INFLUENCE OF METACOGNITION AND ATTRIBUTIONAL COMPLEXITY ON ACADEMIC RESILIENCE OF ORPHANAGE STUDENTS IN KERALA

Thesis

Submitted for the Degree of

DOCTOR OF PHILOSOPHY IN EDUCATION

by

SHAHANAS E

Supervised by

Dr. HASSAN KOYA M.P

Associate Professor

FAROOK TRAINING COLLEGE

RESEARCH CENTRE IN EDUCATION

KOZHIKODE

2022

DECLARATION

I **SHAHANAS E.,** do hereby declare that this thesis entitled as **INFLUENCE OF METACOGNITION AND ATTRIBUTIONAL COMPLEXITY ON ACADEMIC RESILIENCE OF ORPHANAGE STUDENTS IN KERALA** is a genuine record of research work done by me under the supervision of **Dr. HASSAN KOYA M.P.,** Associate Professor (Rtd.), Farook Training College, Research Centre in Education, University of Calicut, and that no part of the thesis has been presented earlier for the award of any Degree, Diploma and Associateship in any University.

Place: Farook College

Date: 30-11-2022

SHAHANAS E.

Dr. HASSAN KOYA M.P
Associate Professor
Farook Training College
Research Centre in Education

Certificate

I **Dr. HASSAN KOYA M.P.**, do hereby certify that this report **"INFLUENCE OF METACOGNITION AND ATTRIBUTIONAL COMPLEXITY ON ACADEMIC RESILIENCE OF ORPHANAGE STUDENTS IN KERALA"** submitted for the degree of Doctor of Philosophy in Education of the Farook Training College, is a record of bonafide study and research carried out by **Mrs. SHAHANAS E.**, under my supervision and guidance and that no part thereof has been presented before for any other Degree, Diploma or Associateship in any other university.

Place: Farook College

Date: 30-11-2022

FAROOK TRAINING COLLEGE
P.O.Farook College
Pin : 673632

Dr. HASSAN KOYA M.P.
(Supervising Teacher)

Acknowledgement

All praise to Allah, the **Almighty** who graced me by the path of knowledge and accomplishment of this research report.

The investigator takes this opportunity to expresses her boundless gratitude to **Dr. Hassan Koya M.P**, Associate Professor, Farook Training College for his unparallel guidance, constructive criticism and patient scrutiny of the script that have inspired the investigator throughout the period of preparing this report.

The investigator is thankful to **Prof. (Dr.) T. Mohamed Saleem**, Principal, Farook Training College for providing necessary facilities during the period of study.

The investigator is thankful to staff of Farook Training College Library, Calicut University Department Library and Central Library, for their help in utilizing the facilities in library.

The investigator also likes to thank all members of staff, Farook Training College for their moral support and encouragement to carry out this study.

The investigator extends her thanks to Head, Mentor Teachers and students of various orphanages who have collaborated with the process of data collection for this study.

The investigator further expresses her heartful thanks to Research Scholars of Farook Training College for their moral support for this study.

The investigator would like to expresses her sincere gratitude received from her family, relatives and friends who have been an unending source of motivation, encouragement and valuable advice that have been boost for me from the beginning to the end.

Farook Training College **SHAHANAS E.**

CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

Chapter	*Title*	*Page No.*
1	INTRODUCTION	1-16
2	REVIEW OF RELATED LITERATURE	17-54
3	METHODOLOGY	55-86
4	ANALYSIS AND INTERPRETATION	87-134
5	SUMMARY, FINDINGS AND SUGGESTIONS	135-160
6	RECOMMENDATIONS	161-166
	REFERENCES	167-175
	APPENDICES	

LIST OF TABLES

Table No.	Title	Page No.
1	District wise Breakup of the Sample Collected among Orphanage Students	62
2	Break-up of the Sample based on Gender	63
3	Break-up of the Sample based on Locale	63
4	Break-up of the Sample based on Type of Management	64
5	Item wise Distribution with Respect to Dimensions of Metacognition Scale (Draft form)	67
6	Details of the Item Analysis of Metacognition Scale	69
7	Item Wise Distribution with Respect to Dimensions of Metacognition Scale (Final Form)	70
8	Item wise Distribution with Respect to Dimensions of Attributional Complexity Scale (Draft form)	73
9	Details of the Item Analysis of Attributional Complexity Scale	75
10	Item wise Distribution with Respect to Dimensions of Attributional Complexity Scale (Final form)	76
11	Item wise Distribution with Respect to Dimensions of Academic Resilience Scale (Draft Form)	79
12	Details of the Item Analysis of Academic Resilience Scale	81
13	Item wise Distribution with Respect to Dimensions (Final form) of Academic Resilience Scale	82
14	List of Orphanages and Number of Samples Selected for Each Category	84
15	Descriptive Statistics of the variable Metacognition and its dimensions	87
16	One Sample t test for the Variable Metacognition and its Dimensions	89
17	Comparison of Metacognition of Orphanage Students based on Gender	90
18	Comparison of Metacognition of orphanage Students based on Locale	92

Table No.	Title	Page No.
19	Comparison of Metacognition and Dimensions Such as Planning, Knowledge, Evaluation and Regulation of Orphanage Students based on Type of Management	95
20	Comparison of Mean Scores of Dimension of Metacognition Monitoring of Orphanage Students based on Type of Management	98
21	Descriptive Statistics of the Variable Attributional Complexity and its Dimensions	99
22	One Sample t test for the Variable Attributional Complexity and its Dimensions	101
23	Comparison of Attributional Complexity of Orphanage Students based on Gender	102
24	Comparison of Mean Scores of Attributional Complexity of Orphanage Students based on Locale	104
25	Comparison of Attributional Complexity and Dimensions such as Complex vs Simple and Interactive Ability of Orphanage Students based on Type of Management	107
26	Comparison of Mean Scores of Dimension of Attributional Complexity Such as Motivation and Internal and External Attributes of Orphanage Students based on Type of Management	109
27	Descriptive Statistics of the Variable Academic Resilience and its Dimensions	111
28	One sample t test for the variable Academic Resilience and its Dimensions	113
29	Comparison of Academic Resilience of Orphanage Students based on Gender	114
30	Comparison of Academic Resilience of Orphanage Students based on Locale	116
31	Comparison of Academic Resilience and its Dimensions of Orphanage Students based on Type of Management	119
32	Pearson's Product Moment Coefficient of Correlation for Metacognition and Academic Resilience of Orphanage Students	122

Table No.	Title	Page No.
33	Influence of Metacognition on Academic Resilience of Orphanage Students	123
34	Influence of Dimensions of Metacognition on Academic Resilience Score of Orphanage Students	124
35	Pearson's Product Moment Coefficient of Correlation for Attributional Complexity and Academic Resilience of Orphanage Students	126
36	Influence of Attributional Complexity on Academic Resilience of Orphanage Students	128
37	Influence of Dimensions of Attributional Complexity on Academic Resilience of Orphanage Students	128
38	Influence of Metacognition and Attributional Complexity on Academic Resilience of Orphanage Students	130
39	Influence of Dimensions of Metacognition and Attributional Complexity on Academic Resilience of Orphanage Students (Model 1)	131
40	Influence of Dimensions of Metacognition and Attributional Complexity on Academic Resilience of Orphanage Students (Model 2)	142

LIST OF FIGURES

Figure No.	Title	Page No.
1	Histogram with the Normal Curve for the Variable Metacognition and its Dimensions	88
2	Comparison of Mean Score of Metacognition of Orphanage Students based on Gender	91
3	Comparison of Mean Scores of Dimensions of Metacognition of Orphanage Students based on Gender	92
4	Comparison of Mean Scores of Metacognition of Orphanage Students based on Locale	93
5	Comparison of Mean Scores of Dimensions of Metacognition of Orphanage Students based on Locale	94
6	Comparison of Mean Scores of Metacognition of Orphanage Students based on Type of Management	97
7	Comparison of Mean Scores of Dimensions of Metacognition such as Planning, Knowledge, Evaluation and Regulation of Orphanage Students based on Type of Management	97
8	Comparison of Mean Scores of Monitoring of Orphanage Students based on Type of Management	98
9	Histogram with Normal Curve for Attributional Complexity Score and its Dimensions	100
10	Comparison of Mean scores of Attributional Complexity of Orphanage Students based on Gender	103
11	Comparison of Mean Scores of Dimensions of Attributional Complexity of Orphanage Students Based on Gender	104
12	Comparison of Mean Scores of Attributional Complexity of Orphanage Students based on Locale	105
13	Comparison of Mean Scores of Dimensions of Attributional Complexity of Orphanage Students based on Locale	106
14	Comparison of Mean Scores of Attributional Complexity of Orphanage Students based on Type of Management	108

Figure No.	Title	Page No.
15	Comparison of Mean Scores of Dimensions of Attributional Complexity such as Complex vs Simple and Interactive Ability of Orphanage Students based on Type of Management	109
16	Comparison of Mean Scores of Motivation and Internal and External Attributes of Orphanage Students based on Type of Management	110
17	Histogram with Normal Curve for the Variable Academic Resilience and its Dimensions	112
18	Comparison of Mean Score of Academic Resilience of Orphanage Students based on Gender	115
19	Comparison of Mean Scores of Dimensions of Academic Resilience of Orphanage Students based on Gender	116
20	Comparison of Mean Scores of Academic Resilience of Orphanage Students based on Locale	118
21	Comparison of Mean Scores of Academic Resilience of Orphanage Students based on Locale	118
22	Comparison of Mean Scores of Academic Resilience of Orphanage Students based on Type of Management	121
23	Comparison of Mean Scores of Dimensions of Academic Resilience of Orphanage Students based on Type of Management	121
24	Scatter Diagram for Metacognition and Academic Resilience of Orphanage Students	123
25	Scatter Diagram for Attributional Complexity and Academic Resilience of Orphanage Students	127

LIST OF APPENDICES

Appendix No.	Title
I	Malayalam Version of Metacognition Scale (Draft)
II	Malayalam Version of Metacognition Scale (Final)
III	English Version of Metacognition Scale (Final)
IV	Malayalam Version of Attributional Complexity Scale (Draft)
V	Malayalam Version of Attributional Complexity Scale (Final)
VI	English Version of Attributional Complexity Scale (Final)
VII	Malayalam Version of Academic Resilience Scale (Draft)
VIII	Malayalam Version of Academic Resilience Scale (Final)
IX	English Version of Academic Resilience Scale (Final)

Chapter 1

Introduction

- Introduction
- Need and Significance of the Study
- Statement of the Problem
- Definition of Key Terms
- Objectives of the Study
- Hypotheses of the Study
- Variables of the Study
- Methodology
- Scope of the Study
- Limitations and Delimitations
- Organization of the Report

Education is a powerful instrument for social change, and often initiates upward movement in the social demography, which helps to bridge the gap between the different divisions of society. The educational scenario in the country has undergone major changes over last decades, resulting in better provision for education and practical knowledge. Education is more than a need, it helps to eradicate poverty. It is essential to provide education for all irrespective of gender, financial background, religion or caste. Children are the greatest asset of our nation. Today's children are tomorrow's citizens. Usually children are taken cared by "basic unit of society" i.e., family. Family, especially parents ensures their child's well-being out of love, care and responsibility. This care and affection from elders not only make them happy but also leaves a positive impact on their personality. All children are not blessed with the same. There are children whose parents have died, are unknown, or have permanently abandoned him/her. They are mostly taken care under an orphanage when there no close relatives to look upon them. Biological parents and sometimes biological grandparents are legally responsible for supporting and taking care of children. In their absence they become a ward of the state and orphanages are one way of providing for their care, housing and education. Living with many kids under a roof can uplift their social skills but they might lack in some other aspects due to less individual attention.

Orphanages are institutions, hence children might have different constrains while growing up in orphanages when compared to growing up with a family. Children have to cope with many things in life. Facing doubtful situations and coping with them, is the way to a happy journey ahead. Dealing with change or loss is inevitable part in life. At some point, everyone experiences varying dimension of setbacks. This capacity of recovering quickly from difficulties can be termed as resilience. Resilience is the psychological strength to cope with stress and hardship.

A person who can get over the stress and strain is said to be resilient. Children should be resilient during school age to have fearless base for future. Emotional support should be provided to orphan students to help them cope better in school, especially adolescents who experience emotional stress, depression, anxiety, stigmatization, and posttraumatic stress disorder. Emotional support should be provided to help them cope better in school environment. Psychosocial support is very important in the school environment because the caregivers may lack the skill to support the adolescents emotionally and psychologically. Resilience is the process of being able to adapt well and bounce back quickly in times of stress. This stress may manifested from family or relationship problems, serious health problems, problems in the workplace or even financial problems to name a few. Developing resilience can help you cope adaptively and bounce back after changes, challenges, setbacks, disappointments, and failures. People tend to demonstrate resilience more often than you think. Being resilient doesn't mean that one has not suffered difficulty or distress. It also doesn't mean you have not experienced emotional pain or sadness. The road to resilience is of with emotional stress and strain.

Metacognition is a thought process and an understanding the things behind the process. It refers to a conscious monitoring of one's own cognitive skills. Attributional complexity simply refers to the understanding different dimensions of the behaviour. It is the capability of an individual to assess the behaviour of fellow being inspite of social judgement. Cause of resilience is multifactorial. Studies indicates that metacognition and attributional complexity have certain goals.

There are several factors that affect resilience in children. Factors like cognition, metacognition, anxiety, optimism, mindfulness and attributional complexity affect to some extent. There is a large body of research supporting central characteristics of the interconnections of metacognition and resilience

(Wells, 2013) little is known about factors associated with the interference of attributional complexity and metacognition that enhance resilience. The current study concentrate on attributional response during performance of various subdivisional cognitive task. Different aspects of Attributional Complexity additional to metacognitive factors may influence response of a person. The nature of the attributional complexity may affect the relationship between various factors of resilience.

Need and Significance of the Study

The study is aimed at investigating the influence of Metacognition and Attributional Complexity on academic resilience of orphanage inhabitants of Kerala. Metacognitive knowledge can be described as what we know about our own cognitive processes. Attributional Complexity and metacognition have remarkable influence on the academic performance of the students. The study will also include the metacognitive strategies of the students overwhelmingly dominant in their learning style and that which contribute maximum outcome from them. Moreover successful students use these strategies to overcome their natural constraints and contribute academic success, which otherwise will remain unchanged. So, these psychological aspects have a predominant importance in the academic endeavours and achievement of orphanage students

Factors like metacognitive skills, abilities of the students, social interactive skills help one to be more resilient. This can be identified from many studies and concurrent evidence in the academic sector. The metacognitive abilities determine goal expectation, success and performance level. The lack of educational opportunities and facilities as well as the absence of social and familial supporting factors substantiate to this and contribute less result from the students residing in the

orphanages of Kerala. Besides, there are numerous studies by the government and nongovernmental organizations, which accelerate the material resources. Despite of these, the actual development is not up to the expected level. Even though many studies have been conducted in this area, a study which combines all these aspects could not be identified.

For improving educational development of children, specific attention is given to the educational needs of orphans and other vulnerable children with regard to specialized training, equitable access, psychosocial support, feeding programs and steps to prevent stigmatization. Emotional support should be provided to orphan students to help them cope better in school, especially adolescents who experience emotional stress, depression, anxiety, stigmatization, and posttraumatic stress disorder (Cluver & Gardner, 2007). It was revealed that psychosocial problems have been consistently observed among orphaned boys and girls (Cluver & Gardner, 2007). The trauma from the loss of a parent can trigger behavioural problems of aggression or emotional withdrawal and negatively affect a child's performance in school and the child's social relations with other children at both school and home. Indeed, some orphan students may become withdrawn and passive or develop sadness, anger, fear and anti-social behaviours and become violent or depressed (Subbarao & Coury, 2004). Psychosocial support is very important in the school environment because the caregivers may lack the skill to support the adolescents emotionally and psychologically. It was found that the lack of psychosocial support from within existing social networks is considered particularly hurtful and insensitive, and adds significantly to the distress felt by the orphan children and adolescents (Breen & O'Connor, 2010). Due to the magnitude of a large number of orphan adolescents who need psychosocial support, a better understanding of how orphan adolescents experiences and what they mean to them remains an important research endeavour.

There are not many studies that were conducted on these variables, with respect to samples in orphan student community. This scenario necessitated that, elaborate studies in this area are badly needed because students in orphanages deserve more consideration. In a developed society every kind of social group should be developed and contribute their share to the nation building. For imparting their role constructively in the future society, they must be empowered and enhance in all aspects. Hence, this study is much significant and vital in the present socio political scenario.

Among orphanage students academic resilience is a factor which is to be explored further. It is also necessary to study the influence of metacognition and attributional complexity on academic resilience. By enhancing attributional complexity and metacognition strategies, it is assumed that the academic resilience could be strengthened. This prompted the investigator to take up the present study.

Statement of the Problem

The study is designed to find out the influence of metacognition and attributional Complexity on Academic resilience of orphanage students in Kerala. The present study is entitled as **"Influence of Metacognition and Attributional Complexity on Academic Resilience of Orphanage Students in Kerala."**

Definition of Key Terms

Metacognition

Metacognition refers to acquired knowledge about cognitive processes that can be used to control cognitive processes. It is the process of planning and assessing and monitoring one's own thinking. (Flavell, 1979)

In the present study the term metacognition is used in the meaning of planning, assessing and monitoring one's own thinking among orphanage dwellers of Kerala. The Metacognitve skill of the individual is assessed by metacognition

scale constructed by the investigator. The scores obtained by an individual in the metacognition scale is the indication of the metacognitive skill of that individual.

Attributional Complexity

Attributional complexity describes the degree to which an individual is interested in understanding the causes of behavior and considers many different possible causes. It includes capability of discriminating and integrating dimensions related to social judgment in order to understand social behavior. (Fletcher, 1986)

In the present study it is used as the capability of discriminating and integrating dimensions related to social judgment in order to understand social behavior among the orphanage students of Kerala. It is considered as a personality variable that refers to the extent that one prefers complex explanations of behaviour. It is assessed by using the attributional complexity scale constructed by the investigator for measuring the levels of Attributional Complexity among orphanage inhabitants.

Academic Resilience

Educational resilience is defined as the heightened likelihood of success in school despite environmental adversities brought about by early traits, conditions, and experiences (Wang, 1994). Academic resilience is a positive adaptation in academics after a stressful or adverse situation. It is the ability to mentally or emotionally cope with a crisis or to return to pre-crisis status quickly. It is the ability to achieve well in studies even in challenging situations.

In the present study, it is the ability of an individual to positive adaptation after a stressful or adverse situation in educational context. The comprehensive assessment of psychological resilience among orphanage students of Kerala is done by applying a resilience scale constructed by the investigator.

Orphanage Students

> "An Orphanage is residential institution devoted to the care of orphans-children whose biological parents are deceased or otherwise unable or unwilling to care for them, and the orphanage students are children of such residential institution" (Encyclopedia of Social Science 1982)

In the present study the terms orphanage student is used as the residential institution devoted to the care of orphans whose biological parents are deceased or otherwise unable or unwilling to care for them. The said children are inhabited in any of the orphanage registered under the appropriate authority like orphanage control board of Govt. of Kerala and it also functioning in the jurisdiction of Kerala state.

Influence

Influence is the power to change or affect someone or something. It is the power to cause changes without directly forcing them to happen.

Objectives of the Study

The following are the objectives of the present study:

1. To assess the extent of Metacognition among orphanage students.
2. To compare the Metacognition and its dimensions of orphanage students based on selected background variables.
3. To assess the extent of Attributional Complexity among orphanage students.
4. To compare the Attributional Complexity and its dimensions of orphanage students based on selected background variables
5. To assess the extent of Academic Resilience among orphanage students.

6. To compare the Academic Resilience and its dimensions of orphanage students based on selected background variables
7. To find out the relationship between Metacognition and Academic Resilience among orphanage students.
8. To find out the relationship between dimensions of Metacognition and dimensions of Academic Resilience among orphanage students.
9. To find out the influence of Metacognition on Academic Resilience among orphanage students.
10. To find out the influence of dimensions of Metacognition on Academic Resilience among orphanage students.
11. To find out relationship between Attributional Complexity and Academic Resilience among orphanage students.
12. To find out the relationship between dimensions of Attributional Complexity and dimensions of Academic Resilience among orphanage students.
13. To find out the influence of Attributional Complexity on Academic Resilience among orphanage students
14. To find out the influence of dimensions of Attributional Complexity on Academic Resilience among orphanage students.
15. To find out the influence of Metacognition and Attributional Complexity on Academic Resilience among orphanage students
16. To find out the influence of dimensions of Metacognition and Attributional Complexity on Academic Resilience among orphanage students.

Hypotheses of the Study

1. There exist significant gender difference in the mean scores of Metacognition and its dimensions of orphanage students.
2. There exist significant locale difference in the mean scores of Metacognition and its dimensions of orphanage students.
3. There exist significant type of management difference in the mean scores of Metacognition and its dimensions of orphanage students.
4. There exist significant gender difference in the mean scores of Attributional Complexity and its dimensions of orphanage students.
5. There exist significant locale difference in the mean scores of Attributional Complexity and its dimensions of orphanage students.
6. There exist significant type of management difference in the mean scores of Attributional Complexity and its dimensions of orphanage students
7. There exist significant gender difference in the mean scores of Academic Resilience and its dimensions of orphanage students.
8. There exist significant locale difference in the mean scores of Academic Resilience and its dimensions of orphanage students.
9. There exist significant type of management difference in the mean scores of Academic Resilience and its dimensions of orphanage students
10. There exist a significant relationship between Metacognition and Academic Resilience among orphanage students.
11. There exist a significant relationship between dimensions of Metacognition and dimensions of Academic Resilience among orphanage students.
12. There exists a significant influence of Metacognition on Academic Resilience among orphanage students.

13. There exists a significant influence of dimensions of Metacognition on Academic Resilience among orphanage students.
14. There exist a significant relationship between Attributional Complexity and Academic Resilience among orphanage students.
15. There exist a significant relationship between dimensions of Attributional Complexity and dimensions of Academic Resilience among orphanage students.
16. There exists a significant influence of Attributional Complexity on Academic Resilience among orphanage students
17. There exists a significant influence of dimensions of Attributional Complexity on Academic Resilience among orphanage students.
18. There exists a significant influence of Metacognition and Attributional Complexity on Academic Resilience among orphanage students
19. There exists a significant influence of dimensions of Metacognition and Attributional Complexity on Academic Resilience among orphanage students.

Variables of the Study

"Variables are the conditions or characteristics that the experimenter manipulates, controls or observes" (Best & Khan, 2005). The present study involves three types of variable viz., dependent variable, independent variable and background variables.

Dependent Variable

The present study is an attempt to find out the influence of metacognition and attributional complexity on academic resilience among orphanage students. Hence dependent variable of the study is

- Academic Resilience

Independent Variables

The independent variables of the study are

- Metacognition
- Attributional Complexity

Background Variables

Selected background variables of the present study are

- Gender
- Locality of students' residence
- Type of management

Methodology

Methods of the Study

Normative Survey Method was used for the present study. The present study was undertaken to find out the influence of metacognition and attributional complexity on academic resilience of orphanage students in Kerala state. In order to fulfill the objectives and for getting a clear picture of the scenario of the problem, it was intended to collect an extensive and true representative data from all over Kerala. Hence survey method was adopted by the investigator for the present study.

Sample Selected for the Study

For the selection of sample, stratified random sampling technique was adopted. Considering the special nature of the study and type of statistical methods used the size of thesample was tentatively fixed as eight hundred secondary students studying in any orphanages of Kerala. The sampling was done through an elaborate process. The investigator collected 800 secondary school students who pursuing in any orphanages in Kerala. The sample consisted of all the subgroups. In the

selection of sample, due representation was given to background variables such as gender, locale and type of management.

Tools Used for the Study

For collecting the data required for the study of any problem one might use various devices or instruments. The instruments thus employed are called tools. The success of a research study depends mostly on the nature of the tools and techniques used. Different types of tools are used for collecting information for different purposes. According to Best and Khan (2005), the use of the particular tool depends upon the type of the problem and each research tool is appropriate in a given situation to accomplish a particular purpose. The following major tools were used for collecting data for the present study, namely:

1. Metacognition Scale (Shahanas & Koya, 2017)
2. Attributional Complexity Scale (Shahanas & Koya, 2017)
3. Academic Resilience Scale (Shahanas & Koya, 2017)

Statistical Techniques

The following statistical techniques were employed for analyzing, interpreting and testing hypotheses of the present study

- Descriptive statistics like mean, median, mode, standard deviation and quartile deviations were calculated for the sample with respect to the variables studied
- One sample t test
- Independent sample t test
- One way ANOVA
- Pearson's Product Moment Coefficient of Correlation 'r'

- Simple Regression Analysis
- Multiple Regression Analysis

Scope of the Study

The findings of the study would help in throwing light into certain neglected fields like physical, mental and social development of students studying in various orphanages of Kerala state. Hence, assisting in enhancing the qualities lacking in the field, can help in effective Resilience and psychological wellbeing of orphanage students in Kerala. The results of the study can help organizations that runs orphanages in Kerala in shaping children better. Rural population taken into account, was limited to school going orphanage students (English medium and Malayalam medium) and did not cater to non-educated and those orphans who are not an inhabitant of any orphanages in Kerala.

Around 1500 orphanages are functioning in Kerala. Almost 80- 90% of the children in orphanages have families and relatives. Many orphans and vulnerable children slip further into poverty, once the family's main bread winner stops working or dies. There is nothing more traumatic for a child than to see a parent die. Added to this tragedy is the loss of adult guidance and protection. Children without proper adult care are more likely to be abused and exploited. Children in this category include orphans, abandoned children, children who have lost their parents in war, communal riots, natural disaster, accidents etc. They are not properly fed; they have no shelter, nutritious food, health care, education or any recreation. Most of them are facing economic and social exploitation. They are deprived of love and affection of the family and are often unwanted by the family members.

The main purpose of the present investigation is to explore how metacognition and attributional complexity influence academic resilience on

secondary school students. There are several factors that influence a child's better life. Introspection of one's own thinking elicit child's educational upliftment. Study about the extent of metacognition leads to this. Self evaluation is the basic key to understand things as well. This might help a child to consider many possible causes for a situation and analyse the matter in other's point of view. It is a great step to humanity as well. That is the ability of discriminating and integrating dimensions related to social judgement inorder to understand social behaviour. The scope of attributional complexity lies here.

Limitations and Delimitations of the Study

In spite of every effort has been taken to make the study precise and objective as possible, certain unavoidable circumstances have crept into the study and acted as limitations to the study. Limitations are those elements over which the researcher has no control. Most of these limitations are inherent in all forms of educational research of the present kind. The investigator couldn't fully rely upon the information given in the sample because it consisted of orphanage students. In the absents of parents the investigator relayed other persons related to the children for information about socio demographic variable. Even though the investigator paid maximum care to get correct and reliable data from all sources while data collection, the students didn't paid much attention.

Delimitations are the characteristics selected by the researcher to restrict the boundaries of the study because of constrains of time and resources, the study had to be delimited with respect to certain areas. The major delimitations are:

1. Selection of independent variables for the study is confined to two major variables, Metacognition and Attributional Complexity.

2. The study is limited to a sample of 800 orphanage students studying in secondary schools of Kerala. The results of the study can be more generalized if more students are included in the sample.
3. There are several socio-psychological factors that determine the Metacognition and Attributional Complexity of adolescent students. The study is restricted to a few dimensions of Metacognition and Attributional Complexity.
4. The study was confined only to those studying secondary classes of various types of schools in Kerala.
5. Even though many research institutions dealing orphanage students are located in various part of Kerala, the area of the present study is confined in nine district. .
6. The investigator relied upon the information given by the sample the responses may vary according to the changing situations.
7. The Metacognition and attributional Complexity is taken as in the student perception only. It is not taken on the basis of socio familial context.
8. The environmental social aspects of the development of resilience are not studied in the present study.
9. The extensive strategies of remediation for the orphanage students are not come under the purview of the present study.

While conducting a comprehensive research of present kind, the above mentioned delimitations are difficult to overcome. Eventhough these delimitations were present, it is expected that the study would yield valid findings and substantial suggestions for educational improvement and would serve as the basis for further research in this area.

Organization of the Report

The report has been organized under six chapters.

Chapter I Introductory chapter presents a foundation for selecting the present problem, its significance, statement of the problem, definitions of key terms, objectives of the study, hypotheses, methodology and a brief description of the scope, limitations and delimitations of the study.

Chapter II Gives a theoretical background of the variables in the problem. A detailed review of related literature from the area of metacognition, attributional Complexity and academic resilience.

Chapter III Covers the methodology of the study includes a discussion of the Methods, variables, tools employed for the study, selection of sample, procedure for the study and statistical techniques use for analysis.

Chapter IV Describes the details of analysis of the data. The analysis has been followed by interpretation of the major findings.

Chapter V Presents a retrospective view of the study, the major finding of the study, tenability of the hypotheses and conclusions.

Chapter VI Includes educational implications and suggestions for the research.

It is followed by references and appendices.

Chapter 2

Review of Related Literature

- Theoretical overview of Metacognition
- Studies related to Metacognition
- Theoretical Overview of Attributional Complexity
- Studies Related to Attributional Complexity
- Theoretical overview of Academic Resilience
- Studies Related to Academic Resilience
- Summary and Conclusion

Reviewing literature is an inscrutable prerequisite to any research. Review allows the researcher to acquaint himself with current knowledge in the area in which he is going to conduct research. The term review means revision or glance over or refers back. By reviewing the related literature, the researcher can avoid unintentional duplication of findings. It provides useful hypotheses and helpful suggestions for the investigation. A careful review of chapters gives the researcher comprehension of the subject which refers to the way the study is to be conducted. It can be said that as light house is used for sailor, the review of literature is used for the researcher. According to Aggarwal (1966) 'the survey of related studies implies locating, studying and evaluating reports of relevant researches, study of published articles, going through related portions of encyclopedias and research abstracts, study of pertinent pages out of comprehensive books on the subject and going through related manuscripts if any'. A perfect study in any field of knowledge, the researcher needs adequate familiarity with the work which has been done in his field of choice. Thus, review of related literature is a crucial step that invariably minimizes the risk of dead ends, rejected topics, rejected studies, wasted effort and trial and error activity which are discarded by previous investigators and erroneous findings based on faulty research design.

Theoretical Overview of Metacognition

Metacognition is simply defined as 'thinking about thinking'. Metacognition refers to higher order thinking which involves active control over the cognitive processes engaged in learning. The term metacognition is most often associated with Flavell (1979). According to Flavell (1987) metacognition consists of both metacognitive knowledge and metacognitive experiences or regulation. Metacognitive knowledge allude to acquired knowledge about cognitive processes, knowledge that can be used to control cognitive processes. Metacognitive strategies are sequential processes that helps to control cognitive activities, and to

achieve cognitive goal. You may use a self-questioning strategy while reading as a means of obtaining knowledge, or as a way of monitoring what you have read. Metacognition is the process of planning, assessing and monitoring one's own thinking; the pinnacle of mental functioning (Cotton, 1991). Declarative, procedural and conditional knowledge may considered subcomponents of metacognitive knowledge. Declarative knowledge involves what we know about how we learn and what influences how we learn. Procedural knowledge is knowledge about different learning, memorising and understanding strategies that works best for us. Conditional knowledge is the knowledge we have about the conditions under which we can implement various cognitive strategies.

Metacognition is something most of us do every day even without noticing. Reflection of self-thought is how we gain insight into ourselves. It's the running conversation we have in our heads, mentally sounding ourselves out and making plans. Studies are suggesting that children who are taught to use metacognitive strategies early on are more resilient and more successful, both in and out of school (Cotton, 1991). Getting into the habit of using metacognitive strategies early on helps kids become more independent learners and bolsters self-advocacy skills. Metacognitive thinking teaches us about ourselves.

Children who are taught to think of themselves as being "good" or "bad" at a particular task, can have a fixed mindset that makes them passive in approaching a challenge. Either they can do it or they can't, but they aren't likely to think they can change that undesirable outcome. Metacognitive knowledge helps the students to rethink, which promotes self-awareness and resilience than being stuck by thinking in one direction. This makes students capable of facing unwelcomed challenges. Asking question or clarifying doubts at home can be aid to metacognitive strategies which help them in studies as well as in life. This might not seem to be practical for many including the one with learning difficulties. It's easy to get bogged down by

poor study habits, procrastination, homework meltdowns and test stress. This is the point where adults help pupil by asking metacognitive questions by introspecting their work in a positive behaviour. Asking metacognitive questions will help him clarify his problems, manage his anxiety, and find a better way to approach his studies. Benefit of this can be long lasting.

Traditional View on Metacognition

Most accounts of metacognition make a basic distinction between meta-cognitive knowledge (i.e., what one knows about cognition) and metacognitive control processes (i.e., how one uses that knowledge to regulate cognition). Brown (1987) and Baker (1991), for example, distinguish knowledge of cognition from regulation of cognition. In this section, we elaborate on the distinction between metacognitive knowledge and regulation, and consider sub processes involved in each. Knowledge of cognition refers to what individuals know about their own cognition or about cognition in general. It usually includes three different kinds of metacognitive awareness: declarative, procedural, and conditional knowledge (Brown, 1987; Jacobs & Paris, 1987). Declarative knowledge refers to knowing "about" things. Procedural knowledge refers to knowing "how" to do things. Conditional knowledge refers to knowing the "why" and "when" aspects of cognition.

Declarative Knowledge

Declarative knowledge includes knowledge about oneself as a learner and about what factors influence one's performance. For example, research investigating meta- memory (knowledge and awareness of own memory processes) indicates that adults have more knowledge than children about the cognitive processes associated with memory (Baker, 1989). Similarly, good learners appear to have more knowledge about their own memory and are more likely than poor learners to use what they do know (Garner, 1987; Schneider and Pressley, 1989).

