases, 10. Tuberculosis, 11. Urinary tract infections, 12. Lower respiratory tract infections, 13. Skin and soft tissue infections, 14. Intra-abdominal infections, 15. Infective endocarditis, 16. Bacterial meningitis, 17. herpes zoster,	
(2): 1. Last one month, 2. Last 6 month, 3. One year, 4. More than a year	(4) Ayurveda, allopathic, homeopathy, self-treatment, integrated medicine
(5) 1. Government hospital 2. Private hospital 3. Traditional healer 4. Others, specify _____	

B<sub>8</sub>. Did you suffer from any ailment / injury / accident during last one month? Y/N

B<sub>8.1</sub> what is the total expenses incurred for it? Rs.....

B<sub>8.2</sub>. who provide the physical support.....and financial care and support..... to you at the time of accident/injury/ailment?

B<sub>9</sub>Do you have any kind of insurance? Y/N

Particulars	Health insurance	Non health Insurance
Name (1)		
Yes/No(2)		
Amount/ month(3)		
Maturity Period(4)		
Private/ public? (5)		
Paid by who?(6)		
Who started it for you?(7)		
B <sub>10</sub> How do you perceive your overall health? 1. Very poor 2. Poor 3. Fairly poor 4. Neither poor nor good 5. Fairly good 6. Good 7. Very good	B <sub>11</sub> Do you have any degenerative diseases? Yes / no	B <sub>11.1</sub> If yes, name the degenerative diseases (possible click more than two answers) cancer, diabetes, Parkinson's, rheumatoid arthritis, Alzheimer's, osteoporosis, disc diseases, heart diseases, degenerative disabilities, others.....
B <sub>11.2</sub> Do you have any knowledge about in which generation the particular diseases is transferred to you? -----	B <sub>11.3</sub> .If B <sub>11</sub> no, is it because of your past generation is healthy? Yes/ No	B <sub>11.4</sub> .If yes, in which past generation responsible for it? 1-Grand -Grandparents, 2- Grandparents, 3- Parents

**B<sub>12</sub>. Education & Employment**

Educational qualification	Hand over from past generation Yes/No	From which generation 1,2,3	Type Employment	Hand over from past generation Yes/No	From which generation 1, 2, 3
Formal			Paid		
Informal			Unpaid		

B<sub>13</sub>. Do/did you work by choice or by compulsion?

1. By Choice 2. Economic Need 3. Other Compulsion

B<sub>14</sub> Do/did you feel any physical or mental strain due to this work? Yes /No /May be

B<sub>15</sub> What is the main reason that you would like to work at present?

1. Need Money 2. Desire to Be Active 3. Want To Feel Useful 4. To Supplement Family Income 5. Family Pressure. 6. Others \_\_\_\_\_

B<sub>15.1</sub> specify it

Details of work done	Paid	Unpaid	Both
Hours of Work			
Purpose			
No. Times/ Day			
No. Days / Week			
Wages Or Benefits			

B<sub>15.2</sub>. Do you enjoy leisure time, when you are getting old? Yes/No

B<sub>15.3</sub>. How many hours spend as leisure time in a day? .....

B<sub>15.4</sub>. what are the leisure time activities? .....

**Consumption income**

B<sub>16</sub>. What is the main source of your monthly income? (Choose more than one, if possible)

Type of income	In Old Age ( Age Below 60) Monthly Income	Before Getting Old ( Age 60 And Above) Monthly Income
Social Pension		
Pension		
Salary And Allowances		
Remittance By Son		
Remittance By Daughters		
Remittance By Grand children		

Interest On Saving/ Investment		
Profit From Firm/ Business		
Rent On Land/ Flat/ House		
Earing from livestock		
Contribution from relatives and friends		
Contributions from NGO's		
Contributions from other institutional caregivers		
Total receipts that you received		

B<sub>17</sub>. Which kind of income is more utilized for your daily needs satisfaction?