Procedural Knowledge

Procedural knowledge refers to the knowledge exercised in the performance of a task. Procedural knowledge involves one's ability to do something (e.g. I know how to operate a machine). It is the ability to execute action sequences to solve problems. This type of knowledge is tied to specific problem types and therefore is not widely generalizable. Procedural knowledge is goal-oriented and mediates problem-solving behavior.

Conditional Knowledge

Conditional knowledge refers to knowing when and why to use procedure, skill or strategy and when not to. Conditional knowledge helps students to allocate resources and use strategies effectively. This involve application of critical thinking and problem solving skills that denotes mastery of theoretical knowledge and professional practice across, content, knowledge, skills and insights.

Dimensions of Metacognition

Dimensions of metacognition are described under the following sections.

Metacognitive Knowledge

Metacognitive knowledge refers to knowledge of learners about learning. That is, the learner's knowledge of their own cognitive abilities. Research shows that metacognitive skills can be taught to students to improve their learning (Nietfeld & Shraw, 2002; Thiede et al., 2003). This abstract of the development of metacognitive knowledge in children focuses on meta-memory, that is, knowledge about memory. First, a classic taxonomy of meta-memory is described, that distinguishes between declarative knowledge (knowing that), conditional knowledge (knowing why), and procedural knowledge (knowing how). As students become more skilled at using metacognitive knowledge, they gain confidence and become

more independent as learners. Individuals with well-developed metacognitive skills can think through a problem or approach a learning task, select appropriate strategies, and make decisions about a course of action to resolve the problem or successfully perform the task.

Metacognitive Planning

Planning involves the selection of appropriate strategies and predictions before reading, strategy sequencing, and allocating time or attention selectively before beginning a task (Miller, 1985). Metacognitive planning refers to making a strategic plan before beginning a task. It implies organizing resources and strategies while keeping the end goal in mind. It is a long term planning for introducing implementing metacognitive strategies in classroom, department or school. Four steps involving the implementation of metacognition in practice are permanence, patience, planning and persistence.

Metacognitive Monitoring

Metacognitive monitoring is the monitoring of one's own thought process and existing state of mental ability. Metacognitive monitoring consists of the revision and adjustment of actions while carrying out a task so you can get closer to the goals. This implies an interactive process which has two-fold: a bottom-up reasoning (identifying errors) and top-down reasoning (correcting errors). Research shows that monitoring ability develops slowly and is quite poor in children and even in adults.

Metacognitive Evaluation

The purpose of metacognitive evaluation is to make students to think about problems by reflecting upon themselves through self-evaluation. Metacognitive evaluation also focus at assessing the learning results of self-evaluation to ultimately assess the learning process. Metacognitive evaluation is the systematic assessment of

the design, implementation or results of an initiative for the purposes of learning or decision-making. This is the evaluation of the final results to consider corrections and strategy changes for future tasks for a positive change. Metacognitive evaluation is a value judgment about one's own thought processes that extents to which goals have been met.

Metacognitive Regulation

Metacognitive regulation simply refers to one's own ability to control her/his thinking process. When a student has an idea about her thought (metacognitive knowledge) she'll be able to use information for regulating her learning. This involves the ability to think strategically and to solve problems, plan, set goals, organize ideas and evaluate what is known and not known. Simply, metacognitive regulation is active supervision and consequent regulation and organization based on the processes that act in a given moment

Studies Related to Metacognition

Ponnusamy (2001) conducted a study on the impact of metacognition and problem solving strategies among low achievers in history. The study showed that metacognitive abilities and problem solving strategies can have a significant impact on academic achievement, metacognitive awareness and metacognitive knowledge. Also the ability to use and reflect on metacognitive strategies during problem solving can bring about a positive attitude towards the learning of history and the ability to answer higher level cognitive questions.

Verma and Mishra (2001) studied on Cognitive and metacognitive aspects of learning styles of prospective secondary teachers in relation to teaching aptitude and self-esteem. 387 subjects was selected by random cluster method. The major finding of the study were the teaching aptitude and self-esteem influenced some cognitive and metacognitive strategies of learning of prospective secondary teachers in an

independent manner and however there seemed to be no interaction effect of the two variables on any cognitive and metacognitive strategy of learning.

Ramganesh and Amutha (2010) Studied on effect of metacognitive orientation on enhancing problem solving competency in mathematics among B.Ed trainees. The objective of this study was to develop metacognitive orientation to enhance problem solving competency in mathematics among B.Ed. trainees. (i) The achievement in problem solving of experimental group was more significant in posttest 1 and posttest 2. (ii) There is a steady decrease in the mean score of anxiety towards mathematics teaching in posttest 1 and posttest 2. (iii) There was a high negative correlation between metacognitive awareness and anxiety. (iv)There is no significant mean difference in achievement and in problem solving among five subgroups of experimental group in pretest 1, posttest 1 and posttest 2.

Begum (2007) conducted a study on conceptual evaluation of metacognition, perspectives in education objective was to find conceptual perspective of metacognition. A Pretest and Posttest single group designwas adopted for the study. the study showed a positive correlation between the scores of metacognition and mediated learning experience in all the pre and post assessments.

Shabaya (2011) investigated the role of pre-service teachers in developing metacognitive awareness strategies among student writers in an urban high school English classroom. The purpose of the study was to determine the indices of metacognitive awareness skills in writing for urban high school. Survey method was used. Sample was of sixteen pre-service teachers. (i) Students self-perception as writers changed over the course of a semester (ii) Metacognitive awareness development occurred over a period of time (iii) Metacognitive awareness development did not occur in a uniform manner for all students and varied teaching approaches yield effective writing instruction.

Savithiri (2006) studied the Impact of metacognitive strategies in enhancing perceptual skills among high school students in learning geometry. To observe whether the students' achievement level increased after implementation of metacognitive strategies and application of perceptual skills was the objective of the study. Research was conducted in single group design with pre progressive and post-test. It reveals that by using metacognitive strategies, perceptual skills could be enhanced in learning geometry. It is also pointed out that both perceptual skills and metacognitive strategies are needed to learn geometry.

Suraya (2009) investigated on the relationship between motivation andlevel of metacognition. To find the relationship between level of motivation and level of metacognition with mathematics achievement and overall academic achievement and to find the relationship between motivation and metacognition were the objectives of this study. Survey method was adopted. Significant correlation was established between levels of metacognition with level of motivation.

Narayanan (2009) searched The Resilience, Metacognition and Complexity to describe the children who were exposed to negative conditions of life and yet not succumbed to their ill effects (Werner & Smith, 1992), the term 'resilience' was introduced to psychological literature. Findings showed that among the aspects of attribution schemata investigated in this study, complex explanation and metacognition and significant effect on resilience. The highly resilient had higher preference for complex rather than simple explanations for explaining human behavior and used metacognition concerning explanations more than those who have low resilience.

Rajkumar (2010) searched on Enhancing students' achievement in physics through metacognitive strategies. The present study was to determine whether the teaching of metacognitive strategies can influence students' academic achievement, increase their ability to answer higher level thinking questions, increase their

metacognitive knowledge and awareness and change their attitude towards physics. The research was carried out using experimental design. Sample was 300 students. The results revealed that the experimental group which have metacognitive strategies outperformed the control group and scored significantly higher.

Dixit (2011) studied on the Readiness towards the use of metacognition and its relationship with academic achievement of higher secondary students. This study was related to the study of readiness towards the use of metacognition in the learning process of higher secondary students. Survey method was adopted. Results of the study revealed that there is a significant difference in the readiness towards the use of metacognition of higher secondary students on the group of gender differences. However, no significant difference was found in the readiness towards the use of metacognition of higher secondary students on the basis of their academic achievement. Positive correlation was found between readiness of metacognition and academic achievement of higher secondary students.

Parvathi and Mohaideen (2011) conducted a study on metacognition of prospective teachers in Thoothukudi District. The objectives of the study were (i) to find out the metacognition of prospective teachers in total and in dimensions such as planning, memory, evaluation, monitoring, and achievement, (ii) to find out the differences, if any, in the metacognition of the prospective teachers in total and from the population 100 student teachers were selected. Simple Random Sampling technique was adopted by the investigator. Results revealed that postgraduate student teachers are having better metacognition. The student teachers whose ages had been within 30 were found to have more metacognition than the undergraduate students in the dimension of monitoring.

Kapa (2001) investigated on the metacognitive support during the process of problem solving in a computerized environment. To find out problem solving among the students who learn in the different conditions of metacognitive support. The

classes were randomly assigned to the different treatment cells of the metacognitive supports. Some of the classes included immigrants who had been living in Israel for less than a year and a half. The obtained results are the students with low previous knowledge were able to improve in their ability to solve word problems correctly and the students with high previous knowledge in the control group showed a decline of achievements compared to their achievements before the treatment where as the students with low previous knowledge had better achievements at the end of the treatment compared to their achievement before the treatment.

Mevarech et al. (2002) investigated the effects of metacognitive instruction on solving Mathematical Authentic Tasks. (i) To compare the effects of cooperative metacognitive and cooperative instruction on students ability to solve mathematical authentic tasks. (ii) The cooperative metacognitive students significantly outperformed the cooperative students in both kinds of tasks (authentic and standard). Metacognitive students were also better able to reorganise and process given information than their counter-parts in the non metacognitive condition. (iii) The cooperative metacognitive students were better able to justify their reasoning than their counterparts in the cooperative condition.

Zakaria et al. (2009) a studied on metacognitive awareness and students achievement on mathematical problem tasks. (i) To find the relationship between metacognitive awareness and students' achievement in mathematical problem solving. (ii) To findout whether there were differences in metcognitive problem solving in relation to gender and discipline of study. Survey method was adopted. The sample consisted of 378 matriculation college students (123 males and 255 females). (i) There was significant relationship between metacognitive awareness and students' achievement in mathematical problem solving. (ii) There was no significant difference in metacoginitive awareness in mathematical problem solving with respect to gender.

Coutinho (2006) developed a model of metacognition, achievement goal orientation, learning style and self efficacy. To test a model integrating achievement goal orientation, learning style, self efficacy and metacognition into a single frame work that could explain and predict variation performance. Quasi-experimental method was adopted. Self efficacy was the strongest predictor of the performance followed by metacognition. Achievement goals correlated with each other suggesting that students may be adopting multiple goals at the same time. Goal orientation was related to two or three learning style to achieve their goals. Achievement goals, self efficacy and learning style had weak and negative relationships with metacognition.

Ke (2008) developed Computer based game playing within alternative classroom and goal structure on fifth grader's math learning outcomes, cognitive, metacognitive, affective evaluation and interpretation. To investigate whether computer based educational game playing in comparison to traditional paper and pencil drilling would be more effective in facilitating comprehensive math. Experimental method was adopted for this study. Computer based game playing facilitated positive attitudes towards math learning significantly more than paper and pencil drilling but its advantage on cognitive math test performance and metacognitive awareness was not significant co-operative goal structure, in comparison to computer based game structure which was significantly more effective than the other two students in promoting math test performance.

Wyre (2007) studied critical thinking, metacognition and epistemological beliefs. To explore the effect of adding metacognitive enrichment exercises to classes in which critical thinking is an implicit learning objective. Surveymethod was adopted for this study. 681 pre-test and 469 post test students at Central Tennessee Community College were the sample. The findings demonstrated adding metacognitive enriching exercises increased the epistemological maturity levels of

the students in all four factors measured by the instrument. In two of those factors, the increase was statistically significant. A focus on metacognitive enrichment can significantly increase a students' personal epistemology and thereby, the student's critical thinking skills.

Alda (2008) analyse the effectiveness of skills versus metacognitive strategy-based approaches on reading comprehension of college developmental students. To explore the relative value of behavioural and cognitive psychology as the basis of instruction for underprepared college students enrolled in developmental reading courses. Experimental method was adopted for this study. The sample were hundred college developmental reading students who were enrolled in six intact sections of a reading course. There were significant differences in reading comprehension between the groups receiving the different instructional treatments and no differences in reading comprehension between the men and women participants.

Whitebread et al. (2008) undertakes the development of two observational tools for assessing metacognition and self regulated learning in young children. To give a report on observational approaches developed with a United Kingdom study to the identification and assessment of metacognition and self regulation in young children in the 3-5 year age range. Survey method was adopted for this study. The establishment of the metacognitive and self regulatory capabilities of young children by means of the kinds of observational tools developed within this study also had clear and significant implications for models and theories of metacognition and self regulation.

Bruno (2009) Metacognitive learning strategies; differential development patterns in high school. The objective of this study is to identify the development of students' self-reported use of metacognitive learning strategies during high school. Survey method was adopted for this study. (i) The result suggested that from a global perspective, there was no development of students' self reported use of

metacognitive learning strategies during high school. (ii) The self reported use of monitoring and evaluation strategies tend to converge between genders during high school; whereas the differences in the self reported use of planning strategies remained stable.

Ibe (2009) conducted a study on effects of metacognitive strategies on classroom participation and students achievement in senior secondary school science classrooms: (i) To measure achievement. (ii) To measure the metacognitive strategies. The design for the study was a quasi experimental design involving 3 intact groups named two treatment groups Thinks Paci Share (TPS) strategy and the Metacognitive Questions (MQ) and a control group. Metacognitive strategies were more effective in enhancing academic achievement followed by the TPS Sevgi.

Turan et al. (2009) conducted a study to investigate the acquisition of metacognitive awareness and self regulated learning skills in medical schools using different curricular models. To fix the significant differences in MAI (Metacognitive Awareness Investigator) scores according to gender, curricular language and previous exposure or not to a learner centered method during secondary school. Experimental design was implemented. (i) With regard to SRLPS (Self Regulated Learning Perception Scale) total scores, no difference was found according to gender but significant differences were found according to phase, curricular language and curricular model. (ii) MAI (Metacognitive Awareness Investigator) and SRLPS (Self Regulated Learning Perception Scale) scores of students from the medical school using a learner centered curriculum were higher than the other schools students.

Ozsoy et al. (2009) conducted a study to investigate the relationship between fifth grade students' metacognition levels and their study habits and

attitudes. (i) To find the relationship between students' metacognition levels and their study habits. (ii) To find the relationship between students' metacognition levels and their attitudes. Survey method was adopted. Study found that, there is a medium positive relationship between metacognitive knowledge, skills, study habits, study attitudes and study orientation, there is no significant relationship between metacognition and study habits and attitudes.

Coskun (2010) conducted a study to investigate the effect of metacognitive listening strategy training on the listening performance of a group of beginners preparatory school students at the University in Turkey. To find the effect of metacognitive listening strategy training on the listening performance of a group beginner preparatory school students. Experimental design was chosen. Two beginner groups a control group (n=20) and an experimental group (n=20) were chosen as the participants of the study. The experimental group did statistically better in the test.

Magno (2010) conducted a study on the influence of metacognition on critical thinking skills. To study that critical thinking occurs when individuals use their understanding metacognitive skills and strategies that increase the probability of a desirable outcome. The Structural Equations Modeling (SEM) was used to determine the effectof metacognition on critical thinking as latent variables. Two models were tested. (i)In the first model, metacognition was composed of two factors. (ii) In the second model, metacognition had eight factors as they affected critical thinking. (i) The results indicated that in both models, metacognition had a significant path to critical thinking. (ii) Theanalysis also showed that for both metacognition and critical thinking factors were significant.

Jaleel and Premachandran (2016) studied on the metacognitive awareness of secondary school students. The objectives of the study are to find out the

metacognitive awareness of secondary school students. The tool used was metacognitive inventory. The major finding is the secondary school students are identically distributed among each group in the metacognitive awareness.

Ozsoy and Ataman (2009) studied the effect of metacognitive strategy training on mathematical problem solving achievement. The study took place over a nine week period with 47 fifth grade students. The experimental group (n=24) instructed to improve their metacognitive skills. Students in the control group (n=23) received no additional activities. Students were pre and post-tested with mathematical problem solving achievement test and Turkish version of Metacognitive Skills and Knowledge Assessment (MSA-TR). The students in the metacognitive treatment group significantly improved in both mathematical problem solving skills.

Joseph (2009) studied metacognition teaching middle and high school students to develop strategic learning skills. Students ineffective learning strategies are linked to poor metacognition, revealing that struggling learners have not developed the practical figure it out skills to succeed in academic challenges.

Theoretical Overview of Attributional Complexity

Humans are genetically motivated to assign causes to their actions and behaviours. From the early centuries, the discoveries and explorations of humanity have been based on instinctive thoughts and actions. Backing up the action with a cause necessarily justifies it and makes it rational and reliable. Attribution is the process of introspecting the causes or origins of various events or behaviours that take place in one's lives. Individuals formulate attributions to understand and attach meanings to their life experiences. These experiences have a substantial impact on interactions of people with others. Attributional Complexity theory deals with how the social perceiver pieces together information to arrive at causal

explanations for events. It examines the information and how is it combined to form a causal judgment.

Attributional Complexity denotes to the ability of discriminating and integrating dimensions related to social judgment in order to understand social behavior. Attributional Complexity is a personality variable that refers to the extent that one prefers complex and multi explanations of behaviour. It is a construct designed to describe individual differences in the motivation and preference for complex attributions of one's behaviour. It describes the degree to which an individual is interested in understanding the causes of behaviour and considers many different possible causes (Fletcher et al., 1986). Individuals with higher level of attributional complexity are theoretically more likely to consider dispositional factors, situational factors, and factors operating from the past (Fletcher et al., 1986). The one with lower level of attributional complexity are less likely to think about behaviour or to consider multiple causes. The individuals having high attributional Complexity are relatively less likely to commit errors and bias in social judgment and are more accurate in social judgment. If someone able to understand behavior, he is able to think about several possible causes of that behavior, and given time to deeply process social information he is less given to errors and bias.

Attributional Complexity is a psychological parameter that describes the degree to which an individual is interested in understanding the causes of other's behaviour and considers different possible reasons (Fletcher et al., 1986). Those people with good level of attributional complexity are theoretically like good social psychologists. Research has shown that a person with high attributional complexity are relatively less likely to fall into various errors of social judgment and in some cases achieve greater accuracy, which may provide insight into the psychological basis of good social judgment. Social stigmas as well as bias in social judgement are relatively reduced when a person has an appreciable level of attributional

complexity, which is the understanding ability to think from other's point of view. Attributional Complexity plays an important role in social interactions which involves a specific interest in comprehending others behaviour. Examining behaviour and reputation of an individual offers insight into how attributional complexity influence his existence in society.

Observing an individual's behaviour and gathering judgments made by those who know that individual well, are important because people do not always do what they say they do (Gosling et al., 1998). Attributional complexity appears to be associated with better social judgment and knowledge of the behavioural correlates might suggest which behaviours are associated with good social judgment, and knowledge of the reputational correlates might provide some understanding of its social consequences.

In this section, we summarize three theories of attribution. Heider's 'common- sense' psychology is reviewed first because its tenets sowed the seeds for the second and third variations of attribution theory

Heider's Attribution Theory

The concept of attribution is found in the work of Heider (1958) who famously stated that individuals concoct common sense explanations of the world in order to make sense of, predict, and control events. Heider suggested that a layperson's explanations are naïve, in that they are not scientifically conceptualized, analyzed, or tested. However, the process by which individuals arrive at explanations for events is akin to the way in which scientists arrive at explanations; that is, in a fairly logical and analytical manner. Heider's most important thesis is that perceived causality influences the perceiver's responses and actions. He elaborated this theory via several propositions, of which we summarize the most influential here.

The first key tenet of Heider's work is the distinction between actions due to personal causes versus those that are related to the environment. In other words, the attributions people make are dependent on whether the locus of causality for the behavior or event is the person (internal), or the environment (external), or both. Internal locus consists of both motivation and ability. For instance, an employee might be late for work because he or she is unmotivated or lacks the ability to arrive on time. However, motivation and ability are often insufficient; situational (external) factors also influence attributions. For example, if the employee is late on a morning with a blustery snowstorm, then arriving to work on time is a joint feature of the weather, motivation and ability. The manager uses information about motivation, ability, and situational factors to infer the cause of the event.

Kelley's Attribution Theory

Heider's theory was further expanded by Kelley (1967, 1973) who wrote several theoretical papers that drew attention to how individuals infer causes about a person's behavior or events. When a person has access to multiple instances of the same behavior or situation, Kelley ((1967, 1973) outlined three types of covariation information that influence whether an observer attributes a person's behavior to internal or external causes. The first is distinctiveness, which refers to the extent to which a person behaves in the same way across similar situations. If the manager is irritable at home and at work (low distinctiveness), then an observer makes an internal attribution (e.g. the manager is generally an irritable person). Observations of different people allow for judgements to be made about the second type of covariation information, that is, consensus. If coworkers agree that the manager is irritable (high consensus), they make an internal attribution. The third is consistency, which refers to the extent to which a person behaves consistently over time. If the manager has been frequently irritated in the past, observers make an internal attribution because, regardless of the environment, the manager becomes irritable on a frequent basis.

Weiner's Attribution Theory

The third, and final model of attribution that we review here is the work of Weiner (1979). Weiner therefore extended Heider and Kelley's attribution theories by suggesting a temporal order for attributions, in that individuals consider the reasons for behavior or actions after the event which brings dynamism to the theory, in that these attributions can change over time according to the situation. According to Weiner and colleagues, any task success or failure is followed by a search for the cause of the outcome along three dimensions: locus of causality (as in Heider's work), stability, and controllability (Weiner, 1979; Weiner et al., 1972). The stability of the behavior echoes Kelley's work yet it is more clearly articulated by Weiner to explain how causal analysis is most informative when stable causes are identified (e.g. dispositions). Controllability is also important because people do not make causal attributions solely to understand why something happened, but also to control future events. Different combinations of locus of causality, stability and controllability in an achievement context are associated with attributions of ability, effort, task difficulty, and luck. For example, an employee is likely to make an ability attribution ('My pitch wasn't good enough to make the sale') when the cause of the failure is seen as due to stable ('I am not a good salesperson') and controllable ('I had the resources necessary to make the sale') factors (Fiske & Taylor, 1991).

Dimensions of Attribution Complexity

Fletcher et al. (1986) developed dimensions of the attributional complexity to form the complexity of the attribution schemata which explain human behavior. The model have seven attribution constructs: a motivational component, preference for complex rather than simple explanations, metacognition concerning explanations, awareness of the extent to which people's behaviour is a function of interaction with others, a tendency to infer abstract or causally complex internal

attributions, a tendency to infer abstract, contemporary, external causal attributions, and a tendency to infer external causes operating from the past.

Four dimensions of attributional Complexity are (i) motivation, (ii) complex v/s simple, (iii) interactive ability and (iv) Internal and external attributes.

(i) Motivation

Motivation is an internal and external process. It is a drive, where it needs a change within or environment. Motivation is something which prompts compels and energizes individual to act or behave in a particular manner at a particular time for attaining some specific goal. Motive might be considered as energetic force working within the individuals to compel, persuade or inspire him to act either for satisfaction of his basic needs.

(ii) Complex v/s Simple Explanations

Complex behaviour is composed of interconnected parts, it is characterized by a very or involved arrangements of components. It is an informal term when a person develops a belief that a particular situation is dangerous or embarrassing. There are a lot of thoughts given into work. Simple is something that is free of thought and complex is too much thinking.

(iii) Interactive Ability

It refers to the ability to interact with the external world to achieve a task. Interaction skill is the fundamental of a communication. Effective interaction means transmitting and receiving information and communicating actively with others in an effective manner.

(iv) Internal and External Attributes

Internal attribution lies inside the person for the behaviour where as external attribution refers to all those factors outside the individual for the cause of

behaviour. Internal attribution is more of a personal reason where as environment affects the external attributes.

Kelley's (1967) Attribution is another way of understanding how we determine if a person's behavior is due to internal or external causes. This model is based on the analysis of variance and is an interesting way of thinking about how people make attributions. An illustration of his model can be found here. Some people have a difficult time getting a grasp on the concept of attributional ambiguity. Recall that the theory of correspondent inference states that when a person is behaving in a manner that could be due to several different reasons, people have a difficult time determining if the behavior is due to something about the person (dispositional attribution) or the situation.

Studies Related to Attributional Complexity

Fletcher et al. (1986) Attributional complexity: An individual differences measure describes the development of a scale that measures the Complexity of attributional schemata for human behavior – the attributional complexity scale. Attributionally complex scale compared with attributionally simple scale spontaneously produced more causes for personality dispositions and selected more complex causal attributions for simple behavioral events. Implications for various issues in social cognition are discussed.

Fletcher et al. (1990) analysed bias and accuracy in attitude attribution: The role of attributional complexity. This study examined the relation between attributional complexity and the correspondence bias: the tendency to assign dispositions that are congruent with behavior that is performed under powerful external constraints. Subjects read essays that were written by a separate group of subjects who had been randomly assigned to write essays that either supported or opposed the legalization of homosexuality. The results are discussed in relation to

different explanations for the correspondence bias, and the conditions under which elaborate and complex attributional schemata will be an advantage to the naive psychologist.

Funder et al. (2008) analyze the social behavior and reputation of the attributionally complex is a construct designed to describe individual differences in the motivation and preference for complex attributions for behavior. Scores on the Attributional Complexity Scale have been found to be related to a lesser propensity to error and greater accuracy in social judgment. Behavior of individuals higher in attributional complexity was directly observed to be relatively open, positive, expressive, and socially skilled. Although attributional complexity was unrelated to academic achievement or SAT scores, those higher in attributional complexity tended to be described by peers as having social wisdom, thoughtfulness, empathy, and openness.

Navarro (2017) developed Attributional Complexity Scale. It is a 28 item scale, self report scale designed to measure seven primary attributional constructs (Fletcher et al., 1986). It is intended to produce a single score that represents an individual's level of attributional complexity, defined as the degree to which an individual prefers complex (to simple) explanations for human behavior. The scale generally produces internally consistent scores, although the factor structure has been shown unstable across administrations. Other validity concerns are related more generally to the self-reporting of what is ultimately a behavior. Correlations between attributional complexity scores and actual behavior tend to be small to moderate in magnitude.

Sun and Anderson (2011) studied the importance of attributional complexity for transformational leadership studies attributional complexity refers to the capability of discriminating and integrating dimensions related to social judgment in

order to understand social behaviour. While previous leadership research has examined the role of leader attributions, it has neglected the role of attributional complexity. We theorize and find support for a relationship between higher attributional complexity and transformational leadership behaviours, based on a sample of 100 leaders and their direct reports. Leaders who were more complex in their social judgments, attributing complex external and internal causes to others' behaviours and actions, were seen as more transformational by their direct reports. Our findings suggest that attributional complexity is a construct that warrants consideration in future research on both transformational leadership and leadership attributions.

Blumberg and Silvera (2011). Attributional complexity and cognitive development: A look at the motivational and cognitive requirements for attribution. Past research supports a sequential model of person perception that begins with automatic categorization of the behavior and ends with effortful correction for situational constraints (Gilbert, et al., 1988). Assuming that logical reasoning skills and motivation may limit one's ability to process attributional information, the relationship between cognitive development, attributional Complexity , and the correspondence bias were examined in a sample of undergraduate students (N = 222). As predicted, these individual differences influenced the degree of attributional error in unique ways. Participants at a pre-formal stage of cognitive development failed to correct fully for situational constraints, whereas attributionally simple participants erroneously categorized the behavior in the direction suggested by situational expectations.

Weiner (1985) An attributional theory of achievement motivation and emotion. In this chapter a theory of motivation and emotion developed from an attributional perspective is presented.

Fiske and Taylor, (1991) Attribution theory, HR attribution theory, HR system strength, HR process, review, HR theory. At the heart of attribution theory is the assertion that people are on a continuous quest to explain events that they encounter. Why did they reject my research proposal? Why did I receive a poor performance rating? Why is the train late? Attribution theory, originally developed by Fritz Heider in the early part of the twentieth century, ignited scholarly interest in such causal inferences.

Weiner, (2010) Although attribution theories generated great enthusiasm from social psychologists prior to the 1980s, attention has been on the decline. At the same time, the use of attribution theories in the field. In this study theory of motivation and emotion developed from an attributional perspective is presented. Yet some attributions particularly ability and effort in the achievement area, dominate causal thinking.

Hewett (2017) Attribution theories in Human Resource Management research: a review and research agenda. There is no doubt that attribution theories have made their mark in social psychology and other related disciplines, but their application and extension to the field of HRs is in its infancy. Indeed, HR scholars have recently realized that understanding the process by which individuals explain the causes of behaviors and events provides insight into a host of HR-related issues. despite shared foundations, these three streams of literature rarely overlap. We summarize and provide theoretical and empirical directions for future research within each research area to help steer courses in these areas. Importantly, we also draw connections among the three streams to inspire future research to stretch the bounds of current theorizing on attributions in the field of HR.

Lakshman (2013) a study on Biculturalism and attributional complexity: Cross-cultural leadership effectiveness. According to author, attributional patterns

and variations across cultures are crucial and call for high attributional complexity and attributional knowledge to reduce cultural distance.

Peterson et al. (1982) studied the attributional style questionnaire. In this study author explains attributional style questionnaire, which measures individual style questionnaire, which measures individual differences in the use of these attributional dimensions. Validity is discussed. It reports means, reliabilities, intercorrelations and test-retest stabilities for a sample of 130 undergraduates.

Estay and Chandrasekhar (2015) studied "Attributional complexity and leadership: Test of a process model in France and India". The study contributes to the literature by focusing on the hitherto unexamined empirical link between attributional complexity and accurate attributions. It tests the theoretical propositions of the model focusing on the process through which attributional complexity of managers affects the accuracy of their attributions.

Flett et al. (1989), a study on depression and components of attributional complexity. The hypothesis is that the depression is associated with increased attributional complexity 20 scales completed the Beck depression inventory and attributional complex scale. Higher the level of motivation to engage in attributional processing, the tendency to make complex external attributions, the use of temporal information.

Theoretical Overview on Academic Resilience

Resilience is the process of adaption in the phase of adversities. Academic resilience is the process of being able to adapt well and bounce back quickly in academic context despite of adversities. Resilience is a psychological construct observed in some individuals that accounts for success despite of hardship. Resilience reflects the ability to bounce back, to beat the odds and is considered an

asset in human characteristic terms. Resilience simply means dealing with stress at times. That is, demonstrating resiliency doesn't mean that one have not suffered difficulty or distress or any kind of emotional pain. The road to resilience is often paved with emotional stress and strain by dealing it.

Academic Resilience refers to the ability of students to make the effort to succeed in despite adverse circumstances by changing existing behaviors or developing new ones, such as discipline, practice, or planning. One major factor that contributes to resilience is the experience of harnessing positive emotions, even in the midst of stressful situations. Positive attitude develops resilience in different ways. Positive attitudes help students to build social, psychological, and physical resources over time, which could help to attain coping skills. According to Fredrickson's broaden-and-build theory (Fredrickson, 1998), positive emotions can help broaden your momentary thoughts, actions, and attention to your surroundings. Emotions of joy and interest, which encourages one to approach loved ones and build stronger bonds. Positive emotions help in building personal resources, which can act as a buffer from psychological distress in stressful situations. The factors like positive emotions, experience and environment or situation will affect resilience of a person. This can help him to be effective at managing challenging tasks and help him to live life with energy and vitality.

Resilience is the way of adapting in the face of hardships. Research indicates that this trait is usual, not unusual, as people commonly demonstrate resilience through life experiences (Chung, 2008). Academic resilience includes behaviors and actions that canbe learned and (Wright & Masten, 2005) develop in. Resilience can be cultivated through practices in individuals.

Many studies show that the most important comforting environment affecting resilience is having supportive friends and family relationships. On the

other hand, different risk factors from family also affect the development of resilience. Both of these directly affect children's academic performance as well. Academic resilience can be described as the potential to deal with adversity, stress or pressure in academic context .

According to the American Psychological Association (APA, 2012) resilience is defined as the process of adapting well in the face of trauma or tragedy, threats or other significant sources of stress. When it comes down to it, the concept of resilience is a complex one. Resilience is more likely to exist on a continuum that may present itself in differing degrees across multiple domains of life (Southwick et al., 2014). For example, a student may be very resilient in his personal life and relationship but not in his academic. That is, it implies the idea of resilience is relative and depends upon the situation.

Academic resilience may also change over time depending on interactions and the surroundings. The more that is learned about resilience, the more potential there is for integrating those into relevant areas in his lifetime. This integration initiates to foster an important shift in thinking.

Developing skills of resilience can help to face challenges and difficulties in life, which can help to feel better and cope better. In essence, resilience helps you to handle stress more positively. It's naturally obvious to have a tendency to try and control things. There are things one can control in life but there are also things one cannot. Developing resilience is a personal process. Each of us reacts differently to stress and trauma. Few wards bounce back quickly while others tend to take longer. What works well for one person may not necessarily work for another, which is one of the biggest reasons to understand multiple techniques for enhancing resilience.

A resilient one would understand that sometimes things just happen. They aren't a victim. Committing to all aspects of one's life means understanding that everything in one life is interconnected. That is, there isn't any one thing that will

suddenly make anyone happy. Having a positive outlook of the future and accepting a growing mindset is probably one of the simplest things one can do to build resilience. Cultivating a growing mindset involves the desire to open and adaptable and learning to change.

The Major Factors Contributing to Academic Resilience

There are many ways to increase academic resilience. Some of those include having a good support system, maintaining a positive environment, having a good self- image and having a positive attitude. Other factors that contribute to academic resilience are

- Having the capacity to make realistic plans.
- Being able to carry out those plans.
- Being able to effectively manage your feelings and impulses in a healthy manner.
- Having good communication skills.
- Having confidence in your strengths and abilities.
- Having good problem-solving skills.

Developing academic resilience helps in maintaining relationships with others and helps to maintain a positive and easygoing disposition. It also helps in developing good coping skills and improve cognitive thinking skills. Those who develop resilience tend to cope much better with life than those who aren't resilient and they may even be happier. Some people are naturally more resilient, however, one can work to enhance their level of resilience.

Characteristics of Academic Resilience Behaviour

There are many factors that contribute easy facilitation for practice of academic resilience. Some characteristics of Academic Resilience include:

1. Utilize long term feedback.

2. Reframing setbacks as opportunities for development.
3. Recognizing cognitive distortions as false beliefs.
4. Emotional Regulation in learning behaviour.
5. Focusing on events you can control.
6. Not seeing yourself as a victim.
7. Committing to all aspects of learning behaivour.
8. Developing a positive outlook about the future.

Resilience is the process of being able to adapt well and bounce back quickly in times of stress. This stress may manifest as family or relationship problems, academic problem, situational problems, serious health problems, problems in the workplace or even financial problems to name a few. Developing resilience can help you cope adaptively and bounce back after changes, challenges, setbacks, disappointments, and failures. Research has shown that resilience is common. People tend to demonstrate resilience more often than you think.

The Dimensions of Academic Resilience

McCraty (2007) formulated and developed four practical dimensions or component resilience. Which are used as the theoretical components of resilience for the present study.

a) Sense of Well-being

A sense of well-being refers to a positive state of mind which helps the learner to interact positively with peers and teachers. It focuses on academic self-concept, social integration, attentiveness in the teaching-learning process and positive attitude in adverse situations. Well-being is the experience of good health, positive feel, and prosperity. It includes having good mental health, life satisfaction, a sense of purpose, and ability to manage and understand stress. In simpler words, well-being is just feeling well.

b) Academic Confidence

It refers to having a definite expectancy or strong belief in academic field. Simply it can be said as a person's confidence in their potential to organize, execute and regulate performance in order to solve or accomplish a task at a designated level of skill. Academic confidence is the student's belief about performing a task at a particular level in order to attain a specific academic goal (Sander & Sanders, 2005). Confidence plays an important role in student's learning. Students with higher level of academic confidence are proved to be high achievers.

c) Emotional Regulation and Motivation

Motivation is an inspiration that propels somebody to action or achieves something. Motivation is known to be the driving force to meet targets and process to sustain the drive. The one with motivation tends to stay in his path throughout journey and could get back if deviated. Emotional regulation is the ability to manage feelings. Emotional control helps to students to stay focused on the matter without outbursting. This helps him to be more resilient and understand the situation.

d) Physical Health and Ability to Achieve Goal

Physical health is an important aspect and it boost one's confidence. Better physical health knowingly or unknowingly by helps the child to worry less and stay focused or aim high.

Studies Related to Academic Resilience

Wang et al. (1994) studied on the educational resilience: An emergent construct psychological theory hold that resilient infants, children and youth can do well even in adverse situations. In each context it suggests improved practices and collaborative roles of teachers and parents.

Jowkar et al. (2014) studied 'Academic resilience in education: The role of achievement goal orientation. Participants are 606 students. Findings shows that achievement goal orientation has a critical role in student's academic achievement.

Cassidy (2015) conducted a study "Resilience building in students: The role of academic self-efficacy". Present study is to establish examples of context-specific resilience factors and resilience responses to academic adversity. Findings explains that one approach to building academic resilience in students. It illustrates how self efficacy influence responses to adversity, the propensity to advocate greater resilience for peers facing adversity.

Abiola and Udofia (2011) reported higher perceived stress, anxiety and depression in low resilience medical students following completion of a major professional examination. The study confirms that resilience scale and resilience scale-14 may be potentially useful instruments to measure resilience in Nigerians.

Martin and Marsh (2006) academic resilience. Described as the capacity to overcome setbacks, challenges, and difficulties that are part of everyday academic life. It is seen as distinct from academic resilience, which instead relates to the capacity to overcome significant adversity that threatens a student's educational development. It explains educational and psychological correlates of academic resilience using within network and between network validity approaches. Study evaluates individual level academic resilience and individual level psychological factors.

Waxman et al. (2003) suggest that studying resilient students will provide important implications for improving the education of students at risk of academic failure and evidence already exists supporting the relevance of academic resilience. Study analyzes how the learners succeed in stress situations. Some students are not successful in school is one issue of the topic. Accordingly resiliency refers to factors

and processes that limit negative behaviors associated with stress and result in adaptive outcomes in the presence of adversity. They discuss the value of resilience studies that identify differences between resilient and non-resilient students and that focus on alterable factors to design more effective educational interventions. They suggest that focusing on educational resilienceand those factors that can be altered to promote resilience may help address the gap in achievement between those students who are successful and those who are at risk of failure.

McLafferty et al. (2012) reported that both resilience and emotional intelligence predicted coping at university, with resilience as the only significant unique predictor of coping subscales for grades, attendance, and studying. It identifies way to help students cope better with university life and their careers.

Wagnild and Collins (2009) further suggest that assessing resilience can be promoted by focusing on alterable factors including mental health, social competence, problem-solving skills, autonomy, a sense of purpose, motivation and goal orientation, positive use of time, family life, and learning environment. Study focuses middle aged and older adults.

Munro and Pooley (2009) suggests that resilience may mediate adversity and success in university students. Study focuses student adaptation to University. Resilience is important in adaptation to any situation.

Jameel et al. (2015) conducted a study on resilience in orphan and non-orphan children. The objective of this study was to investigate resilience among orphan and non-orphan children. The study was carried out in two orphanages and two schools run by Government in Tricity- Chandigarh, Panchkula and Ajitgarh (Mohali) in India. Standardized tool was used to assess resilience of the subjects. The findings revealed that major reason for living in the orphanage was death of parents, closely followed by financial problems of single parenthood. Majority of

children were left in these institutes by their mothers and relatives. Most of orphan children had relatives too, whom they visited 1-2 times in a year. There was significant difference in resilience of orphan and non-orphan children, with orphan children having higher resilience than that of non-orphan children.

Malik and Yasin (2012) studied the Resilience, Self esteem and Delinquent Tendencies among Orphanand Non-Orphan Adolescents. The present study aimed at studying the relationship between psychological resilience, self esteem and delinquent tendencies among orphan and non orphan adolescents. A significant negative correlation between self esteem and delinquent tendencies whereas, a significant positive correlation between selfesteem and resilience was found. T-test analysis revealed significantly high level of resilience in orphans as compared to non orphan adolescents however non-orphans were found to have more delinquent tendencies than orphan adolescents. These results are helpful foracademicians and psychologist to sort out and deal the problems of orphan and non- orphan adolescents and to take preventive measures to solve their problems regarding high level of delinquent tendencies and low level of resilience.

Lee et al. (2012) identifies the concept of resilience is reviewed from a range of disciplinary perspectives in this paper. Both broad and narrow definitions of resilience are highlightedand a working definition of resilience is proposed to inform research, policy and practice. Different psychological, social and ecological protective factors, particularly competence, optimism, and bonding to family and cultural beliefs are highlighted. Theoretical relationships between resilience and positive youth development are examined with an attempt to erase misunderstandings. Finally, how schools can promote resilience among students is discussed.

Onkari and Itagi (2019) carried out a study on resilience among orphans those who are stayingin rural area was conducted in the year 2016-2018 in Dharwad

taluk. The study focusedon resilience of orphan students . About 124 orphans were randomly selected in the age range of 6 to 18 years to know their resilience. Resilience scale developed by Embury (2007), socio-economic status scale by Aggarwal et al. (2005) and self-structured questionnaire were used to collect auxiliary information. Negative and significant relation found between resilience and vulnerability. Vulnerability and birth order of children predicted 80.2 per cent of variation in the resilience among orphans.

Rutter (2012) attempted to find out a definition on resilience, which are closer to one another than might appear at first. Luthar emphasizes that a child may demonstrate resilience in one domain, but suffer disorder in another domain. For example, she describes children who suffer significant adversity and yet demonstrate academic competence, as measured through a variety of means. Yet some of these children also suffer a variety of psychological and emotional disturbances ranging from anxiety to depression. Hence, resilience in one domain (educational) co-exists in the same child with psychological/emotional disorder (Luthar 2006).

Hunter and Chandler (1999) conceptualizes resilience in a continuum with two poles: less optimum resilience and optimum resilience. Less optimum resilience includes “survivaltactics of violence, high risk behaviors, and social and emotional withdrawal” (Hunter, 1999). Hunter’s main point is that adolescents who display this kind of resilience often are maladapted as adults.

Academic Resilience among Orphanage Students

Resilience is defined as an individuals’ ability to properly adapt to stress and adversity. Stress and adversity can come in the shape of family or relationship problems, health problems, or peer group problems, among others. Resilience is not a rare ability, in reality, it is found in the average individual and it can be learned and developed virtually anyone. People who demonstrate resilience are people with

broad mindset. They are conscious to balance negative emotions with positive ones. There are numerous factors, which cumulatively contribute to a person's resilience. Important factor is having positive relationship inside or outside one's family. It is the single most critical means of handling both ordinary and extraordinary levels of stress. Hence resilience has a key role in the behavior formation of any student. Resilience is the result of individuals being able to interact with their environment and the processes that either promote well- being or protect them against the overwhelming influence of risk factors. Studies show that these are several other factors which develop and sustain a person's resilience.

1. The ability to make realistic plans and being capable of taking the steps necessary.
2. A positive self concept and confidence, one's strengths and abilities.
3. Communication and problem solving skills.
4. The ability to manage strong impulses and feelings.

These can be developed in any individual and they promote resiliency.

Children are crucial for deciding how the world is going to be after some years. Family plays an influential role in the development of children. All children need healthy relationship with parents. Not only parents nourish their children and leave an impressionable mark on their personality but also help them to cope with their personal problems particularly emotional as well as problems related to their school, studies and fight with friends during budding years. Sadly, some children are not lucky and get separated from their parents at a very early age due to some reason. The phenomenon of early separation of a young child from his parents is parental deprivation. It creates psycho-social problems for children. Being deprived of parental care and familial protection, such children get lesser opportunities for wider interactions with the physical and social world outside their neighborhood. It is very hard for them to live a happy and normal life due to

inability to meet their varied needs and cope with problems like insecurity, stress, anxiety and loneliness. The term 'orphan' is used more liberally to include young people bereft of parent and/or any person bereft of protection and economic advantage because of the loss of the parent. An orphan is operationally defined as a child who is below 18 years of age and is deprived of parental care due to death of one or both the parents or because of abandonment by parents. India is the world's largest democracy with a population of over a billion people, of which 400 million are children. All these changes can easily affect the physical and psychological well-being of a child.

There is steady increase in the number of orphans in Kerala who are particularly vulnerable as they are without means of psychological, financial, social and parental support. The loss of an attachment figure or parent affects every aspects of a child's life: their emotional wellbeing, physical security, mental and educational development and overall health (Maundeni, 2013). Research studies have consistently shown that parental loss in childhood and the absence of a warm, quality caretaker does effect depression in childhood and eventually in the adulthood (Cozolino, 2006). The stage of adolescence tends to be the most difficult one throughout the life cycle. Many boys and girls of this age seem to cause problems in the family, school and community (Melgosa, 2011). Erikson's psychosocial theory on adolescence stage shows that these children are faced with psychosocial crisis of identity vs. role confusion. They experiment with variety of activities (Erikson, 1974). It was therefore the main aim of this research to find out on school-based psychosocial support. Psychosocial support is generally classified into three types namely information, which consists of the provision of guidance and advice; instrumental, which comprises the provision of tangible assistance including goods, services and money; and emotional, which includes the provision of warmth and empathy (Taylor, 2007).

Children are the greatest assets of our nation. Investing in them is investing for a better future for our country and for our world. Considering all the reality of the presentsituations faced by some children (orphans) in our society, it is important to provide care in their social and personal development.

The number of orphans and vulnerable children in various part of the country are growing. children are denied equal opportunities for education because of caste, class and gender differences. Poor or orphaned children are unable to get a chance to learn. They often drop out of school to help provide for themselves or their family, even at their early age. Without education, the children will be subjected to a life of extreme poverty and, at times, may be forced into bonded labor. Research shows that self-regulated students are more engaged in their learning. Furthermore, other studies revealed that, depending on the outcome measure, self-regulation, self-efficacy, and test anxiety emerged as the best predictors of performance. In addition, other studies found that familial, societal and school factors were the most significant factors in relation to resilience. It is clearly important to develop self-understanding and healthy self-esteem. Research have revealed that the metacognitive ability will support the way in which children are engaged in complex situations like cognitive complexity and eventually leads to cognitive development and hence results in being much more resilient. A synchronic conjunction of these personality variable will leads to enhanced growth of personality of the orphanage students.

Conclusion

From the overview of the literature, we could get a broader perspective of the given problem. The researcher reviewed the literature to a great extend. Each study includes investigator's name with year of investigation, title, objective and findings of the study. But the investigator couldn't find much studies related to metacognition, attributional complexity and academic resilience among orphanage students. Only a

single study done by Narayan (2009) was found on the related variables. This indicates that there is a need to further explore the influence of Attributional Complexity and Metacognition on Academic Resilience. This prompted the investigator to take up the present study.

Chapter 3

Methodology

- Variables of the Study
- Objectives of the Study
- Hypotheses of the Study
- Method Adopted for the Study
- Sample used for the Study
- Tools used for the Study
- Description of the Tools
- Procedure Adopted for Collection of Data
- Scoring and Consolidation
- Statistical Techniques used for the Study

Methodology elaborate various steps of plan of action to be take on in solving a research problem, such as formulation of the problem, the definition of key terms, subjects for investigation, validity of tools used, collection of data, analysis and interpretation of collected data and the procedure of generalization. The selection of the method depends upon the nature of the problem selected and kind of data necessary for its solution. The validity and reliability of the findings depend upon the method adopted. It is the scientific way of approaching the problem. A preplanned and well described method will provide the researcher a scientific and feasible plan for solving the problem under investigation and hence methodology occupies a very important place in any type of research.

The major objective of the present study is to find out the influence of metacognition and attributional complexity on academic resilience among students at secondary level. The details of the variables, objectives, method adopted, sample selected for the study, tools used for the collection of data, procedures adopted for data collection, scoring and consolidation of data and statistical techniques used for the analysis of data in the present study are described in details under the suitable heads as given below.

Variables of the Study

"Variables are the conditions or characteristics that the experimenter manipulates, controls or observes" (Best & Khan, 2005). The present study involves three types of variable viz., dependent variable, independent variable and background variables.

Dependent Variables

The present study is an attempt to find out the influence of Metacognition and Attributional Complexity on Academic resilience among orphanage students. Hence the dependent variable of the study is

- Academic Resilience

Independent Variables

The independent variables of the study are

- Metacognition
- Attributional Complexity

Background Variables

Selected background variables of the present study are

- Gender
- Locality of students' residence
- Type of Management

Rationale for Selecting Variables

Independent variables of the study, metacognition and attributional complexity were decided after an initial review of related literature. The study was conducted in orphan students. Orphan students faces stressful situation and their life is not that easy as they are separated from the family. Secondary school going orphans are affected with a number of psychological and sociological issues like insecurity, anxiety in studies, unhealthy competition, coping strategies etc. To overcome this scenario the students should be academically resilient.

Metacognition is often simply defined as thinking about thinking. It emphasizes the executive role in the overseeing of cognitive processes in

student's day to day affairs. Actually defining metacognition is not simple. Although the term has been part of the vocabulary of educational psychologists for the last couple of decades, and the concept for as long as humans have been able to reflect on their cognitive experiences, there is much debate over exactly what metacognition is. One reason for this confusion is that there are several terms currently used to describe the same basic phenomenon, or an aspect of that phenomenon, and these terms are often used interchangeably in the literature knowingly or unknowingly. Resilient one's will exhibit qualities of metacognition as well.

When a student considers many possible causes for a problem, then psychologist says that they have high attributional complexity. Ability of discriminating and integrating dimensions related to social judgement is very helpful to be resilient. The highly resilient one will prefer complex rather than simple explanations for explaining human behavior. Investigator couldn't find any studies in the combination of these variables. These variables are relevant in the development of any student especially orphans. These variables are very important in building a sensible independent person.

Objectives of the Study

The following are the objectives of the present study:

1. To assess the extent of Metacognition among orphanage students.
2. To compare the Metacognition and its dimensions of orphanage students based on selected background variables.
3. To assess the extent of Attributional Complexity among orphanage students.
4. To compare the Attributional Complexity and its dimensions of orphanage students based on selected background variables

5. To assess the extent of Academic Resilience among orphanage students.
6. To compare the Academic Resilience and its dimensions of orphanage students based on selected background variables
7. To find out the relationship between Metacognition and Academic Resilience among orphanage students.
8. To find out the relationship between dimensions of Metacognition and dimensions of Academic Resilience among orphanage students.
9. To find out the influence of Metacognition on Academic Resilience among orphanage students.
10. To find out the influence of dimensions of Metacognition on Academic Resilience among orphanage students.
11. To find out relationship between Attributional Complexity and Academic Resilience among orphanage students.
12. To find out the relationship between dimensions of Attributional Complexity and dimensions of Academic Resilience among orphanage students.
13. To find out the influence of Attributional Complexity on Academic Resilience among orphanage students
14. To find out the influence of dimensions of Attributional Complexity on Academic Resilience among orphanage students.
15. To find out the influence of Metacognition and Attributional Complexity on Academic Resilience among orphanage students
16. To find out the influence of dimensions of Metacognition and Attributional Complexity on Academic Resilience among orphanage students.

Hypotheses of the Study

1. There exist significant gender difference in the mean scores of Metacognition and its dimensions of orphanage students.
2. There exist significant locale difference in the mean scores of Metacognition and its dimensions of orphanage students.
3. There exist significant type of management difference in the mean scores of Metacognition and its dimensions of orphanage students.
4. There exist significant gender difference in the mean scores of Attributional Complexity and its dimensions of orphanage students.
5. There exist significant locale difference in the mean scores of Attributional Complexity and its dimensions of orphanage students.
6. There exist significant type of management difference in the mean scores of Attributional Complexity and its dimensions of orphanage students
7. There exist significant gender difference in the mean scores of Academic Resilience and its dimensions of orphanage students.
8. There exist significant locale difference in the mean scores of Academic Resilience and its dimensions of orphanage students.
9. There exist significant type of management difference in the mean scores of Academic Resilience and its dimensions of orphanage students
10. There exist a significant relationship between Metacognition and Academic Resilience among orphanage students.
11. There exist a significant relationship between dimensions of Metacognition and dimensions of Academic Resilience among orphanage students.
12. There exists a significant influence of Metacognition on Academic Resilience among orphanage students.
13. There exists a significant influence of dimensions of Metacognition on Academic Resilience among orphanage students.

14. There exist a significant relationship between Attributional Complexity and Academic Resilience among orphanage students.
15. There exist a significant relationship between dimensions of Attributional Complexity and dimensions of Academic Resilience among orphanage students.
16. There exists a significant influence of Attributional Complexity on Academic Resilience among orphanage students
17. There exists a significant influence of dimensions of Attributional Complexity on Academic Resilience among orphanage students.
18. There exists a significant influence of Metacognition and Attributional Complexity on Academic Resilience among orphanage students
19. There exists a significant influence of dimensions of Metacognition and Attributional Complexity on Academic Resilience among orphanage students.

Method Adopted for the Study

The selection of a method and the specific design appropriate to the research problem will depend upon the nature of the problem and collected data. Based on the topic and objectives of the present study the investigator has adopted the normative survey method. The word survey indicates gathering of data regarding current condition. It attempts to describe and interpret what exists at present in the form of conditions, practices, processes, trends etc.

Sample used for the Study

Population for the Study

A population means collection of particular group of human or non-human entities. The selection of a sample or sampling is an integral part of the research. It governs the reliability and dependability of the result obtained. Sample means a

small group drawn from a population carefully selected to reflect closely the characteristics of the population. A good sample of a population is one, which will reproduce the characteristics of the population with great accuracy, "sample is a small group selected from a large population: the sample is intended to reflect the population closely, so that findings made from the sample will be applicable to the population" (Charles, 1995). The population of the present study consisted of Orphanage students, perusing their education in secondary level. They can belong to any mode of curriculum like CBSE, ICSE, State Curriculum etc.

Sample Selected for the Study

Considering the special nature of the study and type of statistical methods used the size of the sample was tentatively fixed as eight hundred secondary students studying in any orphanages of Kerala. Investigator tried to make the sample a true representation of population. The sampling was done through an elaborate process. A detailed description of all these phases is given below.

Initial Sample for Analysis

Investigator collected 850 samples from different orphanages across Kerala. Some of the samples were incomplete and unresponded. So the investigator had to cut short the number of samples into 800.

The Final Sample for Analysis

The final sample for the study was fixed as eight hundred orphans studying at secondary level at various schools of Kerala. The tools were administered in the proper way. The details of the sub categories of final sample are given in the following table.

Table 1

District wise Breakup of the Sample Collected among Orphanage Students

Sl. No.	District	Male	Female	Total
1.	Kasaragod	20	24	44
2.	Kannur	34	39	73
3.	Waynad	40	49	89
4.	Kozhikode	65	78	143
5.	Malappuram	52	66	118
6.	Thrissur	40	44	84
7.	Kottayam	56	60	116
8.	Alappuzha	18	22	40
9.	Thiruvananthapuram	44	49	93
	Total	369	431	800

Factors to be Represented in the Sample

Factors to be represented in the sample selection are another important decision to be taken regarding sampling. The selected secondary school students have a wide representation of different demographic and background factors. As such the investigator decided to give representation to the following facets in the sample.

1. Gender
    a. Boys
    b. Girls
2. Locale of students' residence
    a. Urban
    b. rural
3. Type of management
    a. Aided
    b. Unaided
    c. Government

Break-up of the Sample based on Gender

Research studies shows that gender differences can influence the metacognition, attributional complexity and academic resilience. Hence gender was taken as a basis for the subsample. The total sample includes boys and girls students. The breakup of the sample of adolescents based on Gender is shown in Table 2.

Table 2

Break-up of the Sample based on Gender

Subsamples Category	Classification	Number	Percentage
Gender	Male	369	46.12
	Female	431	53.87

Break-up of the Sample based on Locale of Students

Research studies shows that Locale differences can influence the metacognition, attributional complexity and academic resilience. Hence Locale was taken as a basis for the subsample. The total sample includes students from urban and rural area. The break-up of the sample of adolescents based on Locale is shown in table 3.

Table 3

Break-up of the Sample based on Locale

Sub samples category	Classification	Number	Percentage
Locale	Urban	350	43.75
	Rural	450	56.25

Break-up of the Sample based on Type of Management

Investigator collected data from Government, Aided and Unaided schools. Research studies shows that type of management differences can influence the metacognition, attributional complexity and academic resilience. Hence type of management was taken as a basis for the subsample. The break-up of the sample of adolescents based on type of management is shown in Table 4.

Table 4

Break-up of the Sample based on Type of Management

Subsamples Category	Classification	Number	Percentage
Type of Management	Aided	325	40.62
	Unaided	275	34.37
	Government	200	25.00

Tools Used for the Study

A researcher used many tools for gathering data which may vary in their design, administration and interpretation. The success of a research study depends mostly on the nature of the tools and techniques used. According to Best and Khan (2005), the use of the particular tools depends upon the type of the problem, and each research tools is appropriate in a given situation to accomplish a particular purpose.

The following major tools were used for collecting data for the present study namely:

1. Metacognition Scale (Shahanas & Koya, 2017).
2. Attributional Complexity Scale (Shahanas & Koya, 2017).
3. Academic Resilience Scale (Shahanas & Koya, 2017).

Description of the Tools

Details regarding the tools used for the present study are given under relevant headings.

Metacognition Scale (Shahanas & Koya, 2017)

This scale measures the different Metacognition abilities of the orphanage students. The Scale (Draft Form) has 62 items which are measuring 05 task dimensions of Metacognition, they are: Planning, Monitoring, Knowledge, Evaluation and Regulation.

Planning

Planning is the mental process that allows us to choose the necessary actions to reach a goal, decide the right order, assign each task to the proper cognitive resources, and establish a plan of action. It is the systematic analysis of students performance with the intention of effective and efficient achievements to attain certain goals. Metacognitive skills include planning of students learning when engaging in a task systematic planning of the whole strategy is essential to solve the problem. Nine items comes under this category.

Eg. I categorize various areas of subjects based on its importance (positive)

I cannot change my learning strategy according to the changing circumstances (negative)

Monitoring

Self-monitoring is a concept by Snyder (1974) shows how much people monitor their self-presentations, expressive behavior, and nonverbal affective displays. Human beings generally differ in substantial ways in their abilities and desires to engage in expressive controls. Monitoring and control are very important in metacognition. Success of a task depends on monitoring of learning strategies. Metacognitive monitoring means how an individual monitor his own thinking process. Eight items comes under this category.

Eg. My self acquired skills lead me in studies (positive)

I am not aware of the factors develops in learning (negative)

Knowledge

Knowledge is a term that refers to the collection of facts, information and experience that a person has collected throughout their life and education that they are able to use and apply to new life experiences. It is a dimension of metacognition, which refers to what we know about our thinking process (Brown, 1987). Students

must have the knowledge about their strength and weaknesses in learning. Eight items are under this category.

Eg. I am aware of thoughts and feelings and able to express well (positive)

I don't have a clear understanding of priorities in learning (negative)

Evaluation

A psychological evaluation, or psychological testing, is a thorough process of assessment and screening administered by a psychologist. A psychological evaluation should be considered in cases where there is uncertainty about the reasons you or someone you love is having problems with mood, behavior, or learning. It is the reflection of learned concept and helps how much and how well one acquired the learning task. Evaluation is a key term while considering the metacognition process.

Eg. I am proud of my achievements related to learning (positive)

I don't think about the poor performance in the exam or try to correct it (negative)

Regulation

In the most basic sense, it involves controlling one's behavior, emotions, and thoughts in the pursuit of long-term goals. More specifically, emotional self-regulation refers to the ability to manage disruptive emotions and impulses. In other words, to think before acting. When a learner has high metacognitive regulation skills, then it is very easy to select suitable strategies for solving a problem and learner can modify their technique and methods to attain their goal. Controlling of mental thought process is very important in the development of a learner. Nine items comes under this category.

Eg. I understand that my opinion are not definite and will subject to change (positive)

I doubt whether I am able to think in multiple perspective of idea while engaging in learning (negative)

Each dimension has items evenly distributed, which will constitute 62 items of the Metacognition scale divided among 5 dimensions. The items numbered 4, 8, 9, 10, 12, 17, 18, 21, 23, 25, 29, 31, 33, 35, 36, 41, 42, 44, 47, 48, 50, 52, 56, 57, 60 and 61 are negative items, whereas all others are positive items. The item wise distributions with respect to dimensions are given in Table 5.

Table 5

Item wise Distribution with Respect to Dimensions of Metacognition Scale (Draft form)

Sl. No.	Dimensions	Item Type	Items	No. of Items
1	Planning	Negative	4, 8, 9, 10, 12	5
		Positive	1, 2, 3, 5, 6, 7, 11, 13	8
2	Monitoring	Negative	17, 18, 21, 23, 25,	5
		Positive	14, 15, 16, 19, 20, 22, 24	7
3	Knowledge	Negative	29, 31, 33, 35, 36	5
		Positive	26, 27, 28, 30, 32, 34, 37	7
4	Evaluation	Negative	41, 42, 44, 47, 48, 50	6
		Positive	38, 39, 40, 43, 45, 46. 49	7
5	Regulation	Negative	52, 56, 57, 60, 61	5
		Positive	51, 53, 54, 55, 58, 59, 62	7
Total				62

Pilot Study

Before finalizing the tool and collected data for the main study, a pilot study was conducted using sub sample of 100 students. Based upon the finding obtained in the pilot study, suitable modifications were incorporated in the scale and the methods have been standardized.

Further, the pilot study enabled to assess the reliability and validity of the tool used for the study try out of the test and standardization of test was conducted.

Pilot study was conducted and the item analysis was done for standardization of the test. The draft of the Scale was administered on a sample of 100 pupils at secondary level from the state of Kerala. The sample was taken by giving due representation to all sub sample. The procedure suggested by Edwards (1957) was followed for standardization of the test. The sum of the scores of all the items constituted the total score of the scale. The responses were arranged in the ascending order of the total scores of the respondents and the scores of the upper 27% and lower 27% were taken for item analysis. This criteria was used to evaluate each statement. The t values for all the items were found out using the formula

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{\frac{SD_1^{\,2}}{N_1} + \frac{SD_2^{\,2}}{N_2}}}$$

Where,

$\overline{X}_1$ = Mean for the first group

$\overline{X}_2$ = Mean for the second group

SD_1 = Standard deviation for the first group

SD_2 = Standard deviation for the second group

N_1= Size of the sample for the first group

N_2 = Size of the sample for the second group.

(Best & Khan, 1998)

The item with t value 2.58 and above were selected for the final tool, which possesses internal consistency and hence discriminating power (significant at 0.01 levels). Twenty statements having ‘t’ values lower than 2.58 were rejected from the draft form. Thus 42 statements were selected for the final scale. The details of item analysis is presented in Table 6.

Table 6

Details of the Item Analysis of Metacognition Scale

Item No	t-value	Item No in the final test	Item No	t-value	Item No in the final test	Item No	t-value	Item No in the final test
1	3.17	1	22	2.00	--	43	2.90	31
2	4.01	2	23	1.27	--	44	2.90	32
3	2.90	3	24	2.01	--	45	2.90	33
4	3.90	4	25	2.11	--	46	1.90	--
5	2.90	5	26	4.01	18	47	2.17	--
6	3.01	6	27	4.01	19	48	2.17	--
7	4.01	7	28	4.01	20	49	1.10	--
8	4.05	8	29	2.90	21	50	2.09	--
9	4.01	9	30	2.90	22	51	3.97	34
10	1.05	--	31	2.90	23	52	4.01	35
11	2.01	--	32	2.90	24	53	4.01	36
12	2.01	--	33	2.90	25	54	4.01	37
13	2.21	--	34	2.30	--	55	4.01	38
14	4.01	10	35	2.09	--	56	4.01	39
15	2.90	11	36	2.01	--	57	4.01	40
16	2.90	12	37	2.01	--	58	4.01	41
17	3.17	13	38	4.01	26	59	4.01	42
18	3.12	14	39	4.01	27	60	2.01	--
19	3.27	15	40	4.01	28	61	2.01	--
20	7.10	16	41	4.01	29	62	1.01	--
21	3.17	17	42	4.01	30			

Final Form of the Scale

The final test of the Scale consisted of 42 statements. Out of forty two statements 28 were positive and 14 were of negative views. The scale contained specific instruction for the respondents. Each dimensions of the Scale contains evenly distributed statements. All the statement in the dimension rate the different aspect of the dimensions of Matacognitive abilities of the students. To avoid the tendency to give a stereotyped response, items of positive and negative responses

were arranged logically. The distribution of statements and details of positive and negative items in the final form of the test is given in the following table 7.

Table 7

Item Wise Distribution with Respect to Dimensions of Metacognition Scale (Final Form)

Sl. No.	Dimensions	Item Type	Items	No. of items
1	Planning	Negative	4, 8, 9	3
		Positive	1, 2, 3, 5, 6, 7	6
2	Monitoring	Negative	13, 14, 17	3
		Positive	10, 11, 12, 15, 16	5
3	Knowledge	Negative	21, 23, 25	3
		Positive	18, 19, 20, 22, 24	5
4	Evaluation	Negative	29, 30, 32	3
		Positive	26, 27, 28, 31, 33	5
5	Regulation	Negative	35, 39, 40	3
		Positive	34, 36, 37, 38, 41, 42	6
	Total			42

Scoring Procedure

The positive statements scoring as follows: Always (5 Marks), Often (4 Marks), Frequently (3 Marks) Rarely (2 Marks) Never (1 Marks). The negative items scoring are given as follows: Never (5 Marks), Rarely (4 Marks), Frequently (3 Marks), Often (2 Mark), Always (1 Marks). The students took 25 minutes to complete the scale.

Reliability

The reliability of the test is defined as the degree of consistency with which the test measures what it intends to measure. The reliability of the Scale on Metacognition was found by using test retest method and the obtained coefficient of correlation is 0.806. Hence the tool is highly reliable and accepted.

Validity

To establish the face validity and content validity, investigator submitted the tool to experts and they found items are adequate for further procedure. Thus, the scale was capable of measuring metacognition of orphanage students. Therefore, it has adequate face validity and content validity. Concurrent validity of Metacognition Scale was established by comparing the scale with another standardized Metacognitive Awareness Inventory developed by Schraw and Dennison (1994). Both the test was applied on a sample consisted of 100 orphanage students. The Pearson Product Movement Coefficient of Correlation was found to be 0.79. Which indicate that the scale is valid to measure Metacognition among orphanage students.

Attributional Complexity Scale (Shahanas & Koya, 2017)

A Scale on Attributional Complexity measures Attributional Complexity characteristics of the orphanage students. The draft form the Scale consisted of 50 items, which are measuring the following 4 task dimensions, viz., Motivation, Complex vs. simple, Interactive ability and Internal and external attributes.

Motivation

Motivation is the process that initiates, guides, and maintains goal-oriented behaviors. It is what causes you to act, whether it is getting a glass of water to reduce thirst or reading a book to gain knowledge. Motivation involves the biological, emotional, social, and cognitive forces that activate behavior. Motivation affect one's ability to process attributional knowledge. Motivation involves in the process of acquiring attributional complexity skill, one's helps in getting more explanations of a cause of motivated student always considers different possibilities for solving a problem. Seven items are included under this category.

Eg. When I study a subject, I often think of different ways to do it (positive)

I am not skillful in using learning strategies which are helpful (negative)

Complex vs. Simple

By definition, the words simple and complex are antonyms. Complex is complicated, simple is not complicated-literally exact opposites. And as the old saying goes, opposites attract, and the list of subject matter in which simple and complex are joined at the hip is quite substantial. Attributional complexity is a construct designed to describe individual differences in the motivation and prefer complex attributions of behaviour. This personality variable refers to the extent, that one prefers complex and multi explanations of behaviour. Eight items come under this category.