Labour income, public transfers, private transfers, income from assets

B<sub>18</sub>. Is the income that you earn sufficient to fulfil your basic needs? Yes /Partially /No

B<sub>19</sub>. If you have Savings, please give us the details

Particulars	Saving type 1	Saving type 2	Saving type 3
Name (1)			
Yes/No(2)			
Amount (3)			
Maturity Period (4)			
Credit agency (5)			
Scheme of crediting (6)			
Nature of interest (7)			
Rate of interest (8)			
Purpose (9)			
Did you receive any additional payments due to old age? (11) Y/N			
how much is the additional amount? (12)			
Final amount received (13)			

Code 5- Chits/ kurries/post office saving bank/ cooperative banks/commercial banks/ others

Code9: Old age unmet needs, medical expenditure, daily expenditure (household), future purchase, achieve my financial goal, monthly budget, Pay the credit card bills, I spend more money than I had, I have to cut my living expenses, I had financial troubles

B<sub>19.1</sub>. Are you plan to give your savings after death? Y/N

B<sub>19.2</sub>. Did you appoint a nominee of your savings? Y/N

B<sub>19.3</sub>. Who is the nominated person? .....

B<sub>20</sub>. If you have Investment, please give us the details

Particulars	Investment -1	Investment -2	Investment -3
Name (1)			
Yes/No(2)			
Amount(3)			
Maturity Period(4)			
Credit agency (5)			
Scheme of crediting (6)			
Nature of interest(7)			
Rate of interest(8)			
Purpose(9)			
Did you receive any additional payments due to old age?(11) Y/N			
how much is the additional amount?(12)			
Final amount received (13)			

Code 5-Bank account, stock market, mutual fund, bond funds, properties, Chits

Code 9-1. choose to accumulate and secure safe to use it for future unexpected expenditure, 2. investing, safety is more important than returns,3.I have a good financial knowledge of investing,4.it is too difficult to understand5.my children will take care of me when I have sufficient income

B<sub>21</sub>. If you have. Debt, please give us the details

Particulars	Debt -1	Debt -2	Debt -3
Name (1)			
Yes/No(2)			
Amount(3)			
Maturity Period(4)			
Credit agency (5)			
Scheme of lending (6)			
Nature of interest(7)			
Rate of interest (8)			
Purpose (9)			
Types of security (10)			
Did you face any difficulties due to old age? (11) Y/N			
pay/receive any additional payments due to old age? (12) Y/N			
how much is the additional amount?(13)			

Code-5Money lenders, kudumbhashree, schemes of government, private individuals, and co-operate society, senior government facilities, bank, family members, relatives, friends and neighbours

Code – 6(types) institutionalised secured debt, non-institutionalised secured debt, non-institutionalised unsecured debt, inherited

Code -9 medical/educational/consumption/marriage/purchase land and buildings/ productive purpose/legal expenses

B22. Consumption expenditure per month

Consumption Variables	Quantity	Value (in Rs.)	Consumption Variables	Quantity	Value (in Rs.)
Food			Phone bills		
Hospital And Medicine			Care Taker		
Travel			Tax		
Gift& Inter vows			Payments for the Servant		
Donations			loan Instalment		
Household Expenditure Contribution			Water/ Electricity Bills		
Foot Wear& Cloth			Entertainment		
Purchasing Aid			Insurance payment		
Children / grant children education			Buy durables		
Total Expenditure / month (in Rs.)					
Additional payment needed by the elderly (in Rs.)					

B22.1 If you are economically depended, who pays your monthly consumption expenditure?

.....

B23. Do you contribute any money from your total income towards the household's expenditure? Yes/No

Amount. Rs.....

B23.1 In your view, what percentage of the total household budget is covered by your contribution? 1. < 20 2. 20-40 3. 40-60 4. 60-80 5. 80+ 6. Don't know

B24. Did you pay any tax to the government? Yes/No

Wealth Tax	Rs.	Property Tax,	Rs.	House Tax	Rs.
Income Tax	Rs.	Indirect Tax,	Rs.	Indirect Tax On Medicine	Rs.

B25. Do you possess any kind of assets? Y/N

B25.1. If yes Tick the assets and mentioned its value in Rs. and utilization purpose

Type Of Asset	Self-Acquired			Inherited			Donation From Government/ Others		
	Value	Qty	Purpose	Value	Qty	Who provided	Value	Qty	Purpose
<input type="checkbox"/> Land									
<input type="checkbox"/> Flat - Rural									
<input type="checkbox"/> Flat- Urban									
<input type="checkbox"/> House in square feet									
<input type="checkbox"/> Field- Rural									
<input type="checkbox"/> Field- Urban									
<input type="checkbox"/> Jewellery									
<input type="checkbox"/> Savings And Fixed Deposit									
<input type="checkbox"/> Household Durable Goods									
<input type="checkbox"/> Valuable Vessels									
<input type="checkbox"/> Kuri/Chitti's									
<input type="checkbox"/> Dividends/Shares / Bonds/ Equities/ Mutual Fund- Financial Assets									
<input type="checkbox"/> Retirement Benefits									
<input type="checkbox"/> Health/ Life Insurance									
Total Value Of The Assets									

B<sub>26</sub>. Did you transfer the assets?