Eg. I usually conceive the complex ideas by dividing it into different components (positive)

I don't think about the poor performance in the exam or try to correct it (negative)

Interactive Ability

Interactive skills refer to the general ability to interact with the external world to accomplish a task. A typical interactive task requires the person to look for relevant information and choose the right actions. Attributional complexity is the degree to which an individual is interested in understanding the causes of other's behaviour (Fletcher et al., 1986). People with good level of attributional complexity are theoretically good psychologists. Attributional complexity plays an important role in social interactions which leads to form an interactive ability in students. This behaviour offers the existence of individuals in their society. Eight Items comes under this category.

Eg. I believe that I can change the attitude of my friends towards me (positive)

I don't bother about reasons behind other's action (negative)

Internal and External Attributes

In an internal or dispositional attribution, people infer that an event or a person's behavior is due to personal factors such as traits, abilities, or feelings. In an external, or situational, attribution, people infer that a person's behavior is due to situational factors. Kelley's (1973) attribution is another way of understanding how we determine if a person's behaviour is due to internal or external causes. The explanations that a student give to any learning situation. Eight items comes under this category.

Eg. I believe that self analysis of one's thinking is important (positive)

I do not have the ability to put any learning concept in my own words (negative)

The distribution of statements and details of positive and negative items in the draft form of the scale is presented in table 8.

Table 8

Item wise Distribution with Respect to Dimensions of Attributional Complexity Scale (Draft form)

Sl. No.	Dimensions	Item type	Items	No. of Items
1	Motivation	Negative	5, 7, 10, 11, 12	5
		Positive	1, 2, 3, 4, 6, 8, 9, 13	8
2	Complex vs. simple	Negative	17, 18, 21, 22, 24,	5
		Positive	14, 15, 16, 19, 20, 23, 25	7
3	Interactive ability	Negative	29, 31, 32, 37	4
		Positive	26, 27, 28, 30, 33, 34, 35, 36	8
4	Internal and external attributes	Negative	41, 43, 45, 47	4
		Positive	38, 39, 40, 42, 44, 46, 48 49, 50	9
Total				50

Pilot Study

Before finalizing the tool and collected data for the main study, a pilot study was conducted using sub sample of 100 students. Based on the findings obtained in the pilot study, suitable modifications were incorporated in the scale and the methods have been standardized.

Further, the pilot study enabled to assess the reliability and validity of the tool used for the study try out of the test and standardization of scale was conducted.

Pilot study was conducted and the item analysis was done for standardization of the tool. The draft of the Scale on Attributional Complexity was administered on a sample of 100 pupils at secondary level from the state of Kerala. The sample was taken by giving due representation to all sub sample. The procedure suggested by Edwards (1957) was followed for standardization of the scale. The sum of the scores of all the items constituted the total score of the scale. The responses were arranged in the ascending order of the total scores of the respondents and the scores of the upper 27% and lower 27% were taken for item analysis. This criterion was used to evaluate each statement. The t values for all the items were found out using the formula

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{\frac{SD_1^{\,2}}{N_1} + \frac{SD_2^{\,2}}{N_2}}}$$

Where,

$\overline{X}_1$ = Mean for the first group

$\overline{X}_2$ = Mean for the second group

SD_1 = Standard deviation for the first group

SD_2 = Standard deviation for the second group

N_1= Size of the sample for the first group

N_2 = Size of the sample for the second group. (Best & Khan, 1998)

The items with t value 2.58 and above were selected for the final tool, which possesses internal consistency and hence discriminating power (significant at 0.01 levels). Nineteen statements having 't' values lower than 2.58 were rejected from the draft form. Thus 31 statements were selected for the final scale. The details of item analysis are is presented in table 9

Table 9

Details of the Item Analysis of Attributional Complexity Scale

Item No	t-value	Item no. in the final test	Item No	t-value	Item no. in the final test	Item No	t-value	Item no. in the final test)
1	3.17	1	18	3.12	12	35	2.30	--
2	4.01	2	19	3.27	13	36	1.01	--
3	2.90	3	20	7.10	14	37	1.41	--
4	3.90	4	21	3.17	15	38	4.01	24
5	2.90	5	22	2.00	--	39	3.41	25
6	3.01	6	23	1.97	--	40	4.01	26
7	4.01	7	24	2.01	--	41	5.61	27
8	2.05	--	25	2.01	--	42	3.31	28
9	2.01	--	26	4.01	16	43	3.20	29
10	1.05	--	27	4.31	17	44	2.90	30
11	2.01	--	28	6.81	18	45	8.70	31
12	2.01	--	29	5.90	19	46	1.90	--
13	1.80	--	30	3.90	20	47	2.17	--
14	5.01	8	31	2.90	21	48	2.17	--
15	5.20	9	32	4.90	22	49	1.10	--
16	2.90	10	33	2.70	23	50	2.09	--
17	3.17	11	34	1.90	--			

Final Form of the Scale

The final test of the Attributional Complexity Scale consisted of 31 statements. Out of thirty one statements 20 were positive and 11 were of negative views. The scale contained specific instruction for the respondents. Each dimensions

contains evenly distributed statements. All the statement in the dimension rate the different aspect of the dimensions. To avoid the tendency to give a stereotyped response, items of positive and negative responses were arranged logically. The distribution of statements and details of positive and negative items in the final form of the test is given in the following table 10.

Table 10

Item wise Distribution with Respect to Dimensions of Attributional Complexity Scale (Final form)

Sl. No.	Dimensions	Item type	Items	No. of Items
1	Motivation	Negative	5, 7,	2
		Positive	1, 2, 3, 4, 6,	5
2	Complex vs. simple	Negative	11, 12, 15	3
		Positive	8, 9, 10, 13, 14	5
3	Interactive ability	Negative	19, 21, 22	3
		Positive	16, 17, 18, 20, 23	5
4	Internal and external attributes	Negative	27, 29, 31	3
		Positive	24, 25, 26, 28, 30	5
		Total		31

Scoring Procedure

In case of positive statements the scoring had been given as follows. Always (5 Marks), Often (4 Marks), Frequently (3 Marks), Rarely (2 Marks), Never (1 Marks). For Negative Statements the scoring has been given as follows Never (5 Marks), Rarely (4 Marks), Frequently (3 Marks), Often (2 Marks), and Always (1 Marks). The students took 20 minutes to complete the Scale.

Reliability

The reliability of the test may be defined as the degree of consistency with which the test measures what it intends to measure. The reliability of the Scale on Attributional Complexity was found by using test retest method and the obtained coefficient of correlation is 0.89. Hence the tool is highly reliable and accepted.

Validity

To establish the face validity and content validity of the Attributional Complexity Scale, investigator was submitted the scale to experts and items are adequate for further procedures. Thus, the scale was capable of measuring attributional complexity of orphanage students. Therefore, it has adequate face validity and content validity. Concurrent validity of Attributional Complexity Scale was established by comparing the scale with another standardized test on attributional complexity developed by Fletcher et al. (1986). Both the test was applied on a sample consisted of 100 orphanage students. The Pearson Product Movement Coefficient of Correlation was found to be 0.81. Which indicate that the scale is valid to measure Attributional Complexity among orphanage students

Academic Resilience Scale (Shahanas & Koya, 2017)

The Scale was used to measure the Academic resilience of score of the Orphanage students. The draft form of the scale consisted of 56 items which measures the 4 task dimension such as, sense of well being, emotional regulation and motivation, academic confidence, physical health and ability to achieved goal. It measures the following 4 task dimensions of Academic resilience.

Sense of Wellbeing

This is the ability to know how to handle situations effectively. To build competence, individuals develop a set of skills to help them trust their judgments and make responsible choices. Socio-economic status of a student is an important factor in deciding academic resilience. Environment around him helps to overcome the situation easily. A student having a mindset of sense of well being will have the urge to overcome the situation which makes him resilient. Nine items comes under this category.

Eg. I think every actions is purposive if it is good or bad (positive)

I don't think that good things will proceed to a painful experience (negative)

Academic Confidence

Ginsburg (2014) says that true self-confidence is rooted in competence. Individuals gain confidence by demonstrating competence in real-life situations. Connections, close ties to family, friends, and community provide a sense of security and belonging. Character Individuals need a fundamental sense of right and wrong to make responsible choices, contribute to society, and experience self-worth. Being academically confident helps a person in being academically resilient. Its a very prominent factor which help students to have a focus vision on future. Academically resilient student mostly trend to possess this quality. Nine items comes under this category.

Eg. If I do my best, I will achieve my learning goals (positive)

I don't bother about what others think about me (negative)

Emotional Regulation and Motivation

Ginsburg (2014) says that having a sense of purpose is a powerful motivator. Contributing to one's community reinforces positive reciprocal relationships. When people learn to cope with stress effectively, they are better prepared to handle adversity and setbacks. A resilient student has to possess regulation on his emotions and motivation. This will help him to stay compassionate. Motivation help students to thrive through the situation. Nine items comes under this category.

Eg. I engage only those activities which are needed to fulfil my desires (positive)

I believe that I don't have strength to face obstacles (negative)

Physical Health and Ability to Achieve Goal

Developing an understanding of internal control helps individuals act as problem-solvers instead of victims of circumstance. When individuals learn that they can control the outcomes of their decisions, they are more likely to view themselves as capable and confident. Physical exercises might helps the student to focus

somewhere else which relaxes him and later assess his problems. This can help him to look within and analyze the problem and which leads to attain the ability to achieve goal.

Eg. I am able to pursue a classroom activity even without the support of friends (positive)

I am not interested in challenging learning activities (negative).

The distribution of statements and details of positive and negative items in the draft form of the scale is presented in table 11

Table 11

Item wise Distribution with Respect to Dimensions of Academic Resilience Scale (Draft Form)

Sl. No.	Dimensions	Item Type	Items	No. of Items
1	Sense of well being	Negative	4, 6, 8, 9, 10, 13, 14	7
		Positive	1, 2, 3, 5, 7, 11, 12, 15	8
2	Academic confidence	Negative	21, 23, 24, 25, 26, 28	6
		Positive	16, 17, 18, 19, 20, 22, 27, 29	8
3	Emotional regulation and motivation	Negative	30, 34, 37, 39, 42	5
		Positive	31, 32, 33, 35, 36, 38, 40, 41	8
4	Physical health and ability to achieve goal	Negative	44, 46, 49, 53, 55	5
		Positive	43, 45, 47, 48, 50, 51, 52, 54, 56	8
		Total		56

Pilot Study

Before finalizing the tool and collected data for the main study, a pilot study was conducted using sub sample of 100 students. Based upon the findings obtained in the pilot study, suitable modifications were incorporated in the scale and the methods have been standardized. Further, the pilot study enabled to assess the reliability and validity of the tool used for the study try out of the test and standardization of test was conducted.

Pilot study was conducted and the item analysis was done for standardization of the test. The draft of the scale on Academic resilience was administered on a sample of 100 pupils at secondary level from the state of Kerala. The sample was taken by giving due representation to all sub sample. The procedure suggested by Edwards (1957) was followed for standardization of the scale. The sum of the scores of all the items constituted the total score of the scale. The responses were arranged in the ascending order of the total scores of the respondents and the scores of the upper 27% and lower 27% were taken for item analysis. This criterion was used to evaluate each statement. The t values for all the items were found out using the formula

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{\frac{SD_1^{\,2}}{N_1} + \frac{SD_2^{\,2}}{N_2}}}$$

Where,

$\overline{X}_1$ = Mean for the first group

$\overline{X}_2$ = Mean for the second group

SD_1 = Standard deviation for the first group

SD_2 = Standard deviation for the second group

N_1= Size of the sample for the first group

N_2 = Size of the sample for the second group. (Best & Khan, 1998)

The items with t value 2.58 and above were selected for the final tool, which possesses internal consistency and hence discriminating power (significant at 0.01 levels). Nineteen statements having 't' values lower than 2.58 were rejected from the draft form. Thus 37 statements were selected for the final scale. The details of item analysis is presented in table 12

Table 12

Details of the Item Analysis of Academic Resilience Scale

Item No	t-value	Item no. in the final test)	Item No	t-value	Item no. in the final test	Item No	t-value	Item no. in the final test
1	3.17	1	20	7.10	14	39	2.01	--
2	4.01	2	21	3.17	15	40	2.01	--
3	2.90	3	22	2.90	16	41	2.01	--
4	3.90	4	23	4.97	17	42	1.81	--
5	2.90	5	24	4.01	18	43	2.90	28
6	3.01	6	25	1.51	--	44	2.90	29
7	4.01	7	26	2.01	--	45	2.90	30
8	4.05	8	27	1.31	--	46	2.90	31
9	4.01	9	28	1.91	--	47	3.17	32
10	2.05	--	29	1.90	--	48	5.17	33
11	2.01	--	30	2.90	19	49	3.10	34
12	1.01	--	31	2.90	20	50	3.09	35
13	2.01	--	32	2.90	21	51	4.17	36
14	2.01	--	33	2.90	22	52	6.90	37
15	1.90	--	34	2.90	23	53	1.94	--
16	2.90	10	35	--	24	54	1.86	--
17	3.17	11	36	4.01	25	55	2.30	--
18	3.12	12	37	4.01	26	56	2.20	--
19	3.27	13	38	4.01	27			

Final Form of the Scale

The final test of the Scale on Academic Resilience consisted of 37 statements. Out of the Thirty Seven 24 were positive and 13 were of negative views. The scale contained specific instruction for the respondents. Each of

specific dimensions of Academic Resilience contains specific number of statements. All the statement in the dimension rate the different aspect of the dimensions. To avoid the tendency to give a stereotyped response, items of positive and negative responses were arranged logically. The distribution of statements and details of positive and negative items in the final form of the test is given in the following table 13.

Table 13

Item wise Distribution with Respect to Dimensions (Final form) of Academic Resilience Scale

Sl. No.	Dimensions	Item Type	Items	No. of items
1	Sense of well being	Negative	4, 6, 8, 9	4
		Positive	1, 2, 3, 5, 7	5
2	Academic Confidence	Negative	15, 17, 18	3
		Positive	10, 11, 12, 13, 14, 16	6
3	Emotional regulation and motivation	Negative	19, 23, 26	3
		Positive	20, 21, 22, 24, 25, 27	6
4	Physical health and ability to achieve goal	Negative	29, 31, 34	3
		Positive	28, 30, 32, 33, 35, 36, 37	7
Total				37

Scoring Procedure

The positive statements scoring as follows: Always (5 Marks), Often (4 Marks), Frequently (3 Marks) Rarely (2 Marks) Never (1 Marks). The negative items scoring are given as follows: Never (5 Marks), Rarely (4 Marks), Frequently (3 Marks), Often (2 Mark), Always (1 Marks). The students took 25 minutes to complete the scale.

Reliability

The reliability of the test is defined as the degree of consistency with which the test measures what it intends to measure. The reliability of the Scale on Academic Resilience was found by using test retest method and the obtained coefficient of correlation is 0.906. Hence the tool is highly reliable and accepted.

Validity

To establish the face validity and content validity of the Scale on Academic Resilience investigator was submitted the scale to experts and they found items are adequate for further procedures. Thus, the scale was capable of measuring academic resilience of orphanage students. Therefore, it has adequate face validity and content validity. Concurrent validity of Resilience Scale was established by comparing the scale with another standardized test on Resilience developed by Cassidi (2015). Both the test was applied on a sample consisted of 100 orphanage students. The Pearson Product Movement Coefficient of Correlation was found to be 0.73. Which indicate that the scale is valid to measure Resilience among orphanage students.

Procedure Adopted for Collection of Data

The present study is confined to the secondary school going orphans those who are residing in orphanages. Investigator visited various orphanages and collected data with the permission of orphanage authority. Investigator explained how to respond each item. It took two days to collect data from most of the institutions. A few of them were bit reluctant to respond and a few were enthusiastic to respond. It was ensured that they respond to every item as well. It was time bounded and the students finished within the time limit.

Table 14

List of Orphanages and Number of Samples Selected for Each Category

Sl. No	Name	District	Locale	Gender		Management
				Boys	Girls	
1	SMSS Hindu Mahila Mandiram Orphanage, Poojappura	Trivandrum	Urban	--	13	Govt.
2	Jayamatha Orphanage Nalanchira		Urban	19	--	Govt.
3	Christian Mission Service Childrens Home, Medical College PO, Kannanmoola		Rural	11	--	Aided
4	Boys Town, Manvila, Kulathoor		Rural	14	--	Unaided
5	CSI Balika Mandiram, LMS Compound, Attingal PO		Urban	--	21	Unaided
6	St. Joseph's Home for Girls, Undancode, Karakkonnam PO		Rural	--	15	Govt.
7	Sarada Devi Balika Sadanam, Swami Vivekanda Cultural Society, Avaloomkunnu PO	Alappuzha	Urban	--	10	Aided
8	Nadvathul Islam Yatheemkhana, Nadvath Nagar PO		Rural	12	--	Aided
9	Ma-u-Din--u-Uloom Orphanage, Arattupuzha North PO		Urban	6	12	Unaided
10	Boys Town, Karoor PO	Kottayam	Urban	16	--	Unaided
11	St. Germane's Balika Bhavan, Changanassery		Urban	--	14	Aided
12	St. Pius Balika Bhavan, Pala		Urban	--	18	Govt.
13	Girls Town, Kozhuvanal, Palai		Rural	--	28	Unaided
14	Poor Boys Home, Muttambalam, Thottakam		Urban	8	--	Unaided
15	St. Vincents Bhalabhavan, Thottakam		Urban	8	--	Unaided
16	Sanjose Balabhavan, Elamkulam, Koorali PO		Rural	24	--	Unaided
17	Cheraman Malik Manzil Orphanage, Kodungallur	Thrissur	Urban	14	18	Govt.
18	Irshadul Musleemeem Orphanage Azhikode Jetty, Kodungallur		Urban	18	--	Unaided
19	St. Mary's Nilayam, Mukkattukara		Rural	--	20	Govt.
20	SOS Children's Village, Ayyappankavu		Rural	8	6	Unaided

Sl. No	Name	District	Locale	Gender		Management
				Boys	Girls	
21	Edavanna Orphanage, Edavanna	Malappuram	Rural	10	10	Aided
22	Thirurangadi Yatheemkhana, Soudabad, Thirurangadi PO		Urban	30	30	Aided
23	Thanveerul Islam Yatheemkhana, Peruvallur, Kondotty		Rural	6	12	Aided
24	Elamaram Orphanage, Vazhakkad PO		Rural	6	14	Unaided
25	Mukkam Muslim Orphanage, Mukkam PO	Kozhikode	Rural	--	20	Aided
26	Koduvally Muslim Orphanage, Koduvally PO		Rural	22	30	Aided
27	Seva Bharathi Balika Sadanam, Parambil PO		Rural	--	10	Govt.
28	Free Birds, Bank Road, Kozhikode-1		Urban	8	--	Govt.
29	St. Vincents Orphanage, Eranhipalam PO		Urban	--	18	Aided
30	Darunnujoom Orphanage, Perambra		Rural	20	--	Unaided
31	Kinnasseri Yatheemkhana, Pokkunnu PO		Rural	15		Aided
32	Wayanad Muslim Orphanage, Muttil PO	Wayanad	Rural	20	25	Aided
33	Holy Infant Mary's Girls Home Chelod Vythiri		Rural	--	8	Aided
34	Pazhassi Balamandiram, Nalam Mile, Nalloornad PO		Rural	8	--	Govt.
35	Jeekay Orphanage, Panthi Poyil, Varampetta PO		Rural	--	16	Aided
36	Boys Town Orphanage, Varayall PO		Rural	12	--	Unaided
37	St. Xavier Orphanage, Koyalad	Kannur	Urban	--	12	Govt.
38	Urusline Bhavan Pundakkadu, Payyannur		Urban	--	20	Aided
39	Little Flower Orphanage, Mattul		Rural	12	--	Aided
40	Balabhavan, Sanhome Nagar, Kottur		Rural	22	--	Govt.
41	Santhosh Bhavan Charitable Institution for Girls, Vayyattuparamb PO		Rural	--	7	Govt.
42	St. Paul's Orphanage, Thrikkaripur	Kasargod	Rural	20	24	Aided

Scoring and Consolidation

Investigator tabulated collected data of each student individually. The valid response sheets were scored as per the scoring procedure of each tool. The scores and data obtained were consolidated to conduct further analysis.

Statistical Techniques Used the Study

Suitable descriptive and inferential statistical techniques were used in the interpretation of the data to draw out a meaningful picture of results from the data. In the present study the following statistical measures were used.

- Descriptive statistics like mean, median, mode, standard deviation and quartile deviations were calculated for the sample with respect to the variable studied
- One sample t test
- Independent sample t test
- One way ANOVA
- Pearson's Product Moment Coefficient of Correlation 'r'
- Simple Regression Analysis
- Multiple Regression Analysis

Conclusion

As the planning and designing is the most vital part of research, this chapter has explained the details regarding the design of the study, Objectives, sample, pilot study, development of the tools and techniques of scoring, reliability validity and statistical analysis.

Chapter 4

Analysis & Interpretation

- Preliminary Analysis
- Mean Difference Analysis
- ANOVA
- Scheffé Test of Multiple Comparisons
- Pearson's Product Moment Coefficient of Correlation
- Regression Analysis

This chapter provides detailed description of analysis and interpretation of the collected data. The major objective of the present study is to find out the influence of Metacognition and Attributional Complexity on Academic Resilience of Orphanage students. For the analysis of collected data, statistical techniques such as descriptive statistics, independent sample t test, one way ANOVA and multiple regression analysis were used. The analysis of the data is based on the formulated objectives and hypothesis, detailed description of analysis and interpretation are presented under the relevant headings.

Preliminary Analysis

Metacognition of Orphanage Students

As the first step of the analysis, preliminary analysis was conducted to find out the distribution of scores of Metacognition of orphanage students. Important descriptive statistics like mean, median, mode, standard deviation, first and third quartiles of the variable Metacognition and its dimensions were calculated. Obtained data and results are presented in table 15.

Table 15

Descriptive Statistics of the variable Metacognition and its dimensions

Metacognition	Mean	SD	Q1	Median	Q3	Mode
Planning	20.0	2.8	18.0	20.0	22.0	21.0
Monitoring	21.9	3.1	20.0	22.0	24.0	21.0
Knowledge	17.2	2.7	15.0	17.0	18.0	17.0
Evaluation	19.9	2.8	18.0	20.0	22.0	21.0
Regulation	21.5	2.9	19.0	21.0	24.0	21.0
Metacognition	100.5	9.0	95.0	101.0	106.5	103.0

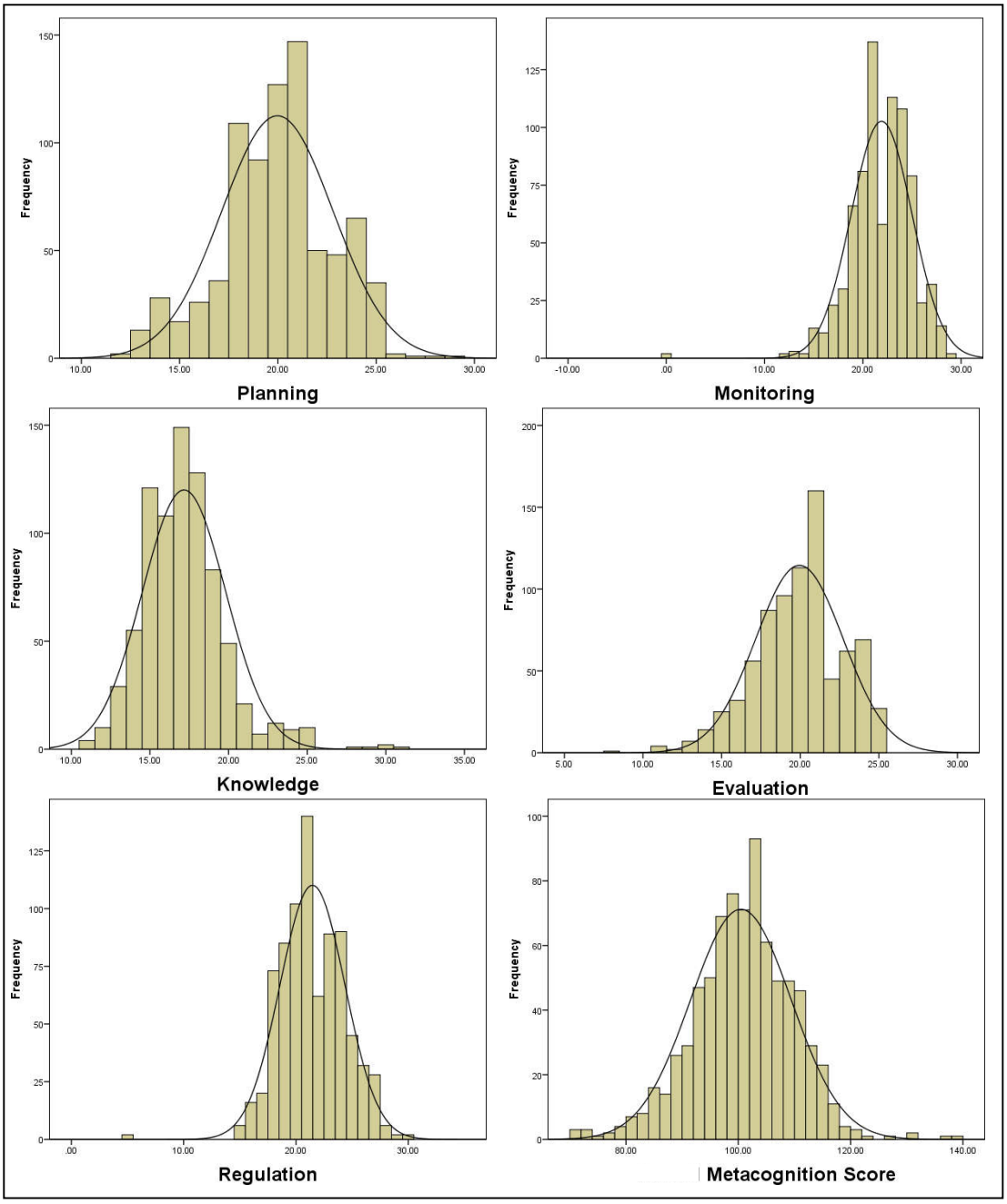
Mean, median and mode of metacognition are 100.5, 101 and 103 respectively. The values are approximately equal. So the distributions of the data are approximately normal. Obtained standard deviation value is 9. The first quartile value of the Metacognition is 95. This means that about 25 % of the orphanage student's Metacognition score lie below 95 and about 75 % lie above 95. The third

quartile value of the Metacognition is 106.5. This means that about 75 % of the orphanage student's Metacognition score lie below 106.5 and about 25 % lie above 106.5

Histogram with the normal curve for the variable Metacognition and its dimensions are presented in figure 1.

Figure 1

Histogram with the Normal Curve for the Variable Metacognition and its Dimensions



Assessment of Metacognition of Orphanage Students

To assess the Metacognition among orphanage students one sample t test was used. Mid score of the tool was used as the test value for the calculation of t value. The maximum score obtainable for Metacognition scale is 210 and minimum score obtainable is 42. Mid score of the tool is 126, and it is taken as the test value in one sample t test. Similarly mid score of each dimension is calculated and used as test value. Results of the one sample t test conducted for Metacognition and its dimensions are presented in table 16.

Table 16

One Sample t test for the Variable Metacognition and its Dimensions

Metacognition	Mean	SD	Test value	Mean difference	t-value
Planning	20.0	2.8	27	7	70.1**
Monitoring	21.9	3.1	24	2.1	24.0**
Knowledge	17.2	2.7	24	6.8	72.7**
Evaluation	19.9	2.8	24	4.1	41.1**
Regulation	21.5	2.9	27	5.5	53.9**
Metacognition	100.5	9.0	126	25.5	80.5**

**: - Significant at 0.01 level

From table it is clear that there exists a significant difference in the mean score of Metacognition (100.5) and mid score (126) of orphanage students (t= 80.5, $p<0.01$). Mean score of Metacognition is less than the mid score. It means that mean score of Metacognition of the orphanage students is significantly lower than the mid score. From the result it concluded that the orphanage students posses low Metacognition.

Dimension wise analysis shows that there exist significant difference in the mean scores of dimensions of Metacognition such as Planning (t=70.1, $p<0.01$), Monitoring (t=24, $p<0.01$), Knowledge (t=72.7, $p<0.01$), Evaluation (t=41.1, $p<0.01$) and Regulation (t=53.9, $p<0.01$) and corresponding mid values of

orphanage students. It means that the mean scores of dimensions of Metacognition such as Planning, Monitoring, Knowledge, Evaluation and Regulation are significantly lower than the corresponding mid values. From results it can be concluded that orphanage students posses low Planning, Monitoring, Knowledge, Evaluation and Regulation.

Analysis of Mean Difference

Comparison of Metacognition of Orphanage Students Based on Gender, Locale and Management

Comparison of Metacognition of Orphanage Students based on Gender, Locale and Type of Management were conducted and presented under relevant headings. Detailed discussions of comparison are presented below.

Comparison of Metacognition of Orphanage Students Based on Gender

Independent sample t test is used to find the gender difference in Metacognition of orphanage students. Comparison of Metacognition of orphanage students based on their gender is presented in Table 17.

Table 17

Comparison of Metacognition of Orphanage Students based on Gender

Metacognition	Boys			Girls			t-value
	Mean	SD	N	Mean	SD	N	
Planning	20.5	2.5	369	19.6	3.1	431	4.46**
Monitoring	22.1	2.7	369	21.7	3.4	431	1.83
Knowledge	17.7	3.1	369	16.7	2.2	431	5.36**
Evaluation	20.2	2.3	369	19.8	3.1	431	1.96
Regulation	21.3	2.9	369	21.6	2.9	431	1.1
Metacognition	101.8	8.9	369	99.3	8.9	431	3.88**

**: - Significant at 0.01 level, *: - Significant at 0.05 level

From the table 16, it can be observed that the mean scores of Metacognition are 101.8 and 99.3 respectively for boys and girls. The independent t test ($t=3.88$, $p<0.01$) shows that there is significant difference in mean scores of Metacognition between boys and girls. So, it can be inferred that the mean score of Metacognition is significantly high among boys as compared to girls.

When comparing the dimensions of Metacognition, it can be observed that the score regarding Planning ($t = 4.46$, $p<0.01$) and Knowledge ($t = 5.36$, $p<0.01$) is significantly high among boys as compared to girls. There is no significant difference in average score regarding Monitoring ($t= 1.83$, $p>0.05$), Evaluation ($t=1.96$, $p>0.05$), and Regulation ($t= 1.1$, $p>0.05$) between boys and girls.

Thus it can be concluded that mean score Metacognition and its dimensions such as Planning and Knowledge significantly differ between boys and girls and no statistical difference in the dimensions such as Monitoring, Evaluation, and Regulation between boys and girls.

Graphical representation of comparison of mean score of Metacognition score and its dimensions based on gender are presented in figure 2 and figure 3.

Figure 2

Comparison of Mean Score of Metacognition of Orphanage Students based on Gender

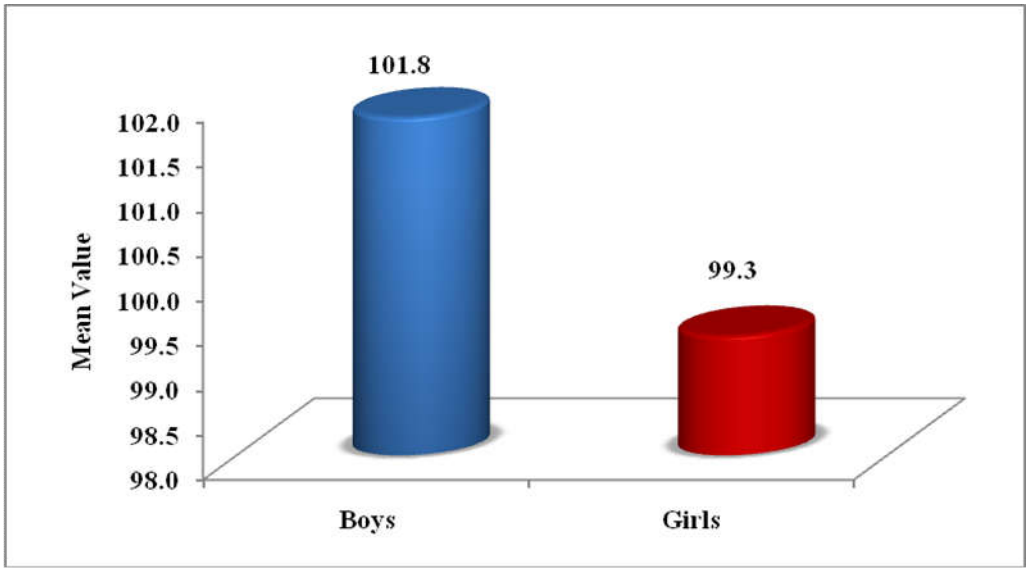
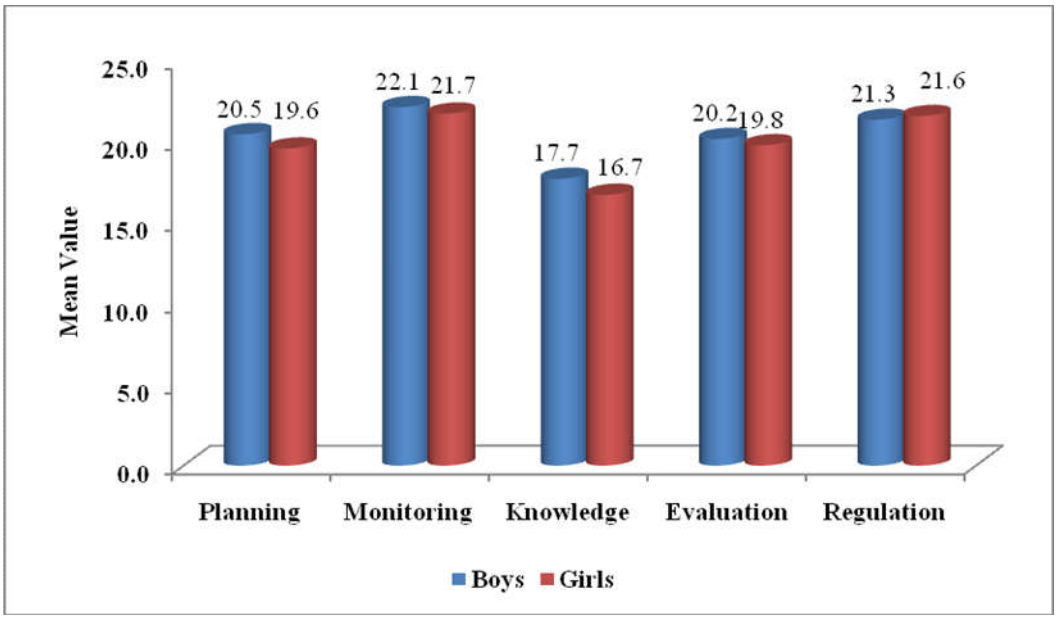


Figure 3

Comparison of Mean Scores of Dimensions of Metacognition of Orphanage Students based on Gender



Comparison of Metacognition of Orphanage Students Based on Locale

Independent sample t-test is used to find the locale difference in Metacognition of orphanage students. Comparison of Metacognition of orphanage students based on their locale is presented in Table 18.

Table 18

Comparison of Metacognition of orphanage Students based on Locale

Metacognition	Rural			Urban			t
	Mean	SD	N	Mean	SD	N	
Planning	20.4	2.7	450	19.4	2.9	350	5.11**
Monitoring	22.0	3.1	450	21.8	3.1	350	0.59
Knowledge	17.6	2.9	450	16.6	2.1	350	5.24**
Evaluation	20.3	2.4	450	19.5	3.1	350	4.21**
Regulation	22.0	3.0	450	20.7	2.6	350	6.46**
Metacognition score	102.3	9.2	450	98.1	8.0	350	6.85**

**: - Significant at 0.01 level, *: - Significant at 0.05 level

From the table 17 it is clear that the mean scores of Metacognition are 102.3 and 98.1 respectively for rural and urban students. The independent t test (t=6.85, p<0.01) shows that there is significant difference in overall Metacognition score between rural and urban students. So, it can be inferred that the overall Metacognition score is significantly high among rural students as compared to urban students.

When comparing the dimensions of metacognition, it can be observed that the score regarding Planning (t = 5.11, p<0.01), Knowledge (t = 5.24, p<0.01) Evaluation (t=4.21, p<0.01), and Regulation (t= 6.46, p<0.01) are significantly high among rural students as compared to urban students. There is no significant difference in average score regarding Monitoring (t= 0.59, p>0.05), between rural and urban students.

Thus it can be concluded that mean scores of Metacognition and its dimensions such as Planning, Knowledge, Evaluation, and Regulation are significantly differ between rural and urban students and no significant difference in the dimension Monitoring, between rural and urban students.

Graphical representation of comparison of mean scores of Metacognition and its dimensions based on locale are presented in figure 4 and figure 5

Figure 4

Comparison of Mean Scores of Metacognition of Orphanage Students based on Locale

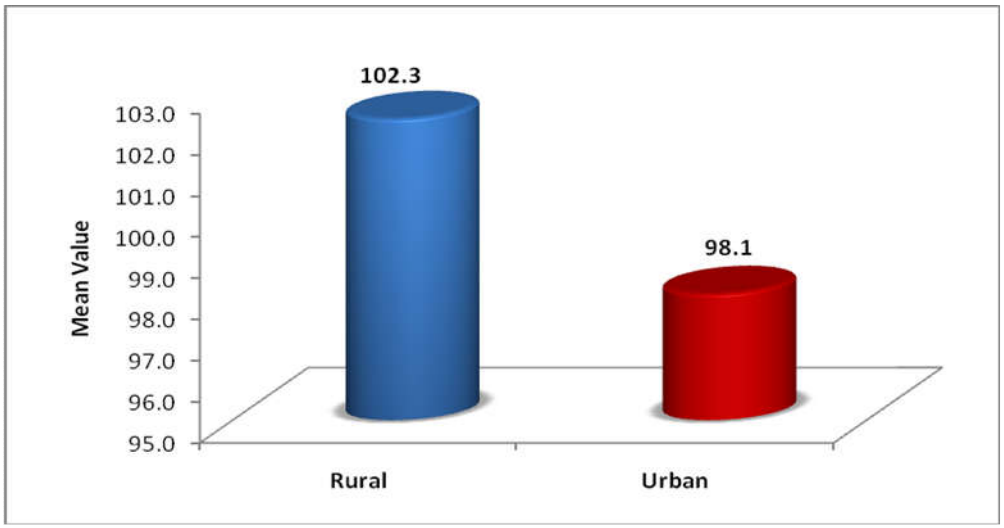
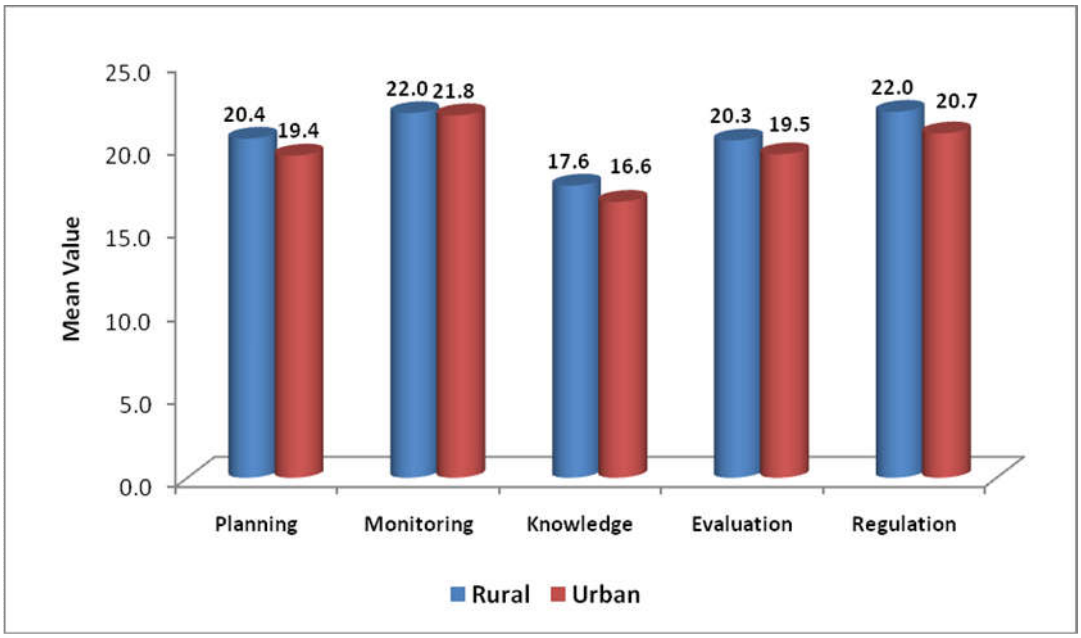


Figure 5

Comparison of Mean Scores of Dimensions of Metacognition of Orphanage Students based on Locale



Comparison of Metacognition of Orphanage Students Based on Type of Management

Comparison of Metacognition of orphanage students based on the type of management of the school in which they are studying is conducted by using one way ANOVA. Scheffe multiple comparison is used as the post hoc analysis. Comparison of Metacognition and dimensions such as Planning, Knowledge, Evaluation and Regulation of orphanage students based on type of management are presented in table 19.

Table 19

Comparison of Metacognition and Dimensions Such as Planning, Knowledge, Evaluation and Regulation of Orphanage Students based on Type of Management

Metacognition	Type of Management	Mean	SD	N	F	Scheffe Multiple Comparisons	
						Pair	Mean Difference
Planning	Aided (A)	19.0	2.7	325	45.16**	A &B	2.1**
	Unaided (B)	21.1	2.7	275		A & C	1.0**
	Government(C)	20.0	2.6	200		B & C	1.1**
Knowledge	Aided (A)	16.6	2.2	325	20.78**	A &B	1.4**
	Unaided (B)	18.0	3.3	275		A & C	.4
	Government (C)	17.0	2.0	200		B & C	1**
Evaluation	Aided (A)	19.2	3.1	325	23.17**	A &B	1.3**
	Unaided (B)	20.5	2.5	275		A & C	1.3**
	Government (C)	20.5	2.4	200		B & C	0
Regulation	Aided (A)	20.7	2.3	325	41.95**	A &B	2.0 **
	Unaided (B)	22.7	3.1	275		A & C	0.4
	Government (C)	21.1	2.9	200		B & C	1.6 **
Metacognition	Aided (A)	97.3	8.9	325	48.09**	A &B	6.8**
	Unaided (B)	104.1	9.0	275		A & C	3.4**
	Government (C)	100.7	7.0	200		B & C	3.4**

**: - Significant at 0.01 level

The table 18 shows that mean score regarding Metacognition is high among students from unaided schools (104.1), followed by students from government schools (100.7) and least among students from aided schools (97.3). The F statistic (One way ANOVA) value is 48.09, which is significant at 0.01 level. It means that the variation in Metacognition among students from different management schools is statistically significant at 0.01 level.

The Scheffe multiple comparison (Post hoc Test) is used to compare the mean score in Metacognition between students from different management schools taken two at a time (pair wise) to assess where a significant mean difference exist. The mean difference in Metacognition between students from aided and unaided schools (6.8) is statistically significant at 0.01 level. It means that the mean scores of Metacognition is significantly high among students from unaided schools as compared to students from aided schools. Similarly, there is significant difference in mean scores of Metacognition between students from aided and government schools (3.4), students from unaided and government schools (3.4).

The table shows that there exist a significant difference in the mean scores of the dimensions planning ($f= 45.16$, $p< 0.01$), knowledge ($f= 20.78$, $p< 0.01$), evaluation ($f= 23.17$, $p< 0.01$) and regulation ($F= 41.95$, $p< 0.01$) based on the type of management.

Scheffe multiple comparisons of dimensions shows that the mean difference in the dimension Planning between students from aided and unaided schools (2.1), aided and government schools (1.0), unaided and government schools (1.1) are statistically significant at 0.01 level. Similarly mean difference in the Knowledge between students from aided and unaided schools (1.4), unaided and government schools (1.0) are statistically significant at 0.01 level. Mean difference in the Evaluation between students from aided and unaided schools (1.3), aided and government schools (1.3) are statistically significant at 0.01 level. Mean difference in the Regulation between students from aided and unaided schools (2.0), unaided and government schools (1.6) are statistically significant at 0.01 level.

Graphical representation of the comparison of mean scores of Metacognition and dimensions such as Planning, Knowledge, Evaluation and Regulation of orphanage students based on type of management are presented in figure 6 and figure 7.

Figure 6

Comparison of Mean Scores of Metacognition of Orphanage Students based on Type of Management

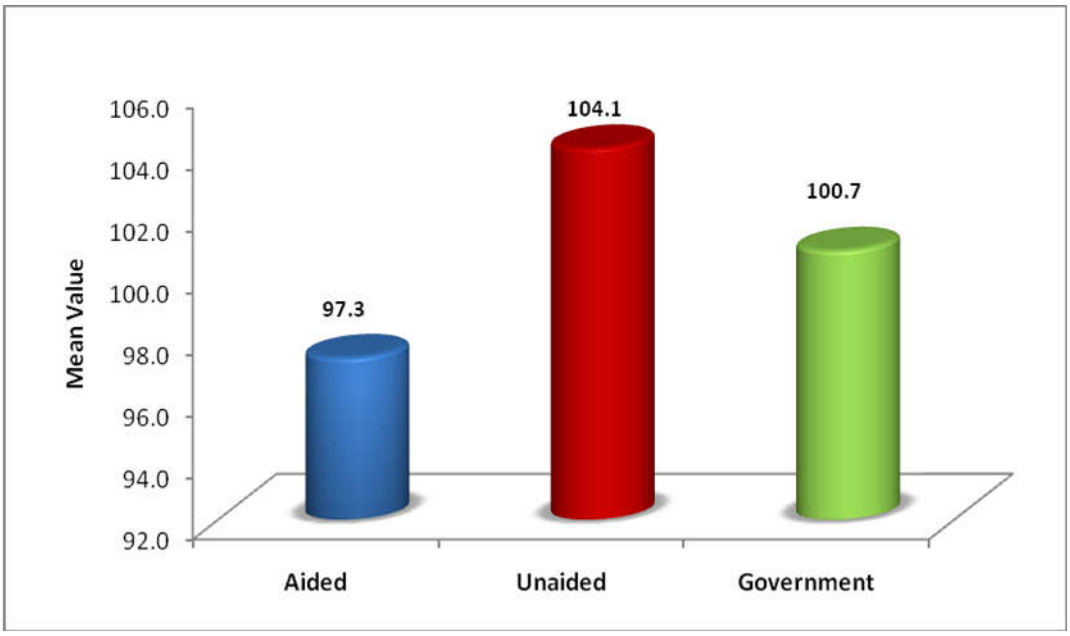
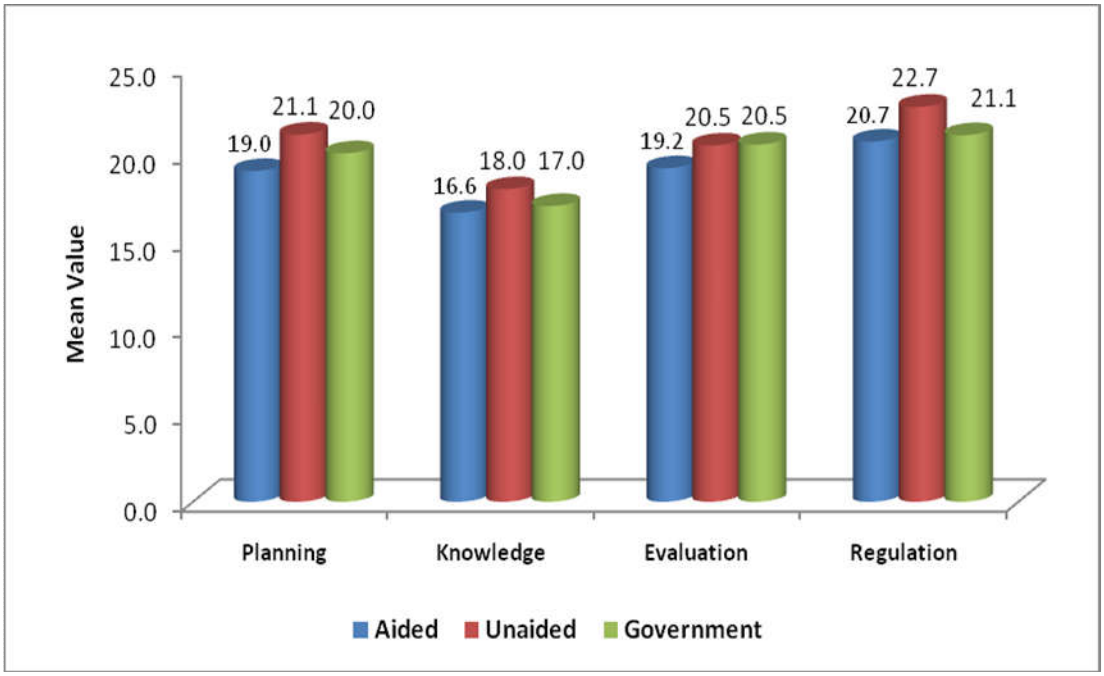


Figure 7

Comparison of Mean Scores of Dimensions of Metacognition such as Planning, Knowledge, Evaluation and Regulation of Orphanage Students based on Type of Management



Comparison of mean scores of dimension of Metacognition Monitoring of orphanage students based on type of management is presented in Table 20.

Table 20

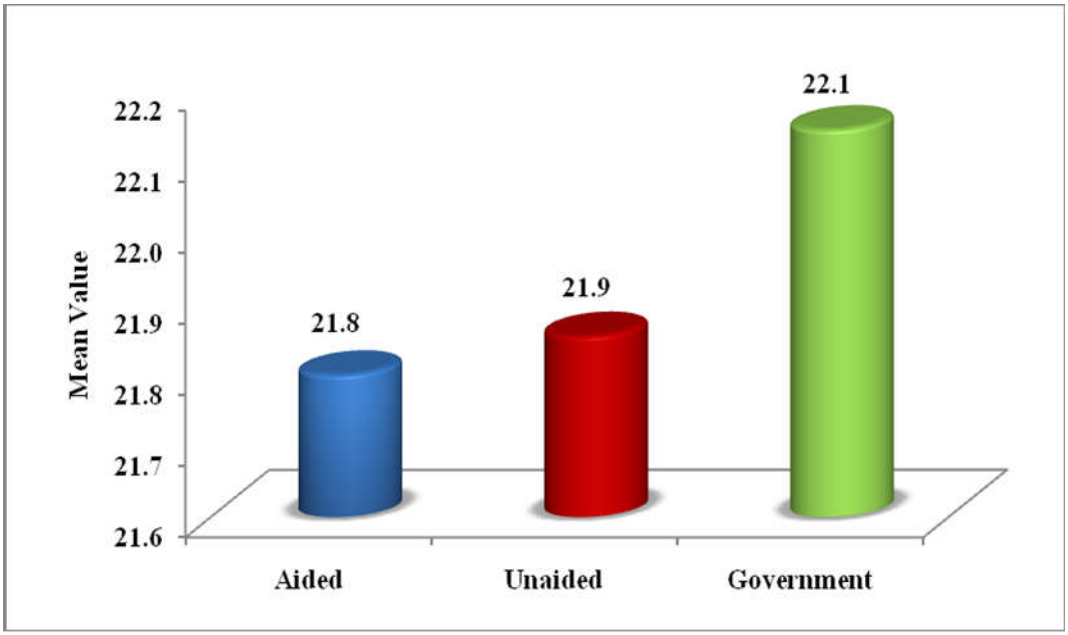
Comparison of Mean Scores of Dimension of Metacognition Monitoring of Orphanage Students based on Type of Management

Type of management	Mean	SD	N	F	p
Aided	21.8	2.8	325		
Unaided	21.9	3.2	275	0.82	0.442
Government	22.1	3.4	200		

Table 20 shows that there exists no significant difference in the dimension Monitoring (F=0.82, p>0.05) based on type of management. Graphical representation of the comparison of mean scores of Monitoring of orphanage students based on type of management is presented in figure 8.

Figure 8

Comparison of Mean Scores of Monitoring of Orphanage Students based on Type of Management



Attributional Complexity of Orphanage Students

Preliminary Analysis

As the first step of the analysis, preliminary analysis was conducted to find out the distribution of scores of Attributional Complexity score of orphanage students. Important descriptive statistics like mean, median, mode, standard deviation, first and third quartiles of the variable Attributional Complexity and its dimensions were calculated. Obtained data and results are presented in table 21.

Table 21

Descriptive Statistics of the Variable Attributional Complexity and its Dimensions

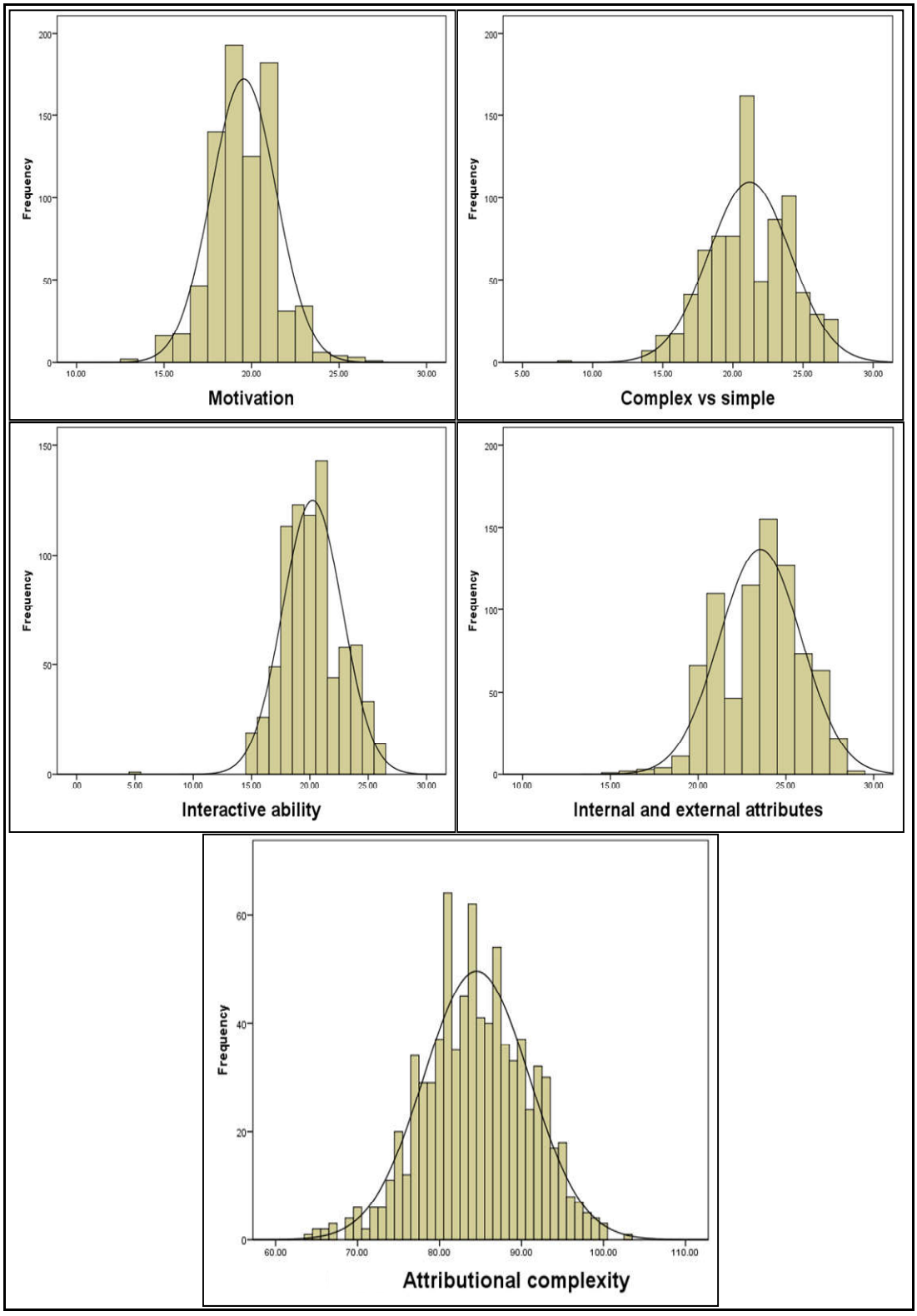
Attributional Complexity score	Mean	SD	Q1	Median	Q3	Mode
Motivation	19.6	1.9	18.0	19.0	21.0	19.0
Complex vs simple	21.2	2.9	19.0	21.0	23.0	21.0
Interactive ability	20.2	2.6	18.0	20.0	22.0	21.0
Internal and external attributes	23.5	2.3	22.0	24.0	25.0	24.0
Attributional Complexity	84.5	6.4	80.0	84.0	89.0	81.0

Mean, median and mode of Attributional Complexity are 84.5, 84 and 81 respectively. The values are approximately equal. So the distributions of the data are approximately normal. Obtained standard deviation value is 6.4. The first quartile value of the Attributional Complexity is 80. This means that about 25 % of the orphanage student's Attributional Complexity score lie below 80 and about 75 % lie above 80. The third quartile value of the Attributional Complexity is 89. This means that about 75 % of the orphanage student's Attributional Complexity score lie below 89 and about 25 % lie above 89.

Histogram with the normal curve for the variable Attributional Complexity and its dimensions are presented in figure 9

Figure 9

Histogram with Normal Curve for Attributional Complexity Score and its Dimensions



Assessment of Attributional Complexity of Orphanage Students

To assess the Attributional Complexity among orphanage students one sample t test was used. Mid score of the tool was used as the test value for the calculation of t value. The maximum score obtainable for Attributional Complexity scale is 155 and minimum score obtainable is 31. Mid score of the tool is 93, and it is taken as the test value in one sample t test. Similarly mid score of each dimension is calculated and used as test value. Results of the one sample t test conducted for Attributional Complexity and its dimensions are presented in table 22

Table 22

One Sample t test for the Variable Attributional Complexity and its Dimensions

Attributional Complexity Score	Mean	SD	Test Value	Mean Difference	t-value
Motivation	19.6	1.9	21	1.4	22.1**
Complex vs simple	21.2	2.9	24	2.8	27.3**
Interactive ability	20.2	2.6	24	3.8	41.8**
Internal and external attributes	23.5	2.3	24	0.5	5.5**
Attributional Complexity	84.5	6.4	93	8.5	37.4**

**: - Significant at 0.01 level

From the table 21 it is clear that there exists a significant difference in the mean score of Attributional Complexity (84.5) and mid score (93) of orphanage students ($t= 37.4$, $p<0.01$). Mean score of Attributional Complexity is less than the mid score. It means that mean score of Attributional Complexity of the orphanage students is significantly lower than the mid score. From the result it can be concluded that the orphanage students posses low Attributional Complexity.

Dimension wise analysis shows that there exist significant difference in the mean scores of dimensions of Attributional Complexity such as Motivation ($t=22.1$, $p<0.01$), Complex vs Simple ($t=27.3$, $p<0.01$), Interactive Ability ($t=41.8$, $p<0.01$)

and Internal and External Attributes (t=5.5, p<0.01) and corresponding mid values of orphanage students. It means that the mean scores of dimensions of Attributional Complexity such as Motivation, Complex vs Simple, Interactive Ability and Internal and External Attributes are significantly lower than the corresponding mid values. From results it can be concluded that orphanage students posses low Motivation, Complex vs Simple, Interactive Ability and Internal and External Attributes.

Comparison of Attributional Complexity Score of Orphanage Students Based on Gender, Locale and Management

Comparison of Attributional Complexity of Orphanage Students Based on Gender, Locale and type of Management were conducted and presented under relevant headings. Detailed discussions of comparison are presented below.

Comparison of Attributional Complexity of Orphanage Students Based on Gender

Independent sample t test is used to find the gender difference in Attributional Complexity of orphanage students. Comparison of Attributional Complexity of orphanage students based on their gender is presented in Table 23.

Table 23

Comparison of Attributional Complexity of Orphanage Students based on Gender

Attributional Complexity Score	Boys			Girls			t
	Mean	SD	N	Mean	SD	N	
Motivation	19.5	1.9	369	19.6	1.8	431	0.88
Complex vs simple	20.7	2.9	369	21.6	2.9	431	4.53**
Interactive ability	20.1	2.4	369	20.3	2.7	431	1.2
Internal and external attributes	23.6	2.2	369	23.5	2.5	431	0.79
Attributional Complexity	83.9	6.7	369	85.0	6.2	431	2.48*

**: - Significant at 0.01 level, *: - Significant at 0.05 level

From the table 23, it is clear that the mean score of Attributional Complexity are 83.9 and 85 respectively for boys and girls. The independent t test (t=2.48, p<0.05)

shows that there is a significant difference in mean scores of Attributional Complexity between boys and girls. So, it can be inferred that the mean scores of Attributional Complexity is significantly high among girls as compared to boys.

When comparing the dimensions of Attributional Complexity, it can be observed that the score regarding Complex vs Simple ($t = 4.53$, $p<0.01$) is significantly high among girls as compared to boys. There is no significant difference in mean scores regarding Motivation ($t= 0.88$, $p>0.05$), Interactive Ability ($t=1.2$, $p>0.05$), and Internal and External Attributes ($t= 0.79$, $p>0.05$) between boys and girls.

Thus it can be concluded that mean scores of Attributional Complexity and its dimension Complex vs Simple are significantly differ between boys and girls and no statistical difference in the dimensions such as Motivation, Interactive Ability and Internal and External Attributes between boys and girls.

Graphical representation of comparison of mean scores of Attributional Complexity and its dimensions based on gender are presented in figure 10 and figure 11.

Figure 10

Comparison of Mean scores of Attributional Complexity of Orphanage Students based on Gender

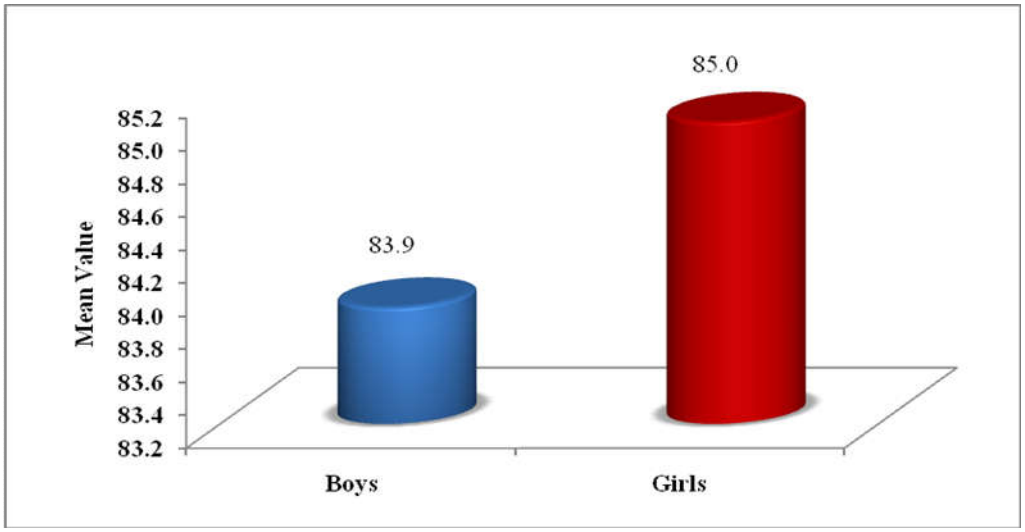
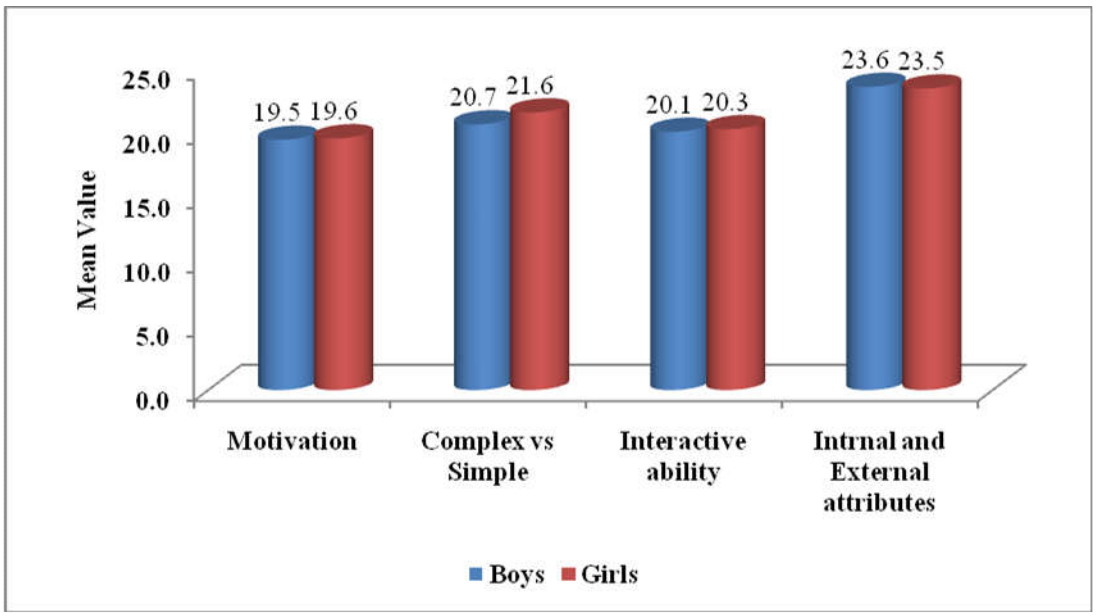


Figure 11

Comparison of Mean Scores of Dimensions of Attributional Complexity of Orphanage Students Based on Gender



Comparison of Attributional Complexity of Orphanage Students Based on Locale

Independent sample t-test is used to find the locale difference in Attributional Complexity of orphanage students. Comparison of Attributional Complexity of orphanage students based on their locale is presented in Table 24.

Table 24

Comparison of Mean Scores of Attributional Complexity of Orphanage Students based on Locale

Attributional Complexity score	Rural			Urban			t
	Mean	SD	N	Mean	SD	N	
Motivation	19.5	1.9	450	19.6	1.8	350	1.18
Complex vs simple	21.3	3.0	450	21.1	2.7	350	0.73
Interactive ability	20.2	2.7	450	20.2	2.4	350	0.27
Internal and external attributes	23.5	2.2	450	23.5	2.5	350	0.03
Attributional Complexity	84.5	6.5	450	84.5	6.3	350	0.11

From the table 24, it is clear that the mean scores of Attributional Complexity was 84.5 and 84.5 respectively for rural and urban students. The independent t test (t=0.11, p>0.05) shows that there is no significant difference in mean scores of Attributional Complexity between rural and urban students.

When comparing the dimensions of Attributional Complexity, it can be seen that the mean score regarding Motivation (t=1.18, p>0.05), Complex vs Simple (t = 0.73, p>0.05) Interactive Ability (t=0.27, p>0.05), and Internal and External Attributes (t= 0.03, p>0.05) are not significantly differ between rural and urban students.