Yes/No

B<sub>26.1</sub>. If yes, At what age you transfer bequest to them? -----

B<sub>27</sub>. Did you register any legal steps to transfer bequeath? Yes/ No/Not ready to reveal

B<sub>27.1</sub> If yes, mention it?

Will of right, settlement deed, verbal assurance, Release deed, gift deed, sale deed, other

B<sub>28</sub>. Did you assign any power of attorney of your properties to others? Yes/ No

B<sub>28.1</sub>. If yes, whom to be assigned to given?

Spouse, Son, daughter, Grant- children, brother, sister, spouse, relatives- paternal, maternal, friends

B<sub>29</sub>. What kind of power of attorney (POA) is it?

General, Limited, Durable Springing, Medical needs, others

B<sub>29.1</sub>. What is the assigned property? -----

B<sub>29.2</sub> Mention its value at present (in Rs.).....

B<sub>30</sub>. Have you decided to transfer the property only after your death? Yes/No

B<sub>31</sub>. Do you have any successors? Yes/ No

B<sub>32</sub>. Do you know about escheats? Yes/ No

B<sub>33</sub>. Are you planning to transfer your assets to the government? Yes/No

B<sub>33.1</sub> If yes, at what time?

At age -----, after death, when the government take care of us/ me,

B<sub>34</sub> what is the reason behind it?

Due to my children's quarrel, I don't like my children/ siblings/relatives, social responsibility

B<sub>35</sub>. In which way the assets were transfer to you from the past generation?

Altruistic, strategic, accidental, social norms and traditions, transfer by an incident

B<sub>36</sub> Name the assets that you plan to transfer to the present generation through bequest?

Persons Identified By the Elderly Household for Bequeath	Altruistic Bequeath						Strategic Bequeath					
	GOLD		LAND		HOUSE		GOLD		LAND		HOUSE	
	Q	P	Q	P	Q	P	Q	P	Q	P	Q	P
Spouse												
Son												
Daughter												
Grand Children												
Government/NGO's												
Communities												
Relatives And Friends												
Total Value Of Bequeath												

Code: 1. Transferred, 2. Non-Transferred, 3. Partially Transferred

B <sub>36.1</sub> . what is the reason behind this kind of transfer of assets?	B <sub>37</sub> . Is there any quarrel for this resource transfers? Yes/No	B <sub>38</sub> . Between whom it takes place? 1.....	B <sub>39</sub> . What is the reason
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For Getting Care/Money/ Love And Affection/ Compulsion/ Financial Abuse/ Medical Needs		2----- 3-----	behind it? ..... ..... .....
B <sub>40</sub> Whether any of your children sacrifice your bequest for his poor siblings? Yes/No	B <sub>41</sub> Do you feel you are economically independent and asset to the economy? Yes/No/ May be	B <sub>42</sub> . Do you think your children will make a resource transfers to future generation Yes/No  If yes, the way of transfer of assets ..... .	..... ..... ..... ..... .....

### SUBJECTIVE WELL BEING INVENTORY (SUBI)

C<sub>18</sub>I would like to know about how your healthy life has been in general over the past few years.

A. My life is interesting	1	2	3	4	5
B. Compared with the past, my life is better	1	2	3	4	5
C. I am happy with the things that I am doing	1	2	3	4	5
D. I think, I have achieved the expected standard of living and the Social status	1	2	3	4	5
E. Always I has achieved success and are getting ahead	1	2	3	4	5
F. Most of the time I can accomplish what I want to do.	1	2	3	4	5
G. Most of the time I can manage situations even when they do not turn out as expected.	1	2	3	4	5
H. I am confident during occurrence of a crisis.	1	2	3	4	5
I. I feel confident in coping with the future	1	2	3	4	5
J. I am satisfied with the family members contribution to health and over all well being	1	2	3	4	5
K. I am satisfied with the help from family members, when I have a problem	1	2	3	4	5
L. Yes I am happy with the family together	1	2	3	4	5
M. I am happy that my children loved you	1	2	3	4	5
N. I am happy that my children help you	1	2	3	4	5
O. I am happy that I can share information regarding the household spending	1	2	3	4	5
P. I am happy that I can share information about buying the household durables	1	2	3	4	5
Q. You feel you can share information with your children's in investment decision	1	2	3	4	5
R. Always my mind is achieve something	1	2	3	4	5
S. I am happy my children listened me.	1	2	3	4	5