Thus it can be concluded that mean scores of Attributional Complexity and its dimensions are not significantly differ between rural and urban students.

Graphical representation of comparison of mean scores of Attributional Complexity and its dimensions based on locale are presented in figure 12 and figure 13

Figure 12

Comparison of Mean Scores of Attributional Complexity of Orphanage Students based on Locale

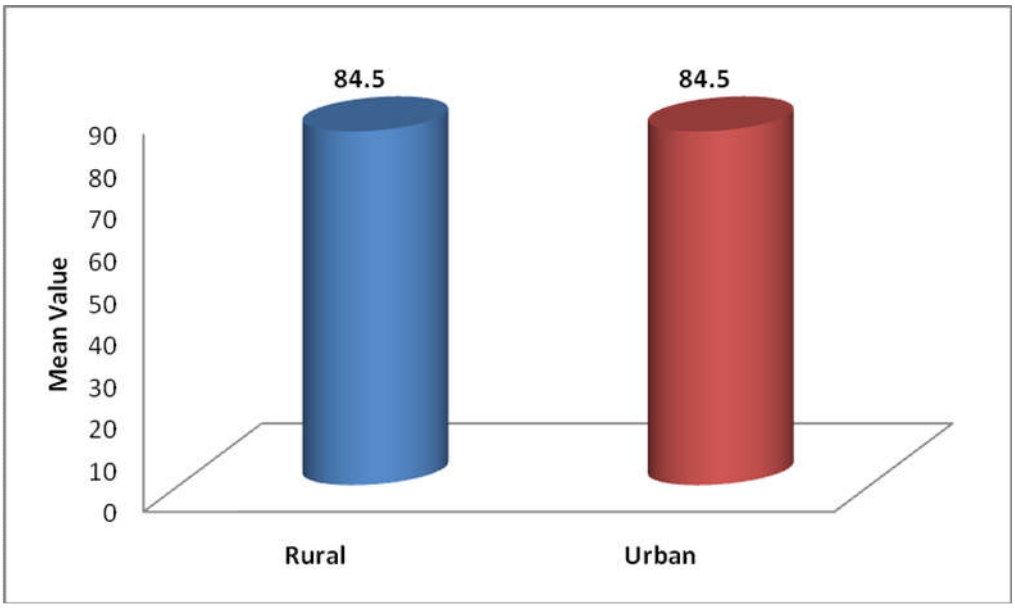
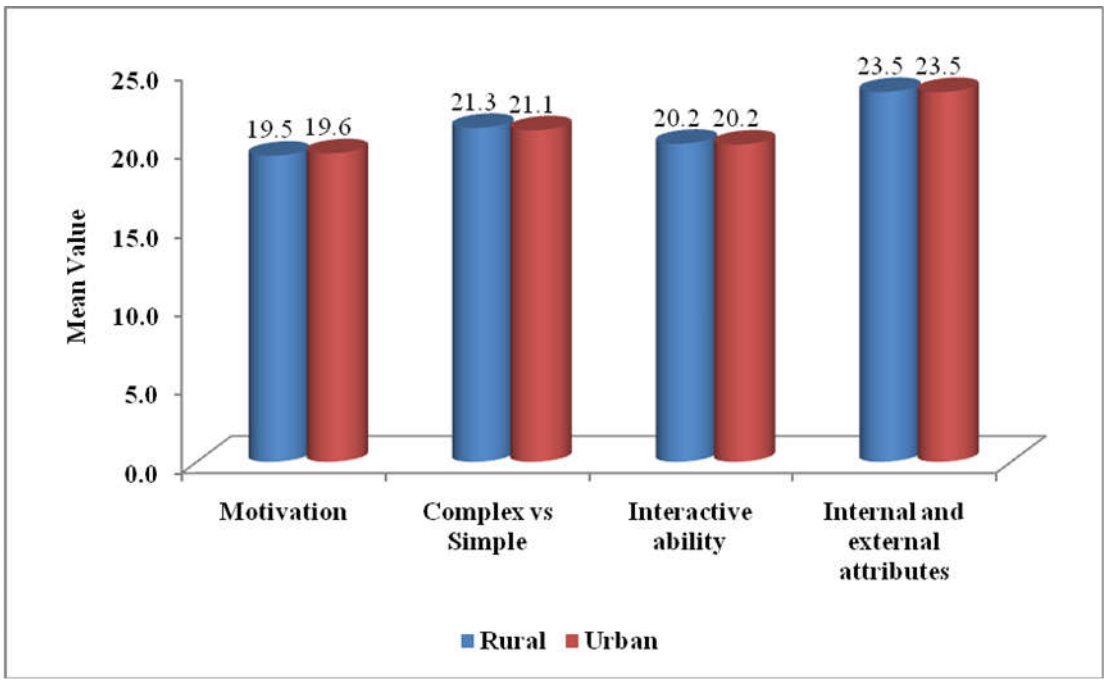


Figure 13

Comparison of Mean Scores of Dimensions of Attributional Complexity of Orphanage Students based on Locale



Comparison of Attributional Complexity of Orphanage Students Based on Type of Management

Comparison of Attributional Complexity of orphanage students based on the type of management of the school in which they are studying is conducted by using one way ANOVA. Scheffe multiple comparison is used as the post hoc analysis. Comparison of Attributional Complexity and dimensions such as Complex vs Simple and Interactive Ability of orphanage students based on type of management are presented in table 25.

Table 25

Comparison of Attributional Complexity and Dimensions such as Complex vs Simple and Interactive Ability of Orphanage Students based on Type of Management

Attributional Complexity Score	Type of Management	Mean	SD	N	F	Scheffe Multiple Comparisons	
						Pair	Mean Difference
Complex vs Simple	Aided (A)	20.7	3.0	325	40.66**	A &B	1.4**
	Unaided (B)	22.4	2.7	275		A & C	0.4
	Government (C)	20.3	2.6	200		B & C	2.1**
Interactive Ability	Aided (A)	19.7	2.3	325	17.59**	A &B	1.2**
	Unaided (B)	20.9	2.8	275		A & C	0.4
	Government (C)	20.1	2.3	200		B & C	0.8**
Attributional Complexity	Aided (A)	83.3	6.7	325	26.32**	A &B	3.4**
	Unaided (B)	86.7	6.5	275		A & C	0.2
	Government (C)	83.5	4.8	200		B & C	3.2**

**: - Significant at 0.01 level

The table 25 shows that mean score regarding Attributional Complexity is high among students from unaided schools (86.7), followed by students from government schools (83.5) and least among students from aided schools (83.3). The F statistic (One way ANOVA) value is 26.32, which is significant at 0.01 level. It means that the variation in Attributional Complexity among students from different management schools is statistically significant at 0.01 level.

The Scheffe multiple comparison (Post hoc Test) is used to compare the mean score in Attributional Complexity between students from different management schools taken two at a time (pair wise) to assess where a significant mean difference exist. The mean difference in Attributional Complexity between students from aided and unaided schools (3.4) is statistically significant at 0.01 level. It means that the mean score of Attributional Complexity is significantly high among students from unaided schools as compared to students from aided schools.

Similarly, there is significant difference in mean scores of Attributional Complexity between students from unaided and government schools (3.2).

The table shows that there exist a significant difference in the mean scores of the dimensions Complex vs Simple (F= 40.66, p< 0.01), and Interactive Ability (F= 17.59, p< 0.01) based on the type of management.

Scheffe multiple comparisons of dimensions shows that the mean difference in the dimension Complex vs Simple between students from aided and unaided schools (1.4), unaided and government schools (2.1) are statistically significant at 0.01 level. Similarly mean difference in the Interactive Ability between students from aided and unaided schools (1.2), unaided and government schools (0.8) are statistically significant at 0.01 level.

Graphical representation of the comparison of mean scores of Attributional Complexity and dimensions such as Complex vs Simple and Interactive Ability of orphanage students based on type of management are presented in figure 14 and figure 15.

Figure 14

Comparison of Mean Scores of Attributional Complexity of Orphanage Students based on Type of Management

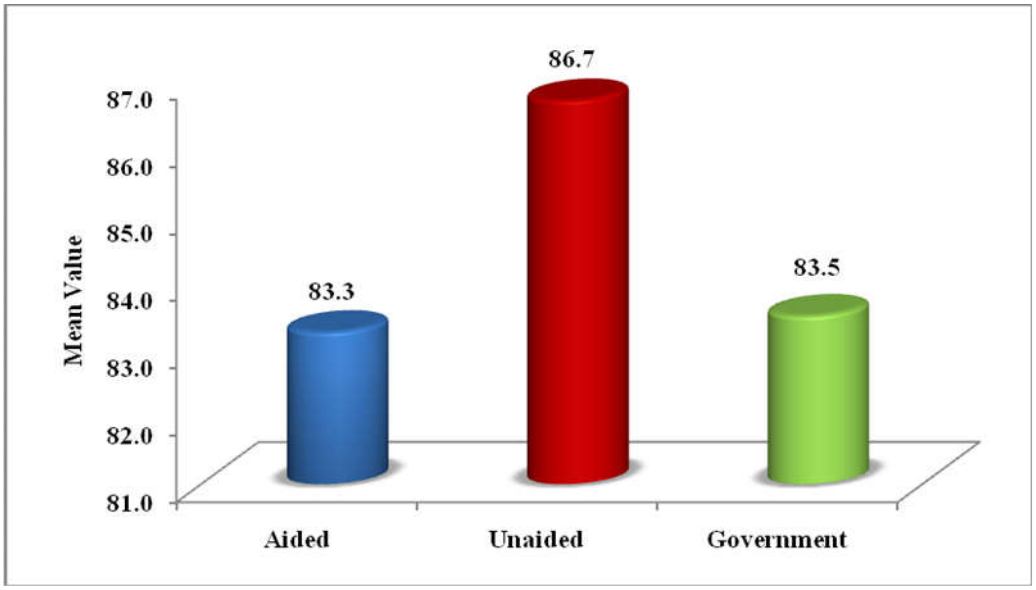
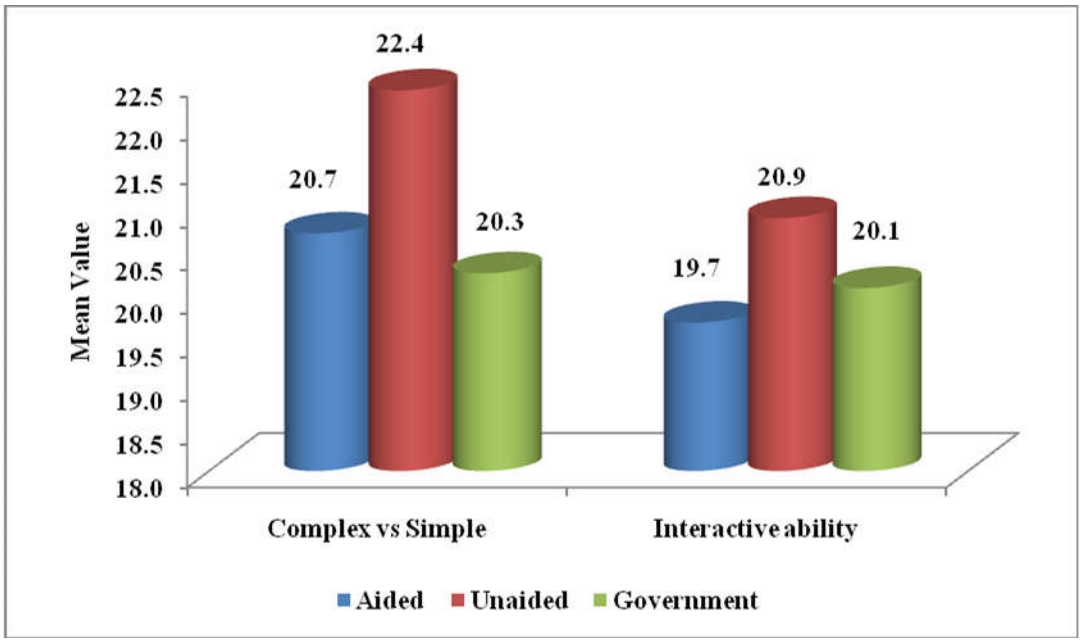


Figure 15

Comparison of Mean Scores of Dimensions of Attributional Complexity such as Complex vs Simple and Interactive Ability of Orphanage Students based on Type of Management



Comparison of mean scores of dimensions of Attributional Complexity such as Motivation and Internal and External Attributes of orphanage students based on type of management are presented in table 26.

Table 26

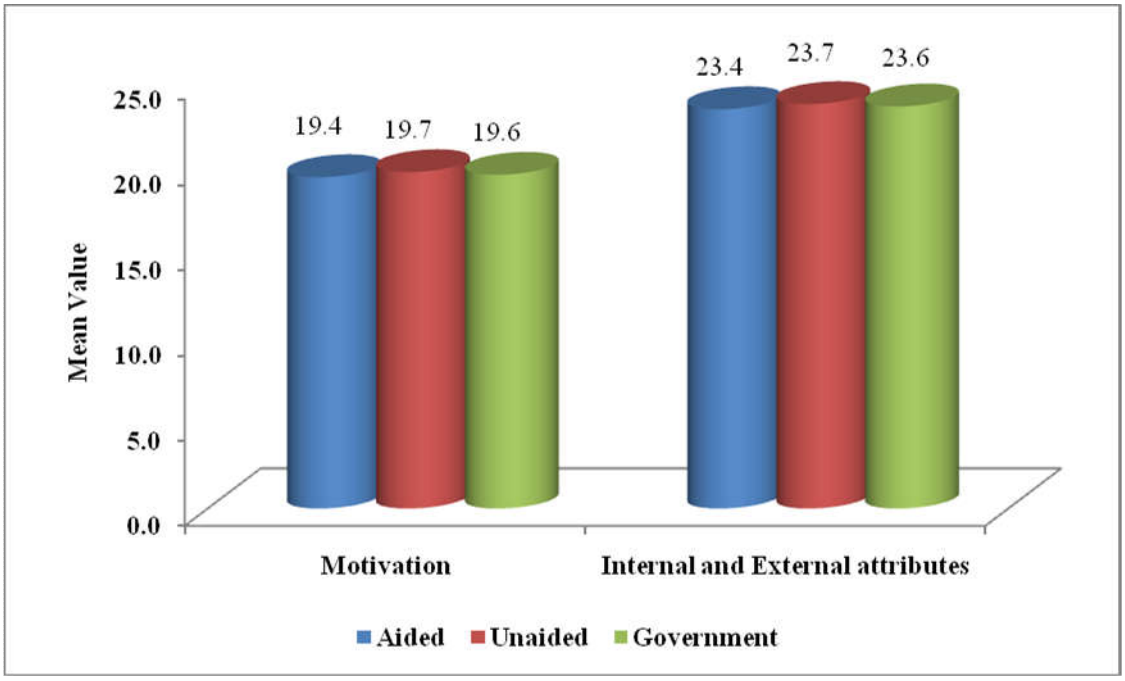
Comparison of Mean Scores of Dimension of Attributional Complexity Such as Motivation and Internal and External Attributes of Orphanage Students based on Type of Management

Attributional Complexity Score	Type of Management	Mean	SD	N	F	p
Motivation	Aided	19.4	1.8	325	1.92	0.147
	Unaided	19.7	2.2	275		
	Government	19.6	1.5	200		
Internal and External attributes	Aided	23.4	2.5	325	1.23	0.294
	Unaided	23.7	2.3	275		
	Government	23.6	2.1	200		

Table 26 shows that there exists no significant difference in the dimensions Motivation (F= 1.92, p>0.05) and Internal and External Attributes (F= 1.23, p>0.05) based on type of management. Graphical representation of the comparison of mean scores of Motivation and Internal and External Attributes of orphanage students based on type of management is presented in figure 16

Figure 16

Comparison of Mean Scores of Motivation and Internal and External Attributes of Orphanage Students based on Type of Management



Academic Resilience Score of Orphanage Students

Preliminary Analysis

As the first step of the analysis, preliminary analysis was conducted to find out the distribution of scores of Academic resilience of orphanage students. Important descriptive statistics like mean, median, mode, standard deviation, first and third quartiles of the variable Academic resilience and its dimensions were calculated. Obtained data and results are presented in Table 27.

Table 27

Descriptive Statistics of the Variable Academic Resilience and its Dimensions

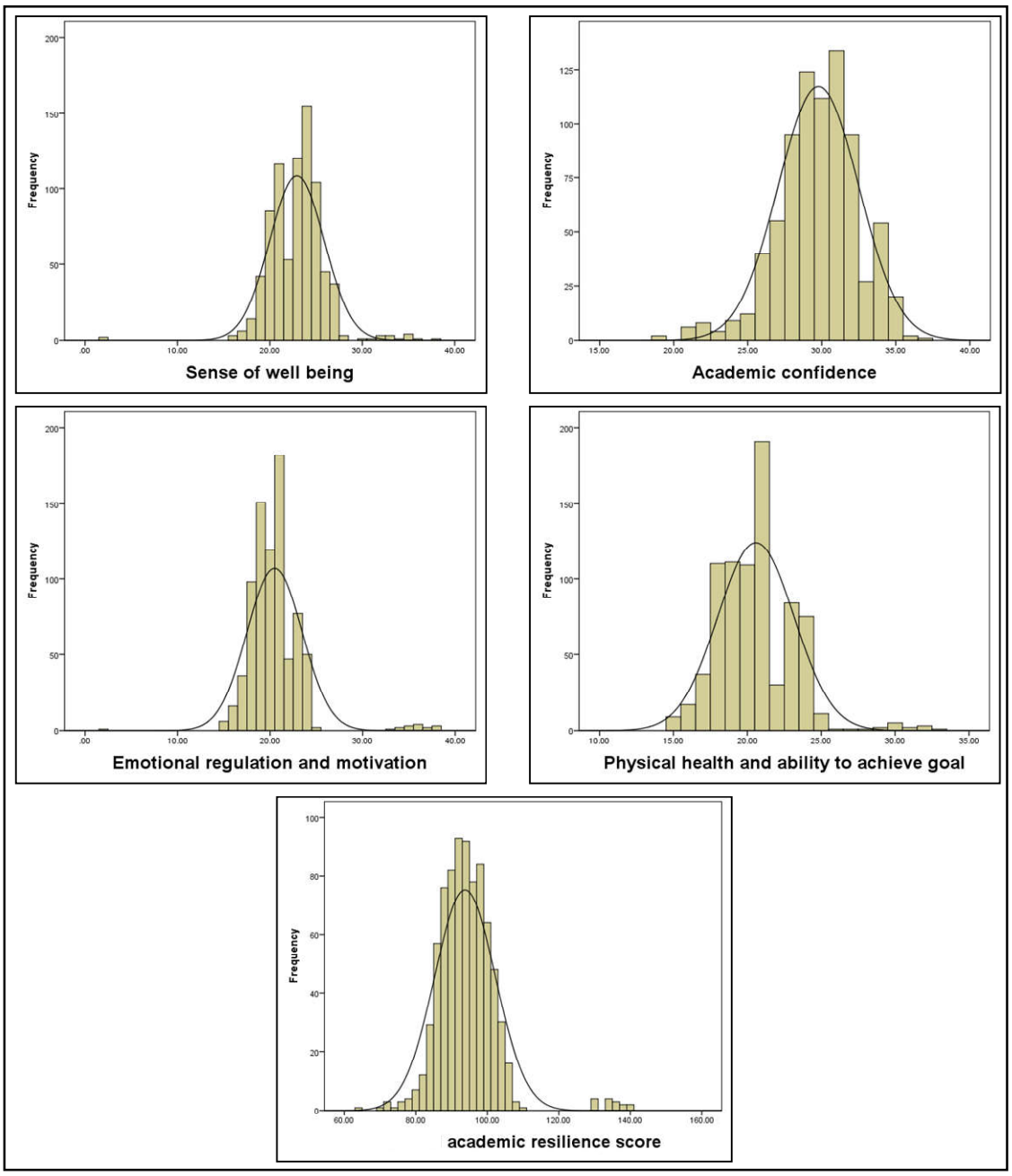
Academic Resilience Score	Mean	SD	Q1	Median	Q3	Mode
Sense of well being	22.9	2.9	21.0	23.0	25.0	24.0
Academic confidence	29.8	2.7	28.0	30.0	31.0	31.0
Emotional regulation and motivation	20.5	3.0	19.0	20.0	21.0	21.0
Physical health and ability to achieve goal	20.6	2.6	19.0	21.0	22.0	21.0
Academic resilience	93.8	8.5	89.0	93.0	98.0	92.0

Mean, median and mode of overall Academic resilience score are 93.8, 93 and 92 respectively. The values are approximately equal. So the distributions of the data are approximately normal. Obtained standard deviation value is 8.5. The first quartile value of the overall Academic resilience score is 89. This means that about 25 % of the orphanage student's Academic resilience score lie below 89 and about 75 % lie above 89. The third quartile value of the overall Academic resilience score is 98. This means that about 75 % of the orphanage student's Academic resilience score lie below 98 and about 25 % lie above 98.

Histogram with the normal curve for the variable Academic resilience and its dimensions are presented in figure 17.

Figure 17

Histogram with Normal Curve for the Variable Academic Resilience and its Dimensions



Assessment of Academic Resilience of Orphanage Students

To assess the Academic resilience among orphanage students one sample t test was used. Mid score of the tool was used as the test value for the calculation of t value. The maximum score obtainable for Academic resilience scale is 185 and

minimum score obtainable is 37. Mid score of the tool is 111, and it is taken as the test value in one sample t test. Similarly mid score of each dimension is calculated and used as test value. Results of the one sample t test conducted for Academic resilience and its dimensions are presented in table 28.

Table 28

One sample t test for the variable Academic Resilience and its Dimensions

Academic Resilience Score	Mean	SD	Test Value	Mean Difference	t-value
Sense of well being	22.9	2.9	27	4.1	39.1**
Academic confidence	29.8	2.7	27	-2.8	28.9**
Emotional regulation and motivation	20.5	3.0	27	6.5	61.7**
Physical health and ability to achieve goal	20.6	2.6	30	9.4	103.4**
Academic resilience	93.8	8.5	111	17.2	57.5**

**: - Significant at 0.01 level

From the table 27 it is clear that there exists a significant difference in the mean scores of Academic resilience score (93.8) and mid score (111) of orphanage students ($t= 57.5$, $p<0.01$). Mean overall Academic resilience score is less than the mid score. It means that mean scores of Academic resilience of the orphanage students is significantly lower than the mid score. From the result it can be concluded that the orphanage students posses low Academic resilience.

Dimension wise analysis shows that there exist significant difference in the mean scores of dimensions of Academic resilience such as Sense of well being ($t=39.1$, $p<0.01$), Academic confidence ($t=28.9$, $p<0.01$), Emotional regulation and motivation ($t=61.7$, $p<0.01$) and Physical health and ability to achieve goal ($t=103.4$, $p<0.01$) and corresponding mid values of orphanage students. Among the mean scores of dimensions of Academic resilience except Academic confidence all other dimension of Academic resilience are lower than mid value. It means that the mean scores of dimensions of Academic resilience such Sense of well being, Emotional

regulation and motivation and Physical health and ability to achieve goal are significantly lower than the corresponding mid values. But the mean score of dimension Academic confidence is higher than the mid value. It indicates that Academic confidence is significantly higher than the mid value. From results it can be concluded that orphanage students posses low Sense of well being, Emotional regulation and motivation, Physical health and ability to achieve goal and High Academic confidence.

Comparison of Academic Resilience Score of Orphanage Students based on Gender, Locale and Type of Management

Comparison of Academic resilience of Orphanage Students Based on Gender, Locale and Type of Management were conducted and presented under relevant headings. Detailed discussions of comparison are presented below.

Comparison of Academic Resilience of Orphanage Students Based on Gender

Independent sample t test is used to find the gender difference in Academic resilience of orphanage students. Comparison of Academic resilience of orphanage students based on their gender is presented in Table 29.

Table 29

Comparison of Academic Resilience of Orphanage Students based on Gender

Academic resilience score	Boys			Girls			t
	Mean	SD	N	Mean	SD	N	
Sense of well being	23.0	3.3	369	22.8	2.6	431	0.99
Academic confidence	30.4	2.2	369	29.3	3.0	431	5.93**
Emotional regulation and motivation	20.6	3.8	369	20.4	2.0	431	0.81
Physical health and ability to achieve goal	20.4	3.0	369	20.7	2.2	431	1.47
Academic resilience	94.4	10.3	369	93.2	6.5	431	2.05*

**: - Significant at 0.01 level, *: - Significant at 0.05 level

Table 29 shows that the mean scores of Academic resilience are 94.4 and 93.2 respectively for boys and girls. The independent t test ($t=2.05$, $p<0.05$) shows that there is a significant difference in mean scores of Academic resilience score between boys and girls. So, it can be inferred that the mean scores of Academic resilience score is significantly high among boys as compared to girls.

When comparing the dimensions of Academic resilience, it can be observed that the score regarding Academic confidence ($t = 5.93$, $p<0.01$) is significantly high among boys as compared to girls. There is no significant difference in mean scores regarding Sense of well being ($t= 0.99$, $p>0.05$), Emotional regulation and motivation ($t=0.81$, $p>0.05$), and Physical health and ability to achieve goal ($t= 1.47$, $p>0.05$) between boys and girls.

Thus it can be concluded that mean scores Academic resilience and its dimension Academic confidence are significantly differ between boys and girls and no statistical difference in the dimensions such as Sense of well being, Emotional regulation and motivation and Physical health and ability to achieve goal between boys and girls.

Graphical representation of comparison of mean scores of Academic resilience and its dimensions based on gender are presented in figure 18 and figure 19.

Figure 18

Comparison of Mean Score of Academic Resilience of Orphanage Students based on Gender

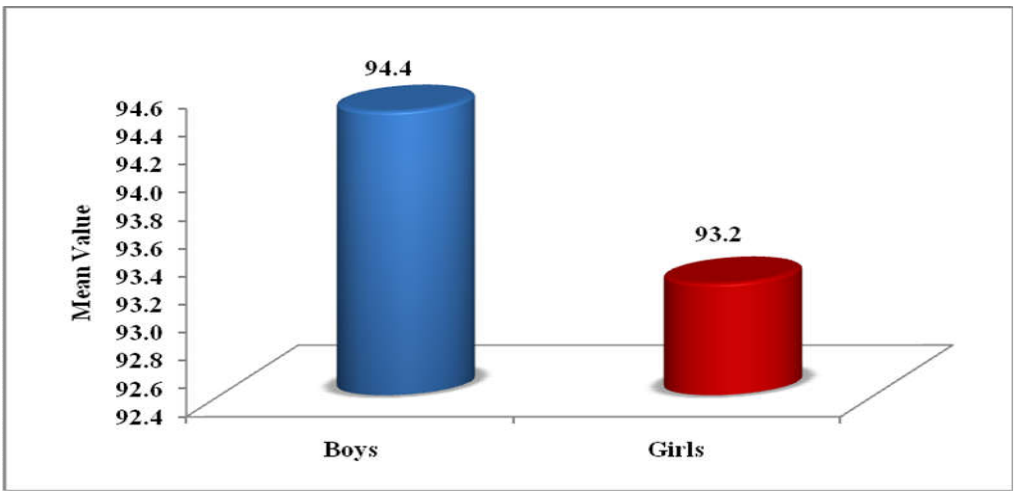
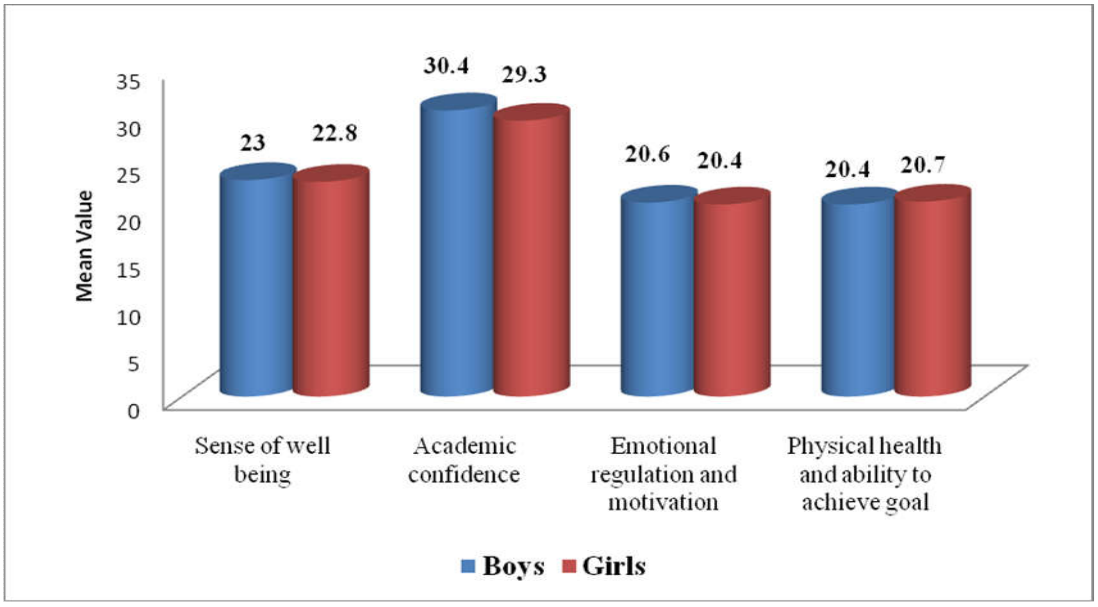


Figure 19

Comparison of Mean Scores of Dimensions of Academic Resilience of Orphanage Students based on Gender



Comparison of Academic Resilience of Orphanage Students based on Locale

Independent sample t-test is used to find the locale difference in Academic resilience of orphanage students. Comparison of Academic resilience of orphanage students based on their locale is presented in Table 30.

Table 30

Comparison of Academic Resilience of Orphanage Students based on Locale

Academic Resilience Score	Rural			Urban			t
	Mean	SD	N	Mean	SD	N	
Sense of well being	23.0	3.3	450	22.8	2.4	350	0.73
Academic confidence	30.2	2.5	450	29.3	2.9	350	4.51**
Emotional regulation and motivation	20.8	3.6	450	20.1	1.9	350	3.23**
Physical health and ability to achieve goal	20.4	2.8	450	20.9	2.2	350	2.68**
Academic resilience	94.3	9.8	450	93.1	6.3	350	2.01*

**: - Significant at 0.01 level, *: - Significant at 0.05 level

From the table 30, it is clear that the mean scores of Academic resilience are 94.3 and 93.1 respectively for rural and urban students. The independent t test ($t=2.01$, $p<0.05$) shows that there is significant difference in mean scores of Academic resilience between rural and urban students. So, it can be inferred that the mean scores of Academic resilience is significantly high among rural students as compared to urban students.

When comparing the dimensions of Academic resilience, it can be observed that the mean score regarding Academic confidence ($t = 4.51$, $p<0.01$), Emotional regulation and motivation ($t = 3.23$, $p<0.01$) and Physical health and ability to achieve goal ($t = 2.68$, $p<0.01$) are significantly differ between rural and urban students. There is no significant difference in mean score regarding Sense of well being ($t= 0.73$, $p>0.05$) between rural and urban students.

Thus it can be concluded that mean scores of Academic resilience and its dimensions such as Academic confidence, Emotional regulation and motivation and Physical health and ability to achieve goal are significantly differ between rural and urban students and no statistical difference in the dimension Sense of well being, between rural and urban students.

Graphical representation of mean scores of comparison of Academic resilience and its dimensions based on locale are presented in figure 20 and figure 21.