T. I am happy that my life experience's is useful to my children	1	2	3	4	5
U. I am happy that I can share information about grandchildren's decision in buying properties	1	2	3	4	5
V. I am happy that I can share information about my children's decision about your grandchild education	1	2	3	4	5
W. I am self-confidence than others	1	2	3	4	5
X. I am confidence with my children	1	2	3	4	5
Y. I am the role model to my children	1	2	3	4	5
Z. Most of the time I share information regarding children's decision in buying vehicles	1	2	3	4	5
AA. I can share information in children's decision about my grandchild insurance policy	1	2	3	4	5
BB. I am more independent than others	1	2	3	4	5
CC. Most of the time I got technological assistance than others	1	2	3	4	5

c19. Is elderly transferred money or asset as per the request of their children or relatives and friends? Yes No

c20. If yes, how much you satisfied in this transaction?

.....

c21. Details of your immediate wish to yet to be achieved.

Duration	One day		One week		One month		One year	
SL. NO.	Wish	Expense	Wish	Expense	Wish	Expense	Wish	Expense
1								
2								
3								
Reasons for dissatisfaction								

C22. How do you feel about your present living arrangement?

Comfortable....1 Satisfactory...2 Uncomfortable...3

C23. Ideally how many children should a person have to support them in their old age?

Male  Female  either male/female  children

C24. We would like to know your opinion about the support system for the elderly. Rank the statements in the order of your agreement:

- A. Since parents support their children when they are young, children should support their parents when they are old. -----
- B. Adults should have their own savings so that they do not have to depend on their children in their old age -----

C. Since as an adult, elderly have contributed to the society they should be taken care by the government-----

C<sub>25</sub>. Please Rank the problems faced by you as you become an elderly populace in Kerala?

Financial problem			Un finished familiar task
Loneliness			Rude behaviour of children
Poor health condition			Physical immortality
Family member conflict			Lack of good friends
Lack of recreational facilities			Health expenditure
Digital / technological divide			Unmet needs
Lack of respect			Lack of care

C<sub>26</sub>. Did you take care of your parents? Yes/No

C<sub>27</sub>. Are they live with you at the time of their death? Yes/No

C<sub>28</sub>. What kind of care do you provide to your parents? Altruistic/strategic

C<sub>29</sub>. What is the reason for provision of this care?

.....

### Formal care

D<sub>1</sub>. Can you tell the Schemes of the government providing old age benefits to senior citizens?

Name Of The Old Age Scheme	Heard (1. Yes, 3. No, 2. May Be)	Avail ed (1. Yes, 3. No, 2. May Be)	Amou nt Recei ve Last One Year?	No. year s (Less Than One Year = 00)	Proble ms Faced	Kind Of Problem	Res olv ed or not ?	Ho w Did You Res olv e It?	Reasons For Not Applying
National Old Age Pension Scheme									
Annapurna Scheme									
Widow Pension									
Government Assisted Health Insurance Schemes									

RashtriyaSwasthya BhimaYojana (RSBY)									
Informal Old Age Pension Scheme									

Type Of Concessions	Awareness(1)	Utilized Or Not?(2)	Duration Of Utilised(3)	Problems related to it (4)
Concessions For Tickets In Train				
Concessions For Tickets In plane				
Reservations Of Seats In Busses				
Preference For Facilities Such As Telephone Connections				
Interest In Bank Accounts/Post Office				
Income Tax Benefits				
Other tax benefits				
8% saving interest				
MNREGA				

D<sub>2</sub>. Can you tell the schemes of the government providing concessions to senior citizens?

Code 1&2: 1-Yes, 0-No

Code 3-1. Once in a year, 2. twice in a year 3. Once in a month 4. More often

D<sub>3</sub>. Mention the details of your legal cards in our state?