Figure 20

Comparison of Mean Scores of Academic Resilience of Orphanage Students based on Locale

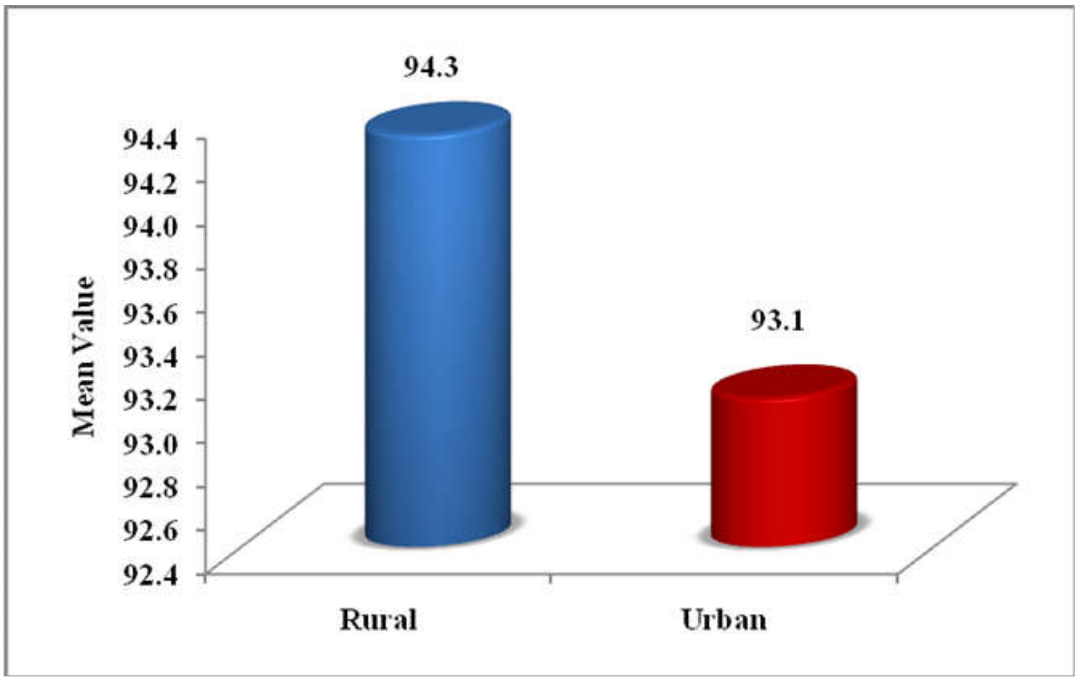
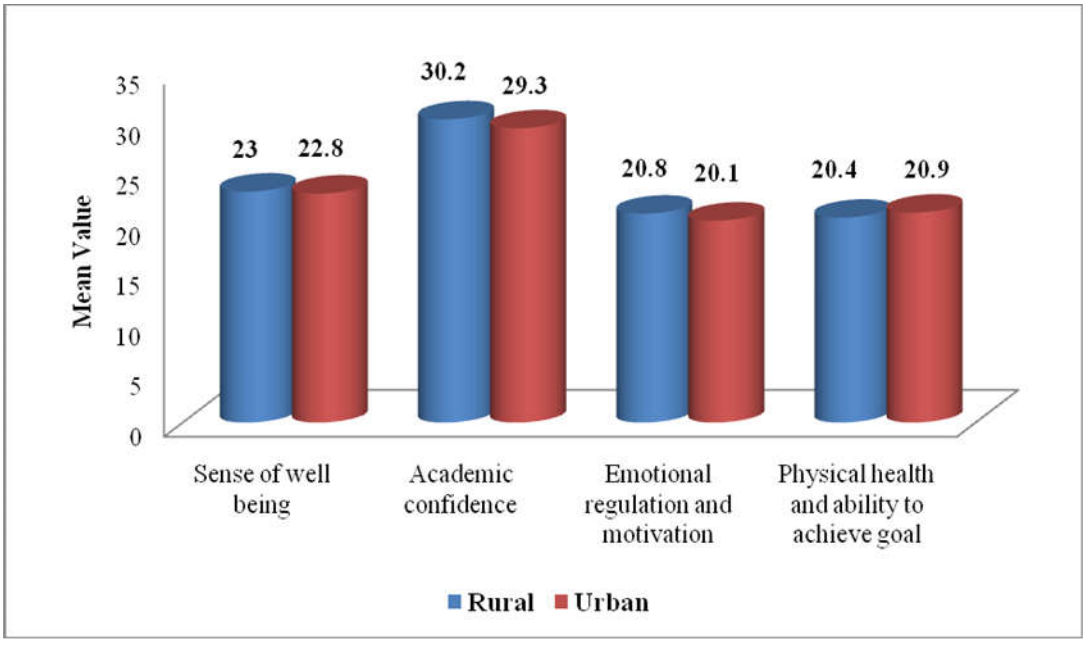


Figure 21

Comparison of Mean Scores of Academic Resilience of Orphanage Students based on Locale



Comparison of Academic resilience Scores of Orphanage Students Based on Type of Management

Comparison of Academic resilience of orphanage students based on the type of management of the school in which they are studying is conducted by using one way ANOVA. Scheffe multiple comparison is used as the post hoc analysis. Comparison of Academic resilience and its dimensions of orphanage students based on type of management are presented in table 31.

Table 31

Comparison of Academic Resilience and its Dimensions of Orphanage Students based on Type of Management

Academic Resilience Score	Type of Management	Mean	SD	N	F	Scheffe Multiple Comparisons	
						Pair	Mean Difference
Sense of Well Being	Aided (A)	22.1	2.7	325	29.64	A &B	1.8**
	Unaided (B)	23.9	3.2	275		A & C	0.7*
	Government (C)	22.8	2.5	200		B & C	1.1**
Academic Confidence	Aided (A)	29.3	2.9	325	21.66	A &B	1.3**
	Unaided (B)	30.6	2.7	275		A & C	0
	Government (C)	29.3	2.2	200		B & C	1.3**
Emotional Regulation and Motivation	Aided (A)	19.8	2.2	325	32.98	A &B	0.8**
	Unaided (B)	21.6	4.0	275		A & C	0.2
	Government (C)	20.0	1.9	200		B & C	1.6**
Physical Health and Ability to Achieve Goal	Aided (A)	20.1	2.3	325	9.02	A &B	0.9**
	Unaided (B)	21.0	3.1	275		A & C	0.6
	Government (C)	20.7	2.0	200		B & C	0.3
Academic resilience score	Aided (A)	91.4	6.6	325	39.46	A &B	5.8**
	Unaided (B)	97.2	11.0	275		A & C	1.4
	Government (C)	92.8	5.1	200		B & C	4.4**

**: - Significant at 0.01 level; *: - Significant at 0.05 level

The table 31 shows that mean score regarding Academic resilience is high among students from unaided schools (97.2) followed by students from government schools (92.8) and least among students from aided schools (91.4). The F statistic (One way ANOVA) value is 39.46, which is significant at 0.01 level. It means that the variation in Academic resilience among students from different management schools is statistically significant at 0.01 level.

The Scheffe multiple comparison (Post hoc Test) is used to compare the mean score in Academic resilience between students from different management schools taken two at a time (pair wise) to assess where a significant mean difference exist. The mean difference in Academic resilience between students from aided and unaided schools (5.8) is statistically significant at 0.01 level. It means that the mean scores of Academic resilience is significantly high among students from unaided schools as compared to students from aided schools. Similarly, there is significant difference in Academic resilience between students from unaided and government schools (4.4).

The table shows that there exist a significant difference in the mean scores of the dimensions Sense of well being ($F= 29.64$, $p< 0.01$), Academic confidence ($F= 21.66$, $p< 0.01$), Emotional regulation and motivation ($F= 32.98$, $p< 0.01$) and Physical health and ability to achieve goal ($F= 9.02$, $p< 0.01$) based on the type of management.

Scheffe multiple comparisons of dimensions shows that the mean difference in the dimension Sense of well being between students from aided and unaided schools (1.8), unaided and government schools (1.1) are statistically significant at 0.01 level and aided and government schools is statistically significant at 0.05 level. Similarly mean difference in the Academic confidence between students from aided and unaided schools (1.3), unaided and government schools (1.3) are statistically significant at 0.01 level. Mean difference in the Emotional regulation and motivation between students from aided and unaided schools (0.8), unaided and government schools (1.6) are statistically significant at 0.01 level. Mean difference in the interaction Physical health and ability to achieve goal between students from aided and unaided schools (0.9) is statistically significant at 0.01 level.

Graphical representation of the comparison of mean scores of Academic resilience and its dimensions of orphanage students based on type of management are presented in figure 22 and figure 23

Figure 22

Comparison of Mean Scores of Academic Resilience of Orphanage Students based on Type of Management

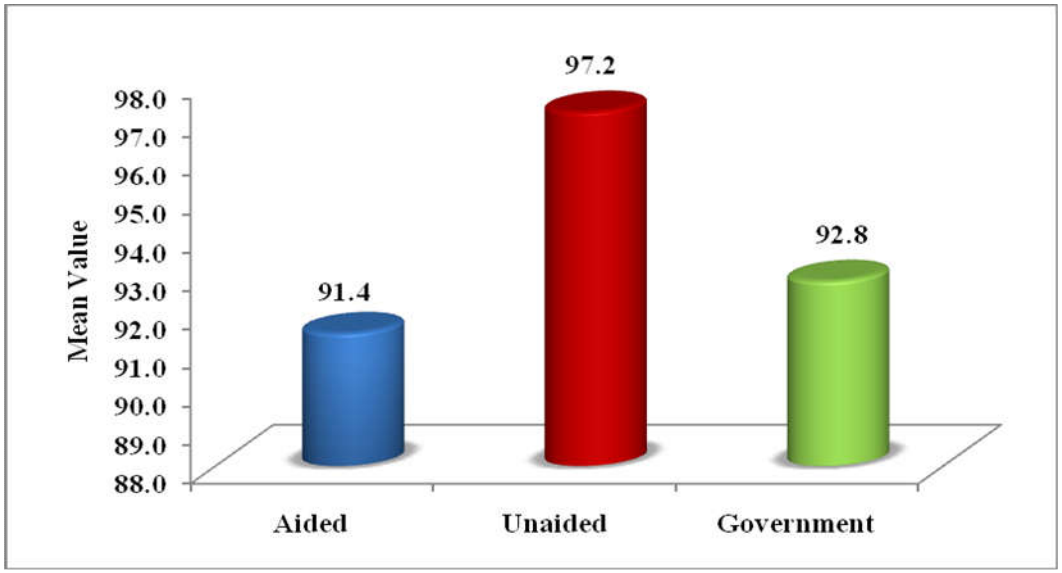
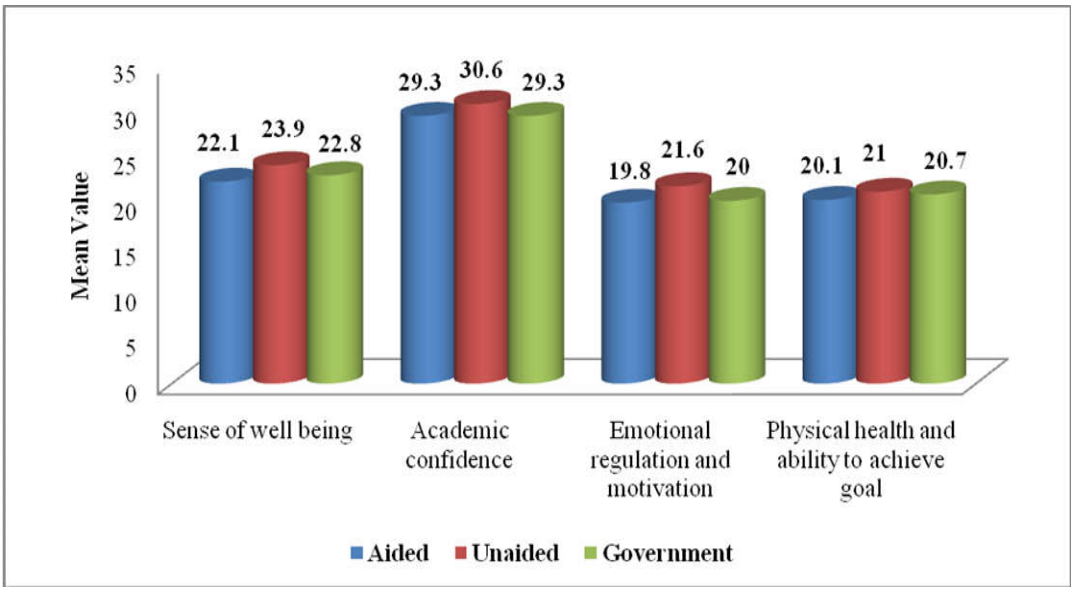


Figure 23

Comparison of Mean Scores of Dimensions of Academic Resilience of Orphanage Students based on Type of Management



Effect of Metacognition on Academic resilience of Orphanage Students

Effect of Metacognition on Academic resilience of orphanage students was found by conducting Pearson's product moment correlation and linear regression analysis. Correlation coefficient of Metacognition and Academic resilience of orphanage students is calculated and details are presented in table 32.

Table 32

Pearson's Product Moment Coefficient of Correlation for Metacognition and Academic Resilience of Orphanage Students

Variables	Sense of well being	Academic Confidence	Emotional Regulation and Motivation	Physical Health and Ability to Achieve Goal	Academic Resilience Score
Planning	0.352**	0.188**	0.293**	0.266**	0.366**
Monitoring	0.305**	0.28**	0.262**	0.382**	0.404**
Knowledge	0.301**	0.352**	0.344**	0.284**	0.425**
Evaluation	0.216**	0.305**	0.176**	0.221**	0.302**
Regulation	0.322**	0.198**	0.342**	0.293**	0.385**
Metacognition	0.478**	0.42**	0.451**	0.464**	0.6**

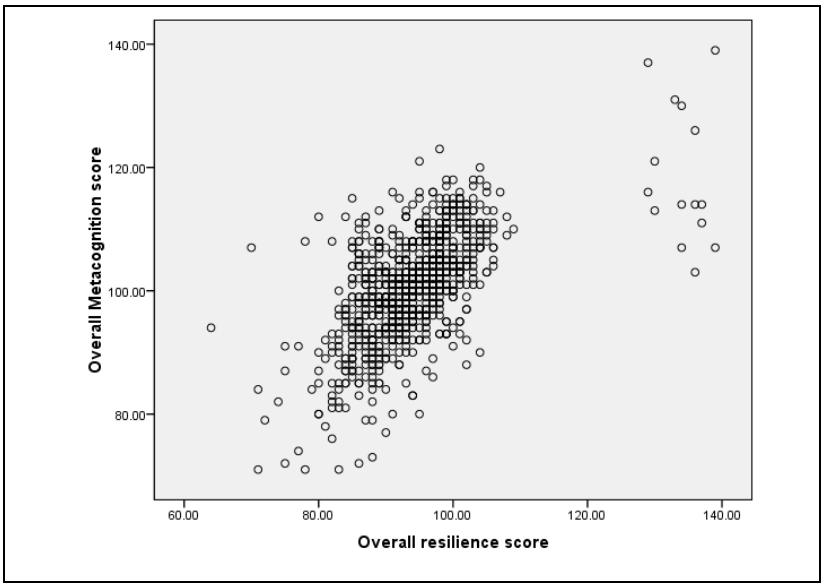
** Significant at 0.01 level

From table 32 it is clear that Pearson's Product Moment Coefficient of correlation between Metacognition and Academic resilience is 0.60 ($P<0.01$). It means that there is a significant positive correlation between scores of Metacognition and Academic resilience. There is significant increase in Academic resilience score for increase in Metacognition score. From the above table, it can be inferred that all the sub dimensions of the Metacognition such as Planning, Monitoring, Knowledge, Evaluation and Regulation are significantly correlated with Academic resilience score and its dimensions such as Sense of well being, Academic confidence, Emotional regulation and motivation and Physical health and ability to achieve goal.

Scatter diagram for Metacognition and Academic resilience of orphanage students is presented in figure 24

Figure 24

Scatter Diagram for Metacognition and Academic Resilience of Orphanage Students



Linear Regression Analysis

Linear regression analysis was carried out to find the influence of Metacognition on Academic resilience. The score regarding Academic resilience was taken as dependent variable and scores of Metacognition was taken as independent variable. Results of the regression analysis presented in table 33.

Table 33

Influence of Metacognition on Academic Resilience of Orphanage Students

Predictor	Constant	B	t	p	R^2
Metacognition	36.71	0.57	21.2	p<0.01	0.360

The B coefficient was observes as 0.57, it means that the increase in the score of Academic resilience of orphanage students is 0.57 for increase in each unit of Metacognition score and it is found as significant. The regression equation for the prediction of Academic resilience is

Academic resilience = 36.71 + 0.57 × Metacognition

The R^2 of the regression equation is found as 0.36, which indicates that 36 percent of the variation in the Academic resilience score can be explained by the Metacognition of orphanage students.

Influence of the dimensions of Metacognition on Academic resilience score of orphanage students is presented in table 34.

Table 34

Influence of Dimensions of Metacognition on Academic Resilience Score of Orphanage Students

Dimension of Metacognition	Constant	B	t	R^2
Planning		0.439	4.6**	
Monitoring		0.776	9.64 **	
Knowledge	36.498	0.849	8.77 **	0.380
Evaluation		0.228	2.44*	
Regulation		0.576	6.43 **	

** Significant at 0.01 level, * Significant at 0.05 level

From table 34, it is clear that B coefficient obtained for Planning is 0.439, it means that the increase in the score of Academic resilience of orphanage students is 0.439 for increase in each unit of Planning score. The obtained t value shows that the B-values obtained differ significantly from zero. Hence the dimension Planning is significant predictor of Academic resilience of orphanage students.

B coefficient obtained for Monitoring is 0.776 , it means that the increase in the score of Academic resilience of orphanage students is 0.776 for increase in each unit of Monitoring score. The obtained t value shows that the B-values obtained differ significantly from zero. Hence the dimension Monitoring is significant predictor of Academic resilience of orphanage students.

B coefficient obtained for Knowledge is 0.849, it means that the increase in the score of Academic resilience of orphanage students is 0.849 for increase in each unit of Knowledge score. The obtained t value shows that the B-values obtained differ significantly from zero. Hence the dimension Knowledge is significant predictor of Academic resilience of orphanage students.

B coefficient obtained for Evaluation is 0.228 , it means that the increase in the score of Academic resilience of orphanage students is 0.228 for increase in each unit of Evaluation score. The obtained t value shows that the B-values obtained differ significantly from zero. Hence the dimension Evaluation is significant predictor of Academic resilience of orphanage students.

B coefficient obtained for Regulation is 0.576 , it means that the increase in the score of Academic resilience of orphanage students is 0.576 for increase in each unit of Regulation score. The obtained t value shows that the B-values obtained differ significantly from zero. Hence the dimension Regulation is significant predictor of Academic resilience of orphanage students.

Hence the dimensions of the variable Metacognition viz., Planning, Monitoring, Knowledge, Evaluation and Regulation are significant predictors of Academic resilience of orphanage students.

With the values of B, the regression model can be expressed as

$$\mathbf{Y^1 = 36.498 + 0.439\ X_1 + 0.776\ X_2 + 0.849\ X_3 + 0.228\ X_4 + 0.576\ X_5}$$

Where,

Y^1 - Predicted value of Academic resilience

X_1 – Score of Planning

X_2– Score of Monitoring

X_3– Score of Knowledge

X_4– Score of Evaluation

X_5– Score of Regulation

The R^2 of the regression equation is found as 0.38, which indicates that 38 percent of the variation in the Academic resilience score can be explained by the regression model developed with variables Planning, Monitoring, Knowledge, Evaluation and Regulation

Effect of Attributional Complexity on Academic Resilience of Orphanage Students

Effect of Attributional Complexity on Academic resilience of orphanage students was found by conducting Pearson's product moment correlation and linear regression analysis. Correlation coefficient of Attributional Complexity and Academic resilience of orphanage students is calculated and details are presented in table 35.

Table 35

Pearson's Product Moment Coefficient of Correlation for Attributional Complexity and Academic Resilience of Orphanage Students

Variables	Sense of Wellbeing	Academic Confidence	Emotional Regulation and Motivation	Physical Health and Ability to Achieve Goal	Academic Resilience Score
Motivation	0.395**	0.257**	0.425**	0.476**	0.514**
Complex vs Simple	0.285**	0.151**	0.216**	0.269**	0.305**
Interactive Ability	0.273**	0.152**	0.258**	0.273**	0.318**
Internal and External Attribute	0.32**	0.348**	0.291**	0.366**	0.436**
Attributional Complexity	0.468**	0.329**	0.428**	0.5**	0.571**

**: - Significant at 0.01 level

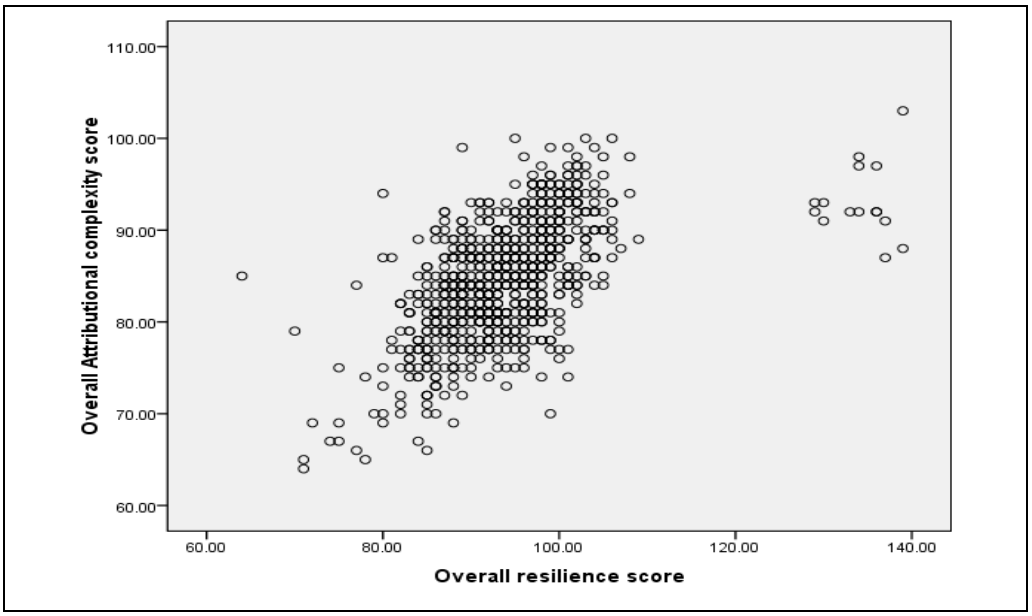
From table 35 it is clear that Pearson's product moment coefficient of correlation between Attributional Complexity and Academic Resilience is 0.571 ($P<0.01$). It means that there is a significant positive correlation between Attributional Complexity and Academic Resilience. There is significant increase in Academic

Resilience score for increase in Attributional Complexity score. From the above table, it can be inferred that all the sub dimensions of the Attributional Complexity such as Motivation, Complex vs Simple, Interaction Ability and Internal and External Attribute are significantly correlated with Academic Resilience score and its dimensions such as Sense of well being, Academic confidence, Emotional regulation and motivation and Physical health and ability to achieve goal.

Scatter diagram for Attributional Complexity and Academic Resilience of orphanage students is presented in figure 25.

Figure 25

Scatter Diagram for Attributional Complexity and Academic Resilience of Orphanage Students



Linear Regression Analysis

Linear regression analysis was carried out to find the influence of Attributional Complexity score on Academic Resilience. The score regarding Academic Resilience was taken as dependent variable and scores of Attributional Complexity was taken as independent variable. Results of the regression analysis are presented in table 36.

Table 36

Influence of Attributional Complexity on Academic Resilience of Orphanage Students

Predictor	Constant	B	t	p	R^2
Attributional Complexity	30.12	0.75	19.63	p<0.01	0.326

The B coefficient was observes as 0.75, it means that the increase in the score of Academic Resilience of orphanage students is 0.75 for increase in each unit of Attributional Complexity score and it is found as significant. The regression equation for the prediction of Academic Resilience is

Academic Resilience = 30.12 + 0.75 × Attributional Complexity

The R^2 of the regression equation is found as 0.326, which indicates that 32.6 percent of the variation in the Academic Resilience score can be explained by the Attributional Complexity of orphanage students.

Influence of the dimensions of Attributional Complexity on Academic Resilience score of orphanage students is presented in table 37

Table 37

Influence of Dimensions of Attributional Complexity on Academic Resilience of Orphanage Students

Dimensions of Attributional Complexity	Constant	B	t	R^2
Motivation	20.149	1.760	13.05**	0.392
Complex vs simple		0.375	4.29**	
Interactive ability		0.476	4.77**	
Internal and external attributes		0.919	8.43**	

**Significant at 0.01 level

From table 37, it is clear that B coefficient obtained for Motivation is 1.760, it means that the increase in the score of Academic Resilience of orphanage students is 1.760 for increase in each unit of Motivation score. The obtained t value shows

that the B-values obtained differ significantly from zero. Hence the dimension Motivation is significant predictor of Academic Resilience of orphanage students.

B coefficient obtained for Complex vs Simple is 0.375, it means that the increase in the score of Academic Resilience of orphanage students is 0.375 for increase in each unit of Complex vs Simple score. The obtained t value shows that the B-values obtained differ significantly from zero. Hence the dimension Complex vs Simple is significant predictor of Academic Resilience of orphanage students.

B coefficient obtained for Interactive Ability is 0.476 , it means that the increase in the score of Academic Resilience of orphanage students is 0.476 for increase in each unit of Interactive Ability score. The obtained t value shows that the B-values obtained differ significantly from zero. Hence the dimension Interactive Ability is significant predictor of Academic Resilience of orphanage students.

B coefficient obtained for Internal and External Attributes is 0.919 , it means that the increase in the score of Academic Resilience of orphanage students is 0.919 for increase in each unit of Internal and External Attributes score. The obtained t value shows that the B-values obtained differ significantly from zero. Hence the dimension Internal and External Attributes is significant predictor of Academic Resilience of orphanage students.

Hence dimensions of the variable Attributional Complexity viz., Motivation, Complex vs Simple, Interactive Ability and Internal and External attributes are significant predictors of Academic Resilience of orphanage students.

With the values of B, the regression model can be expressed as

$$\mathbf{Y^1 = 20.149 + 1.760\ X_1 + 0.375\ X_2 + 0.476\ X_3 + 0.919\ X_4}$$

Where,

Y^1 - Predicted value of Academic Resilience

X_1 – Score of Motivation

X_2– Score of Complex vs Simple

X_3– Score of Interactive Ability

X_4– Score of Internal and External Attributes

The R^2 of the regression equation is found as 0.392, which indicates that 39.2 percent of the variation in the Academic Resilience score can be explained by the regression model developed with variables Motivation, Complex vs Simple, Interactive Ability and Internal and External Attributes.

Influence of Metacognition and Attributional Complexity on Academic Resilience of Orphanage Students

Influence of Metacognition and Attributional Complexity on Academic Resilience of orphanage students is obtained by conducting multiple regression analysis. The score regarding Academic Resilience was taken as dependent variable and scores of Metacognition and Attributional Complexity are taken as independent variable. Results of the multiple regression analysis are presented in table 38.

Table 38

Influence of Metacognition and Attributional Complexity on Academic Resilience of Orphanage Students

Predictor	Constant	B	t	p	R^2
Metacognition	17.981	0.383	12.34	p<0.01	0.434
Attributional Complexity		0.441	10.18	p<0.01	

The B coefficient was observed as 0.383 for Metacognition and 0.441 for Attributional Complexity. It means that increase in the score of Academic Resilience of orphanage students is 0.383 for increase in each unit of Metacognition score and increase in the score of Academic Resilience of orphanage students is 0.441 for increase in each unit of Attributional Complexity score. The regression equation for the prediction of Academic Resilience is

Academic Resilience =

17.981 + 0.383 × Metacognition + 0.441 × Attributional Complexity

Table 38 shows that the R^2 value obtained is .434, which indicates that 43.4 percent of variation in Academic Resilience score can be explained by the regression model developed with the variable Metacognition and Attributional Complexity.

Influence of the dimensions of Metacognition and Attributional Complexity on Academic Resilience score of orphanage students is presented in table 39

Table 39

Influence of Dimensions of Metacognition and Attributional Complexity on Academic Resilience of Orphanage Students (Model 1)

Dimensions of Metacognition and Attributional Complexity	Constant	B	t	R^2
Planning		0.200	2.21*	
Monitoring		0.422	5.5**	
Knowledge		0.753	8.37**	
Evaluation		-0.054	0.62	
Regulation	8.694	0.435	5.26 **	0.511
Motivation		1.391	11.07**	
Complex vs simple		0.141	1.66	
Interactive ability		0.393	4.04 **	
Internal and external attributes		0.532	5.12**	

In this model with the predictors, the unstandardized regression coefficient for the dimensions Evaluation and Complex vs Simple is found to be not significantly different from zero as the t value obtained is less than 1.96. Hence another model 2 was tried excluding the dimensions Evaluation and Complex vs Simple. Details of the regression analysis is presented in table 40.

Table 40

Influence of Dimensions of Metacognition and Attributional Complexity on Academic Resilience of Orphanage Students (Model 2)

Dimensions of Metacognition and Attributional Complexity	Constant	B	t	R^2
Planning		.225	2.580**	
Monitoring		.427	5.635**	
Knowledge		.729	8.231**	
Regulation	9.201	.468	5.818**	0.509
Motivation		1.387	11.098**	
Interactive ability		.406	4.391**	
Internal and external attributes		.543	5.277**	

** Significant at 0.01 level

From table 40, it is clear that in this model B coefficient obtained for the Planning is 0.225, it means that the increase in the score of Academic Resilience of orphanage students is 0.225 for increase in each unit of Planning score. The obtained t value shows that the B-values obtained differ significantly from zero. Hence the dimension Planning is significant predictor of Academic Resilience of orphanage students.

B coefficient obtained for Monitoring is 0.427, it means that the increase in the score of Academic Resilience of orphanage students is 0.42 for increase in each unit of Monitoring score. The obtained t value shows that the B-values obtained differ significantly from zero. Hence the dimension Monitoring is significant predictor of Academic Resilience of orphanage students.

B coefficient obtained for Knowledge is 0.729, it means that the increase in the score of Academic Resilience of orphanage students is 0.729 for increase in each unit of Knowledge score. The obtained t value shows that the B-values obtained differ significantly from zero. Hence the dimension Knowledge is significant predictor of Academic Resilience of orphanage students.

B coefficient obtained for Regulation is 0.468, it means that the increase in the score of Academic Resilience of orphanage students is 0.46 for increase in each unit of Regulation score. The obtained t value shows that the B-values obtained differ significantly from zero. Hence the dimension Regulation is significant predictor of Academic Resilience of orphanage students

B coefficient obtained for the Motivation is 1.387, it means that the increase in the score of Academic Resilience of orphanage students is 1.387 for increase in each unit of Motivation score. The obtained t value shows that the B-values obtained differ significantly from zero. Hence the dimension Motivation is significant predictor of Academic Resilience of orphanage students.

B coefficient obtained for Interactive Ability is 0.406, it means that the increase in the score of Academic Resilience of orphanage students is 0.406 for increase in each unit of Interactive Ability score. The obtained t value shows that the B-values obtained differ significantly from zero. Hence the dimension Interactive Ability is significant predictor of Academic Resilience of orphanage students.

B coefficient obtained for Internal and External Attributes is 0.543, it means that the increase in the score of Academic Resilience of orphanage students is 0.543 for increase in each unit of Internal and External Attributes score. The obtained t value shows that the B-values obtained differ significantly from zero. Hence the dimension Internal and External Attributes is significant predictor of Academic Resilience of orphanage students.

Hence dimensions of the variables Metacognition and Attributional Complexity viz., Planning, Monitoring, Knowledge, Regulation, Motivation, Interactive Ability and Internal and External Attributes are significant predictors of Academic Resilience of orphanage students.

With the values of B, the regression model can be expressed as

$$\mathbf{Y^1 = 9.201 + 0.225\ X_1 + 0.427\ X_2 + 0.729\ X_3 + 0.468\ X_4 + 1.387\ X_5 + 0.406\ X_6 + 0.543\ X_7}$$

Where,

Y_1 - Predicted value of Academic Resilience

X_1 – Score of Planning

X_2– Score of Monitoring

X_3– Score of Knowledge

X_4– Score of Regulation

X_5– Score of Motivation

X_6– Score of Interactive Ability

X_7– Score of Internal and External Attributes

The R^2 of the regression equation is found as 0.509, which indicates that 50.9 percent of the variation in the Academic Resilience score can be explained by the regression model developed with dimensions of the variables Metacognition and Attributional Complexity viz., Planning, Monitoring, Knowledge, Regulation, Motivation, Interactive Ability and Internal and External Attributes.

Chapter 5

Summary, Findings and Suggestions

- *Study in Retrospect*
- *Major Findings of the Study*
- *Tenability of Hypotheses*
- *Conclusions*

In this chapter an overview of the important aspects of the stages of execution the study, the study in retrospect, major findings of the study, tenability of the hypotheses and conclusions of the study are presented in brief. This chapter is organized under the following headings

- Study in retrospect
- Major findings of the study
- Tenability of Hypotheses
- Conclusions

Study in Retrospect

The various aspects in the different stages of the present investigations like the Title, Variables, Objectives, Hypotheses, Methodology used are viewed retrospectively.

Restatement of the Problem

The study is designed to find out the influence of metacognition and Attributional Complexity on Academic resilience of orphanage students in Kerala. So the problem has been stated as **"Influence of Metacognition and Attributional Complexity on Academic Resilience of Orphanage Students in Kerala."**

Variables of the Study

The present study involves three types of variable viz., dependent variable, independent variable and background variables.

Dependent Variable

The present study is an attempt to find out the influence of Metacognition and Attributional Complexity on Academic Resilience among orphanage students. Hence the dependent variable of the study is

- Academic Resilience

Independent Variables

The independent variables of the study are

- Metacognition
- Attributional Complexity

Background Variables

Selected background variables of the present study are

- Gender
- Locality of students' residence
- Type of Management

Objectives of Study

The following are the objectives of the present study:

1. To assess the extent of Metacognition among orphanage students.
2. To compare the Metacognition and its dimensions of orphanage students based on selected background variables.
3. To assess the extent of Attributional Complexity among orphanage students.
4. To compare the Attributional Complexity and its dimensions of orphanage students based on selected background variables
5. To assess the extent of Academic Resilience among orphanage students.
6. To compare the Academic Resilience and its dimensions of orphanage students based on selected background variables

7. To find out the relationship between Metacognition and Academic Resilience among orphanage students.
8. To find out the relationship between dimensions of Metacognition and dimensions of Academic Resilience among orphanage students.
9. To find out the influence of Metacognition on Academic Resilience among orphanage students.
10. To find out the influence of dimensions of Metacognition on Academic Resilience among orphanage students.
11. To find out relationship between Attributional Complexity and Academic Resilience among orphanage students.
12. To find out the relationship between dimensions of Attributional Complexity and dimensions of Academic Resilience among orphanage students.
13. To find out the influence of Attributional Complexity on Academic Resilience among orphanage students
14. To find out the influence of dimensions of Attributional Complexity on Academic Resilience among orphanage students.
15. To find out the influence of Metacognition and Attributional Complexity on Academic Resilience among orphanage students
16. To find out the influence of dimensions of Metacognition and Attributional Complexity on Academic Resilience among orphanage students.

Hypotheses of the Study

1. There exist significant gender difference in the mean scores of Metacognition and its dimensions of orphanage students.
2. There exist significant locale difference in the mean scores of Metacognition and its dimensions of orphanage students.
3. There exist significant type of management difference in the mean scores of Metacognition and its dimensions of orphanage students.

4. There exist significant gender difference in the mean scores of Attributional Complexity and its dimensions of orphanage students.
5. There exist significant locale difference in the mean scores of Attributional Complexity and its dimensions of orphanage students.
6. There exist significant type of management difference in the mean scores of Attributional Complexity and its dimensions of orphanage students
7. There exist significant gender difference in the mean scores of Academic Resilience and its dimensions of orphanage students.
8. There exist significant locale difference in the mean scores of Academic Resilience and its dimensions of orphanage students.
9. There exist significant type of management difference in the mean scores of Academic Resilience and its dimensions of orphanage students
10. There exists a significant relationship between Metacognition and Academic Resilience among orphanage students.
11. There exist a significant relationship between dimensions of Metacognition and dimensions of Academic Resilience among orphanage students.
12. There exists a significant influence of Metacognition on Academic Resilience among orphanage students.
13. There exists a significant influence of dimensions of Metacognition on Academic Resilience among orphanage students.
14. There exist a significant relationship between Attributional Complexity and Academic Resilience among orphanage students.
15. There exist a significant relationship between dimensions of Attributional Complexity and dimensions of Academic Resilience among orphanage students.
16. There exists a significant influence of Attributional Complexity on Academic Resilience among orphanage students

17. There exists a significant influence of dimensions of Attributional Complexity on Academic Resilience among orphanage students.
18. There exists a significant influence of Metacognition and Attributional Complexity on Academic Resilience among orphanage students
19. There exists a significant influence of dimensions of Metacognition and Attributional Complexity on Academic Resilience among orphanage students.

Methodology in Brief

Methodology of the study are explained below:

Methods of the Study

Normative Survey Method is used for the present study. The present study was undertaken to find out the influence of Metacognition and Attributional Complexity on Resilience of orphanage students in Kerala state. In order to fulfill the objectives and for getting a clear picture of the scenario of the problem, it was intended to collect an extensive and true representative data from all over Kerala. Hence survey method was adopted by the investigator for the present study.

Sample Selected for the Study

For the selection of sample, stratified random sampling technique was adopted. Considering the special nature of the study and type of statistical methods used the size of the sample was tentatively fixed as eight hundred secondary school students studying in any orphanages of Kerala. The sampling was done through an elaborate process. As the Final Phase the investigator collected 800 secondary school students who pursuing in any orphanages in Kerala. The sample consisted of all the subgroups of sample. In the selection of

sample, due representation was given to background variables such as Gender, Locale and Type of management.

Tools used for the Study

For collecting the data required for the study of any problem one might use various devices or instruments. The instruments thus employed are called tools. The success of a research study depends mostly on the nature of the tools and techniques used. Different types of tools are used for collecting information for different purposes. According to Best and Khan (2005), the use of the particular tools depends upon the type of the problem and each research tool is appropriate in a given situation to accomplish a particular purpose. The following major tools were used for collecting data for the present study, namely:

1. Metacognition Scale (Shahanas & Koya, 2017)
2. Attributional Complexity Scale (Shahanas & Koya, 2017)
3. Academic Resilience Scale (Shahanas & Koya, 2017)

Statistical Techniques

The following statistical techniques were employed for analyzing, interpreting and testing hypotheses of the present study

- Descriptive statistics like mean, median, mode, standard deviation and quartiles were calculated for the sample with respect to the variable studied
- One sample t test
- Independent sample t test
- One way ANOVA
- Pearson's Product Moment Coefficient of Correlation 'r'
- Simple Regression Analysis
- Multiple Regression Analysis

Major Findings

1. There exists a significant difference in the mean scores of Metacognition (100.5) and mid score (126) of orphanage students (t= 80.5, p<0.01). It means that the orphanage students posses low Metacognition.
2. There exist significant difference in the mean scores of the dimensions of Metacognition such as Planning (t=70.1, p<0.01), Monitoring (t=24, p<0.01), Knowledge (t=72.7, p<0.01), Evaluation (t=41.1, p<0.01) and Regulation (t=53.9, p<0.01) and corresponding mid values of orphanage students. It means that orphanage students posses low Planning, Monitoring, Knowledge, Evaluation and Regulation.
3. There exist significant difference in mean scores of Metacognition between boys and girls (t=3.88, p<0.01). Mean scores of Metacognition is significantly high among boys (M=101.8) as compared to girls (M=99.3).
4. The mean scores of the dimensions of Metacognition viz., Planning (t = 4.46, p<0.01) and Knowledge (t = 5.36, p<0.01) is significantly high among boys as compared to girls.
5. There is no significant difference in the mean scores of the dimensions of Metacognition viz., Monitoring (t= 1.83, p>0.05), Evaluation (t=1.96, p>0.05), and Regulation (t= 1.1, p>0.05) between boys and girls.
6. There exist a significant difference in overall Metacognition score between rural and urban students (t=6.85, p<0.01). Overall Metacognition score is significantly high among rural (M=102.3) students as compared to urban (M=98.1) students.
7. The mean scores of dimensions of Metacognition viz., Planning (t = 5.11, p<0.01), Knowledge (t = 5.24, p<0.01) Evaluation (t=4.21, p<0.01), and Regulation (t= 6.46, p<0.01) are significantly high among rural students as compared to urban students.

8. There is no significant difference in mean score regarding the dimension Monitoring (t= 0.59, p>0.05), between rural and urban students.
9. The variation in Metacognition among students from different management schools is statistically significant at 0.01 level (F= 48.09, p<0.01). There exist significant difference in mean scores of Metacognition between students from aided and unaided schools (Mean difference = 6.8), aided and government schools (Mean difference = 3.4) and students from unaided and government schools (Mean difference = 3.4).
10. There exist a significant difference in the mean scores of the dimensions Planning (F=45.16, p< 0.01), Knowledge (F= 20.78, p< 0.01), Evaluation (F= 23.17, p< 0.01) and Regulation (F= 41.95, p< 0.01) based on the type of management. The mean difference in the dimension Planning between students from aided and unaided schools (Mean difference = 2.1), aided and government schools (Mean difference = 1.0), unaided and government schools (Mean difference = 1.1) are statistically significant at 0.01 level. Similarly mean difference in the Knowledge between students from aided and unaided schools (Mean difference = 1.4), unaided and government schools (Mean difference = 1) are statistically significant at 0.01 level. Mean difference in the Evaluation between students from aided and unaided schools (Mean difference = 1.3), aided and government schools (Mean difference = 1.3) are statistically significant at 0.01 level. Mean difference in the Regulation between students from aided and unaided schools (Mean difference = 2.0), unaided and government schools (Mean difference = 1.6) are statistically significant at 0.01 level.
11. There exists no significant difference in the dimension Monitoring (F= 0.82, p>0.05) based on type of management.
12. There exists a significant difference in the mean scores of Attributional Complexity score (84.5) and mid score (93) of orphanage students (t=

37.4, $p<0.01$).it means that orphanage students posses low Attributional Complexity.

13. There exist significant difference in the mean scores of the dimensions of Attributional Complexity such as Motivation ($t=22.1$, $p<0.01$), Complex vs Simple ($t=27.3$, $p<0.01$), Interactive Ability ($t=41.8$, $p<0.01$) and Internal and External Attributes ($t=5.5$, $p<0.01$) and corresponding mid values of orphanage students. It means that orphanage students posses low Motivation, Complex vs Simple, Interactive Ability and Internal and External Attributes.
14. There exist a significant difference in mean scores Attributional Complexity score between boys and girls ($t=2.48$, $p<0.05$). The overall Attributional Complexity score is significantly high among girls ($M = 85$) as compared to boys ($M = 83.9$).
15. The Dimension of Attributional Complexity, Complex vs Simple ($t = 4.53$, $p<0.01$) is significantly high among girls ($M= 21.6$) as compared to boys ($M= 20.7$).
16. There is no significant difference in mean scores regarding the dimension of Attributional Complexity viz., Motivation ($t= 0.88$, $p>0.05$), Interactive Ability ($t=1.2$, $p>0.05$), and Internal and External Attributes ($t= 0.79$, $p>0.05$) between boys andgirls.
17. There is no significant difference in Attributional Complexity score between rural and urban students ($t=0.11$, $p>0.05$).
18. Mean scores of the dimensions of Attributional Complexity viz., Motivation ($t=1.18$, $p>0.05$), Complex vs Simple ($t = 0.73$, $p>0.05$) Interactive Ability ($t=0.27$, $p>0.05$), and Internal and External Attributes ($t= 0.03$, $p>0.05$) are not significantly differ between rural and urban students.

19. Variation in Attributional Complexity among students from different management schools is statistically significant at 0.01 level (F= 26.32, p<0.01). Attributional Complexity between students from aided and unaided schools (Mean difference = 3.4) and unaided and government schools (Mean difference = 3.2) are statistically significant at 0.01 level.

20. There exist a significant difference in the mean scores of the dimensions of Attributional Complexity viz., Complex vs Simple (F= 40.66, p< 0.01) and Interactive Ability (F= 17.59, p< 0.01) based on the type of management. Mean difference in the dimension Complex vs Simple between students from aided and unaided schools (Mean difference 1.4), unaided and government schools (Mean difference 2.1) are statistically significant at 0.01 level. Similarly mean difference in the Interactive Ability between students from aided and unaided schools (Mean difference 1.2), unaided and government schools (Mean difference 0.8) are statistically significant at 0.01 level.

21. There exists no significant difference in the dimensions Motivation (F= 1.92, p>0.05) and Internal and External Attributes (F= 1.23, p>0.05) based on type of management.

22. There exists a significant difference in the mean scores of Academic Resilience (93.8) and mid score (111) of orphanage students (t= 57.5, p<0.01). It means that orphanage students posses low Academic Resilience.

23. There exist significant difference in the mean scores of dimensions of Academic Resilience such as Sense of well being (t=39.1, p<0.01), Academic confidence (t=28.9, p<0.01), Emotional regulation and motivation (t=61.7, p<0.01) and Physical health and ability to achieve goal (t=103.4, p<0.01) and corresponding mid values of orphanage students.

Among the mean scores of dimensions of Academic Resilience except Academic confidence all other dimension of Academic Resilience are lower than mid value. It means that orphanage students posses low Sense of well being, Emotional regulation and motivation, Physical health and ability to achieve goal and high Academic confidence.

24. There exists a significant difference in mean scores of Academic Resilience between boys and girls ($t=2.05$, $p<0.05$). Mean score of Academic Resilience is significantly high among boys ($M= 94.4$) as compared to female ($M= 93.2$).

25. Mean score regarding Academic confidence ($t=5.93$, $p<0.01$) is significantly high among boys as compared to girls. There is no significant difference in mean scores regarding Sense of well being ($t= 0.99$, $p>0.05$), Emotional regulation and motivation ($t=0.81$, $p>0.05$), and Physical health and ability to achieve goal ($t= 1.47$, $p>0.05$) between boys and girls.

26. There is significant difference in Mean scores of Academic Resilience score between rural and urban students ($t=2.01$, $p<0.05$). Mean scores of Academic Resilience score is significantly high among rural ($M = 94.3$) students as compared to urban ($M = 93.1$) students.

27. Mean score regarding Academic confidence ($t = 4.51$, $p<0.01$), Emotional regulation and motivation ($t = 3.23$, $p<0.01$) and Physical health and ability to achieve goal ($t= 2.68$, $p<0.01$) are significantly differ between rural and urban students. There is no significant difference in mean score regarding Sense of well being ($t= 0.73$, $p>0.05$) between rural and urban students.

28. Variation in Academic Resilience among students from different management schools is statistically significant at 0.01 level ($F = 39.46$, $p<0.01$). Academic Resilience between students from aided and unaided

schools (Mean difference =5.8) and unaided and government schools (Mean difference = 4.4) are statistically significant at 0.01 level.

29. There exist a significant difference in the mean scores of the dimensions Sense of wellbeing (F= 29.64, p< 0.01), Academic confidence (F= 21.66, p< 0.01), Emotional regulation and motivation (F= 32.98, p< 0.01) and Physical health and ability to achieve goal (F= 9.02, p< 0.01) based on the type of management. This dimension, Sense of well being between students from aided and unaided schools (Mean difference = 1.8), unaided and government schools (Mean difference=1.1) are statistically significant at 0.01 level and aided and government schools is statistically significant at 0.05 level. Similarly mean difference in the Academic confidence between students from aided and unaided schools (Mean difference = 1.3), unaided and government schools (Mean difference = 1.3) are statistically significant at 0.01 level. Mean difference in the Emotional regulation and motivation between students from aided and unaided schools (Mean difference = 0.8), unaided and government schools (Meandifference = 1.6) are statistically significant at 0.01 level. Mean difference in the interaction Physical health and ability to achieve goal between students from aided and unaided schools (Mean difference = 0.9) is statistically significant at 0.01 level.

30. There exist a significant positive correlation between Metacognition and Academic Resilience (r = 0.6, p<0.01). All the sub dimensions of the Metacognition such as Planning, Monitoring, Knowledge, Evaluation and Regulation are significantly correlated with Academic Resilience score and its dimensions such as Sense of well being, Academic confidence, Emotional regulation and motivation and Physical health and ability to achieve goal.

31. Metacognition is a significant predictors of Academic Resilience of orphanage students. The regression equation for the prediction of Academic Resilience with Metacognition as predictor

Academic Resilience = 36.71 + 0.57 × Metacognition

36 percent of the variation in the Academic Resilience score can be explained by the Metacognition of orphanage students.

32. The dimensions of the variable Metacognition viz., Planning, Monitoring, Knowledge, Evaluation and Regulation are significant predictors of Academic Resilience of orphanage students.

With the values of B, the regression model with dimensions of Metacognition as predictor can be expressed as

$$\mathbf{Y^1 = 36.498 + 0.439\ X1 + 0.776\ X2 + 0.849\ X3 + 0.228\ X4 + 0.576\ X5}$$

Where,

Y^1 – Predicted value of Academic Resilience

X1– Score on Planning X2 – Score on Monitoring X3– Score on KnowledgeX4 – Score on Evaluation X5– Score on Regulation

38 percent of the variation in the Academic Resilience score can be explained by the regression model developed with variables Planning, Monitoring, Knowledge, Evaluation and Regulation

33. There exist a significant positive correlation between Attributional Complexity and Academic Resilience ($r = 0.571$, $P<0.01$). all the sub dimensions of the Attributional Complexity such as Motivation, Complex vs Simple, Interaction Ability and Internal and External Attribute are significantly correlated with Academic Resilience score and its dimensions

such as Sense of well being, Academic confidence, Emotional regulation and motivation and Physical health and ability to achieve goal

34. Attributional Complexity is a significant predictors of Academic Resilience of orphanage students. The regression equation for the prediction of Academic Resilience with Attributional Complexity as predictor is

Academic Resilience = 30.12 + 0.75 × Attributional Complexity

32.6 percent of the variation in the Academic Resilience score can be explained by the Attributional Complexity of orphanage students.

35. Dimensions of the variable Attributional Complexity viz., Motivation, Complex vs Simple, Interactive Ability and Internal and External attributes are significant predictors of Academic Resilience of orphanage students.

With the values of B, the regression model with dimensions of Attributional Complexity aspredictor can be expressed as

$$\mathbf{Y^1 = 20.149 + 1.760\ X1 + 0.375\ X2 + 0.476\ X3 + 0.919\ X4}$$

Where,

Y^1 - Predicted value of Academic ResilienceX1– Score on Motivation

X2– Score on Complex vs SimpleX3– Score on Interactive Ability

X4– Score on Internal and External Attributes

39.2 percent of the variation in the Academic Resilience score can be explained by the regression model developed with variables Motivation, Complex vs Simple, Interactive Ability and Internal and External Attributes.

36. Metacognition and Attributional Complexity are significant predictors of Academic Resilience of orphanage students. The regression equation

for the prediction of Academic Resilience with Metacognition and Attributional Complexity as predictors is

Academic Resilience=

17.981 + 0.383 × Metacognition + 0.441 × Attributional Complexity

43.4 percent of variation in Academic Resilience score can be explained by the regression model developed with the variable Metacognition and Attributional Complexity .

37. The dimensions of the variables Metacognition and Attributional Complexity viz., Planning, Monitoring, Knowledge, Regulation, Motivation, Interactive Ability and Internal and External Attributes are significant predictors of Academic Resilience of orphanage students.

With the values of B, the regression with dimensions of Metacognition and Attributional Complexity as predictor model can be expressed as

Y^1 = 9.201 + 0.225 X1+ 0.427 X2+ 0.729 X3+ 0.468 X4 +1.387 X5 + 0.406 X6+ 0.543 X7

Where,

Y^1 – Predicted value of Academic ResilienceX1– Score on Planning

X2 – Score on Monitoring X3– Score Knowledge X4– Score on RegulationX5– Score on Motivation

X6– Score Interactive Ability

X7– Score on Internal and External Attributes

50.9 percent of the variation in the Academic Resilience score can be explained by the regression model developed with dimensions of the variable Metacognition and Attributional Complexity viz., Planning, Monitoring,

Knowledge, Regulation, Motivation, Interactive Ability and Internal and External Attributes.

Tenability of Hypotheses

1. The first hypothesis states that '**There exist significant gender difference in the mean scores of Metacognition and its dimensions of orphanage students**'.

   The results of the analysis shows that the Metacognition and its dimensions such as Planning and Knowledge significantly differ between boys and girls and no statistical difference in the dimensions such as Monitoring, Evaluation, and Regulation between boys and girls. **Hence the hypothesis is partially substantiated.**

2. The second hypothesis states that '**There exist significant locale difference in the mean scores of Metacognition and its dimensions of orphanage students**'.

   The study shows that Metacognition and its dimensions such as Planning, Knowledge, Evaluation, and Regulation are significantly differ between rural and urban students and no significant difference in the dimension Monitoring, between rural and urban students. **Hence the hypothesis is partially substantiated.**

3. The third hypothesis states that '**There exist significant type of management difference in the mean scores of Metacognition and its dimensions of orphanage students**'.

   The study shows that there exist a significant difference in the mean scores of the Metacognition and its dimensions Planning, Knowledge, Evaluation and Regulation based on the type of management. There exists no

significant difference in the dimension Monitoring based on type of management. **Hence the hypothesis is partially substantiated.**

4. The fourth hypothesis states that '**There exist significant gender difference in the mean scores of Attributional Complexity and its dimensions of orphanage students**'.

   The results of the analysis shows that Attributional Complexity and its dimension Complex vs Simple are significantly differ between boys and girls and no statistical difference in the dimensions such as Motivation, Interactive Ability and Internal and External Attributes between boys and girls. **Hence the hypothesis is partially substantiated.**

5. The fifth hypothesis states that '**There exist significant locale difference in the mean scores of Attributional Complexity and its dimensions of orphanage students**'.

   The study shows that Attributional Complexity and its dimensions are not significantly differ between rural and urban students. **Hence the hypothesis is rejected.**

6. The sixth hypothesis states that '**There exist significant type of management difference in the mean scores of Attributional Complexity and its dimensions of orphanage students'.**

   The study shows that there exist a significant difference in the mean scores of the Attributional Complexity and its dimensions Complex vs Simple and Interactive Ability based on the type of management. There exists no significant difference in the dimensions Motivation and Internal and External Attributes based on type of management. **Hence the hypothesis is partially substantiated.**

7. The seventh hypothesis states that '**There exist significant gender difference in the mean scores of Academic Resilience and its dimensions of orphanage students**'.

   The study revealed that Academic Resilience and its dimension Academic confidence are significantly differ between boys and girls and no statistical difference in the dimensions such as Sense of well being, Emotional regulation and motivation and Physical health and ability to achieve goal between boys and girls. **Hence the hypothesis is partially substantiated.**

8. The eighth hypothesis states that '**There exist significant locale difference in the mean scores of Academic Resilience and its dimensions of orphanage students'.**

   The study shows that Academic Resilience and its dimensions such as Academic confidence, Emotional regulation and motivation and Physical health and ability to achieve goal are significantly differ between rural and urban students and no statistical difference in the dimension Sense of well being, between rural and urban students. **Hence the hypothesis is partially substantiated.**

9. The ninth hypothesis states that '**There exist significant type of management difference in the mean scores of Academic Resilience and its dimensions of orphanage students'.**

   The study shows that there exist a significant difference in the mean scores of the Academic Resilience and its dimensions based on the type of management. **Hence the hypothesis is accepted.**

10. The 10th hypothesis states that '**There exist a significant relationship between Metacognition and Academic Resilience among orphanage students**'.

    The study reveals that there exist a significant positive relationship between Metacognition and Academic Resilience among orphanage students. **Hence the hypothesis is accepted.**

11. The 11th hypothesis states that '**There exist a significant relationship between dimensions of Metacognition and dimensions of Academic Resilience among orphanage students**'.

    The study reveals that there exist a significant positive relationship between dimensions of Metacognition and dimensions of Academic Resilience among orphanage students. **Hence the hypothesis is accepted.**

12. The 12th hypothesis states that '**There exists a significant influence of Metacognition on Academic Resilience among orphanage students'.**

    The study showed that there exists a significant influence of Metacognition on Academic Resilience among orphanage students. **Hence the hypothesis is accepted.**

13. The 13th hypothesis states that **'There exists a significant influence of dimensions of Metacognition on Academic Resilience among orphanage students'**.

    The study shows that there exists a significant influence of dimensions of Metacognition on Academic Resilience among orphanage students. **Hence the hypothesis is accepted**.

14. The 14th hypothesis states that '**There exist a significant relationship between Attributional Complexity and Academic Resilience among orphanage students'**.

    The study shows that there exist a significant positive relationship between Attributional Complexity and Academic Resilience among orphanage students. **Hence the hypothesis is accepted.**

15. The 15th hypothesis states that '**There exist a significant relationship between dimensions of Attributional Complexity and dimensions of Academic Resilience among orphanage students**'.

    The study shows that there exist a significant positive relationship between dimensions of Attributional Complexity and dimensions of Academic Resilience among orphanage students. **Hence the hypothesis is accepted.**

16. The 16th hypothesis states that '**There exists a significant influence of Attributional Complexity on Academic Resilience among orphanage students'.**

    The study revealed that there exists a significant influence of Attributional Complexity on Academic Resilience among orphanage students. **Hence the hypothesis is accepted.**

17. The 17th hypothesis states that **'There exists a significant influence of dimensions of Attributional Complexity on Academic Resilience among orphanage students'.**

    The study shows that there exists a significant influence of dimensions of Attributional Complexity on Academic Resilience among orphanage students. **Hence the hypothesis is accepted.**

18. The 18th hypothesis states that **'There exists a significant influence of Metacognition and Attributional Complexity on Academic Resilience among orphanage students'**.

    The study shows that there exists a significant influence of Metacognition and Attributional Complexity on Academic Resilience among orphanage students. **Hence the hypothesis is accepted.**

19. The 19th hypothesis states **that 'There exists a significant influence of dimensions of Metacognition and Attributional Complexity on Academic Resilience among orphanage students'.**

    The study revealed that there exists a significant influence of dimensions of Metacognition and Attributional Complexity on Academic Resilience among orphanage students. **Hence the hypothesis is accepted.**

Conclusion of the Study

The conclusions of the present study are summarized as follows:

From the analysis of Metacognition and its dimensions among orphanage students it is found that the distribution of Metacognition and its five dimensions planning, monitoring, knowledge, evaluation and regulation among orphanage students are almost normal. From the assessment of Metacognition and its dimensions it is observed that the orphanage students possess low level Metacognition and its dimensions.

When comparing Metacognition and its dimensions based on selected background variables such as gender, locale and type of management it yielded the following findings.

The Metacognition of boys is higher than the Metacognition of girls for total score. Considering the dimensions, planning and knowledge of Metacognitions boys are slight higher level when compared to girls.

Metacognition of rural orphan students are higher level when compared to urban students for the total score. While considering the dimensions of Metacognition viz., planning, knowledge, evaluation and regulation are higher level among rural orphanage students when compared to urban students.

The Metacognition among orphanage students is significantly differed based on type of management in which the students are studying. The orphanage students studying in unaided school have better Metacognition compared to orphanage students studying in government and aided schools. The dimensions of Metacognition like Planning, Knowledge, Evaluation and Regulation based on the type of management is significantly differed among orphanage students. The dimension Planning between students from aided, unaided and government schools are significant. Knowledge between students from aided unaided and government schools are significant. In the case of Evaluation students from aided and unaided schools, aided and government schools are significant. In the dimensions Regulation between students from aided and unaided schools, unaided and government schools are significant.

From the analysis of Attributional complexity and its dimensions, it is found that the distribution of Attributional complexity and its dimensions such as motivation, complex vs simple, interactive ability and internal and external attributes are almost normal. From the assessment of the Attributional complexity and its dimensions it is observed that orphanage students posses low level Attributional complexity for the total score, and in the dimensions Attributional complexity like motivation, complex vs simple, interactive ability and internal and external attributes also recorded as low.

A significant Gender and locale difference and difference based on type of management are found among orphanage students with respect of Attributional Complexity. The Attributional complexity of girls is high as compared to boys for the total score. The dimension of Attributional Complexity, Complex vs Simple is slightly high among girls as compared to boys. In the case of dimensions of Attributional Complexity viz., Motivation, Interactive Ability, and Internal and External Attributes between boys and girls are not significant.

Variation in Attributional Complexity among students from different management schools are significant. Attributional Complexity between students from aided and unaided schools and unaided and government schools are significant. The Attributional Complexity and its dimensions like Complex vs Simple and Interactive Ability is differed among orphanage students based on type of management. The Attributional Complexity of Unaided students is greater than that of aided and government school students.

From the analysis of Academic Resilience and its dimensions among orphanage students, it is found that the distribution of Academic Resilience and its dimensions such as Sense of well being, Academic confidence, Emotional regulation and motivation and Physical health and ability to achieve goal are normal. It is found that the orphanage students possess low level Academic Resilience for total score. They possess low sense of well being, emotional regulation and motivation and physical health and ability to achieve goal and high academic confidence.

Academic Resilience is high among boys as compared to girls. The dimension, Academic confidence is high among boys as compared to girls for the total score.

Academic Resilience for total score is high among rural students as compared to urban students. The dimensions, Academic confidence, Emotional regulation and motivation and Physical health and ability to achieve goal are significantly differ between rural and urban students. Considering the dimensions Academic Confidence and Emotional Regulation and Motivation of Academic Resilience are high among rural students when compared to urban students for the corresponding scores. In the case of the dimension physical health and ability to achieve goal, urban students are higher than rural students in their scores obtained.

Variation in Academic Resilience among students from different management schools is significant. Academic Resilience of students from unaided schools is greater than that of unaided and government schools. The dimensions of Academic Resilience like Sense of well being, Academic confidence, Emotional regulation and motivation and Physical health and ability to achieve goal are significantly differ based on the type of management. The dimension Sense of well being between students from aided and unaided schools, unaided and government schools are significant and aided and government schools is significant. Similarly the difference in the Academic confidence between students from aided and unaided schools, unaided and government schools are significant. The difference in the Emotional regulation and motivation between students from aided and unaided schools, unaided and government schools are significant. The difference in the Physical health and ability to achieve goal between students from aided and unaided schools is significant.

A positive correlation is found between Metacognition and Academic Resilience. All the dimensions of the Metacognition such as Planning, Monitoring, Knowledge, Evaluation and Regulation are positively correlated with Academic Resilience and its dimensions such as Sense of well being, Academic confidence, Emotional regulation and motivation and Physical health and ability to achieve goal.

Metacognition is a significant predictor of Academic Resilience among orphanage students. It is found that 36 percent of the variation in the Academic Resilience score can be determined by the Metacognition of orphanage students.

Dimensions of the variable Metacognition viz., Planning, Monitoring, Knowledge, Evaluation and Regulation are significant predictors of Academic Resilience among orphanage students. 38 percent of the variation in the Academic

Resilience score can be explained by the regression model developed with variables Planning, Monitoring, Knowledge, Evaluation and Regulation.

There exist a significant positive correlation between Attributional Complexity and Academic Resilience. All the dimensions of the Attributional Complexity such as Motivation, Complex vs Simple, Interaction Ability and Internal and External Attribute are significantly correlated with Academic Resilience and its dimensions such as Sense of well being, Academic confidence, Emotional regulation and motivation and Physical health and ability to achieve goal.

Attributional Complexity is a significant predictor of Academic Resilience of orphanage students. 32.6 percent of the variation in the Academic Resilience score can be explained by the Attributional Complexity of orphanage students.

The dimensions of the variable Attributional Complexity viz., Motivation, Complex vs Simple, Interactive Ability and Internal and External attributes are significant predictors of Academic Resilience of orphanage students. 39.2 percent of the variation in the Academic Resilience score can be explained by the regression model developed with variables Motivation, Complex vs Simple, Interactive Ability and Internal and External Attributes.

Metacognition and Attributional Complexity are significant predictors of Academic Resilience among orphanage students. 43.4 percent of variation in Academic Resilience score can be explained by the regression model developed with the variable Metacognition and Attributional Complexity.

The dimensions of the variables Metacognition and Attributional Complexity viz., Planning, Monitoring, Knowledge, Regulation, Motivation, Interactive Ability and Internal and External Attributes are significant predictors of Academic Resilience of orphanage students. 50.9 percent of the variation in the Academic

Resilience score can be explained by the regression model developed with dimensions of the variable Metacognition and Attributional Complexity viz., Planning, Monitoring, Knowledge, Regulation, Motivation, Interactive Ability and Internal and External Attributes.

Chapter 6

Recommendations

- *Educational Implications*
- *Suggestions for Further Research*

In this chapter educational implications and suggestions for further research are included.

Educational Implications

The study aims to evaluate some aspects of orphanage students which brings attention towards education, daily need of students in relation to their learning environment, physical activities, lack of love and affection. Focusing to these factors can elevate effective Metacognition and Attributional Complexity which leads to Academic Resilience among orphan students. The results have implication for the government and other agencies to develop programs with holistic approach for orphans through various organizations. Based on the findings of the study investigator concluded that Metacognition and Attributional Complexity have significant influence on Academic Resilience of Orphanage students in Kerala. So the Attributional Complexity must be enhanced and at the same time Metacognitive skill must be improved to develop the academic resilience among orphanage students. Results of the study are promising to the application at different levels. The study is found relevant in many educational areas like policy making, curriculum development and classroom environment.

Educational Policy Making to Promote Academic Resilience

The study found that metacognitive abilities and attributional complexity among orphanage students are generally low. It is assumed that high level Metacognition and Attributional Complexity would yield the expected level of Academic Resilience among orphans. That instigate the investigator to suggest programmes and different policies for the fast development of Metacognition and Attributional Complexity among orphanage students. This leads the need to develop appropriate policies and programmes for the educational development of orphanage students in Kerala. However the study put forward the following strategies may keep in mind while making educational policy.

- The study indicates that continued effort is needed on the part of educators to identify problems of orphanage students. Teacher support is the essential element to help the students overcome all kinds of barriers they experience at schooling and thereby promote Resilience.
- The psychological, physical, and social needs of the orphanage students never be ignored by the school education system. Hence, schools need to change at the policy level and infrastructural level. In addition, the schools should avoid any sort of discrimination in its nature.
- The school community was responsible for the dropping out of every student, so they must have the appropriate training programmes to develop the Academic Resilience which leads to achievement and overall psychological factors of personality.
- In most cases, the school education system failed to develop a "WE" feeling among the students beyond the gender differences. Thus, the marginalized and students are victimized and more silenced and, at last, forced to drop out of their schools. So, the schools should follow clear guidelines for unity among the student's socio cultural background, thereby protecting the educational rights of underprivileged and maintaining social justice in education.
- Provide inspiring classroom situation that must helps to motivate students. Improve students self esteem and provide reinforcement to each and every activities of the orphan students.
- Develop programmes which helps to make proud moments in orphans it helps to build self confidence in learners and that may lead to develop leadership quality and interactive ability in learners. Interactive ability of the orphan students are increased by giving extra curricular activities.
- Mostly students tends to have small term goals which gives them momentary satisfaction. They tend to fail in planning a long term goal which seems to be

hard at the point of time. This should be changed. Include programmes to reach this goal.

The strategies and implications of the study are a solid foundation for developing orphanage students in school education system in Kerala, thereby ensuring the social functioning and empowerment of the overall society.

Classroom Related Activities to Develop Metacognition

Classroom is the place were practice and enrichment all kinds of abilities of students. The research shows that growth of metacognitive ability happens between ages 12 and 15. Various classroom activities can help in the development of metacognitive skills in students since they spend most of their conscious time in classrooms. Following activities may help in developing metacognitive skills in students.

- Content should be presented to explore the point of view of students from multilevel perspectives.
- To develop metacognitive abilities there should be consonance between theory and practice. Give practical experiences to each theoretical knowledge.
- Life skill certainly help in achieving metacognitive thinking. Additional skill acquisition programmes are included.
- Practice intellectual exercises by doing drill work and other activities to enhance memory and learning.
- Include why and how questions for assessing students performance.
- Practice students to develop a growth mindset when compared to fixed mindset. It helps to develop reflective thinking in urban students than rural orphan students.
- Interactive sessions with experienced teachers may develop meta-cognition in students.

- Try to know what you don't know and it helps to realise weaknesses and give mental exercises to get insight.
- Provide systematic planning and preparation of the concepts related to the classroom activities
- Continuous and proper monitoring of the performance may help to attain the metacognitive skills especially in girls
- Keeping diary to record daily activities might help students in analysing his day to day affairs and may enhance thinking about thinking
- Encourage to do higher cognitive level activities through organizing application level activities.
- Analyse facts and concepts with the help of already accumulated images and acquire knowledge about what you don't know
- Self evaluation strategies may help in bringing metacognitive skills in students and conduct daily review of the learning activities in a proper way
- Interdisciplinary approach may promote metacognitive monitoring and provide opportunity for using strategies to improve self regulation skill.
- Individual learning techniques like brainstorming, self paced learning must be included in teaching learning process and promote different learning styles like auditory, kinesthetic, reading, visual etc.
- Self developed programmes support students in developing all dimensions of metacognition and incorporate yoga and curriculum in different schools especially in government and aided institutions.

Enhance Attributional Complexity

This study leads to the fact that there should be strident action to develop