Type of card	Yes/No	Awareness (1)	Utilized Or not? (2)	Duration Of Utilised (3)	Problems related to it (4)
Aadhar					
Pan					
Electoral id					
Driving licence					
Other					

D<sub>4</sub>. Are you aware of the Act called The Maintenance and Welfare of Parents and Senior Citizens Act, 2007? (Yes/No)

D<sub>4.1</sub> If yes, please give details about it

Sl. No.	Point out any 4 rules of	Point out any 4 rules of	Registration of a	Place of register	Issue related to	Solve	If yes, Duration of

	MWSC act 2007	modified MWSC act 2018	complaint	the complaint	your complaint	it or not	resolving
1.							
2.							
3.							
4.							

D<sub>5</sub>. Act says if the Children are not caring the older people they will be punished, do you think this Act will serve towards protection and caring of helpless older people? Y/N

D<sub>6</sub>. Have you heard about the new National Rural Health Mission (NRHM) Palliative and Geriatric care Projects for the bed ridden, elderly, chronically & incurably ill people? y-1, n-0

D<sub>6.1</sub> If yes, please give details about it

Place To Get Information (1)	Utilized Or not? (2)	Duration Of Utilised (3)	Problems Related to It (4)
Media			
Neighbours			
Relatives			
Children			
Panchayath			
NGO			
Religious Communities			

D<sub>7</sub>. Are you aware of any programmes being implemented for Aged in your Panchayat or Municipalities (Yes/ No)

D<sub>7.1</sub> If yes, please give details about it

Pillars of Age-Friendly Panchayath	Awareness	Availability	Utilization	Satisfied or not	If not, Problems
Medical					
Physical Fitness					
Nutritious Food					
Infrastructure					

D<sub>8</sub>. What is the impact of other Non – Government, communities and private individual's programmes for older people?

Programmes related to	Mention The Name Of It	Awareness	Availability	Utilization	Satisfied Or Not	If Not, Problems
Technological						
Health Related						
Financial						
Literacy						

Employment						
Informational						
Recreational						

D<sub>9</sub>. Do you attend day care centre or 'pakalveedu', when you get aged? Y/N

If yes, please give details about it

Spending hours	Ownership	Activities of the centre	Activities undertaken by you	Reasons for attend	Benefits received

D<sub>10</sub>. Have you faced any kind of interaction? Yes/ No

D<sub>10.1</sub> If yes, what kind of abuse did you face and from where?

Type of abuse	within family	From Whom	outside family	From Whom	Yes, Both within family & Outside family	From Whom
Physical Abuse						
Verbal Abuse						
Economic Abuse						
Showing disrespect						
Neglect						
Sexual abuse						
Technological abuse						
Legal abuse						

Code: 01 Spouse, 02 Son, 03 Daughter, 04 Son-in-law, 05 Daughter-in-law, 06 Domestic helper 07 Grandchildren 08 Relatives. 09 Neighbours 10. Stranger, 11. Friends, 12. Great-grand children 13. Police force, 14. Govt. authorities 96 Other

D <sub>11</sub> . Do you have the physical security in your place? Yes/No	D <sub>11.1</sub> . What is the source of physical security? Relatives and family members/Servant/Neighbours/ Stranger/ unknown persons/Any other	D <sub>11.2</sub> What measures do you think may improve your security? Police security/provision of personal security/ a handy ring bell to alert the police/ any other
D <sub>12</sub> . What are the misbehaviours that you are facing?	D <sub>13</sub> . Why you prefer this particular provision of formal care?	D <sub>14</sub> . Mention the details of attending political group meetings like ward Sabha/ Gramasabha/

You are not consulted-1, uncared-2, not giving proper food-3, not giving proper medicine-4, conflict of opinions with in laws-5, other-6	Availability of free service, located nearby, good care and attention, expectations of care, other	vayoganamithra/vayojanasa bha? Never/ regularly/ once in a week/ once in a month, yearly
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D<sub>15</sub>. What needs to be done for health, safety and security of older people in your place?

(Choose as many you like)			
Financial help	1	6	Children should learn lesson from us
Health facilities to be provided	2	7	Place need to be created for entertainment
Security to be provided	3	8	News Paper/TV should be provided
People should regard us	4	9	Pension amount be enhanced
Local Government/Panchayat should tell us about the Legislation	5	10	Timely distribution of old age pension be ensured
Other	12	11	Venu for interaction

Field Note of the Enumerator: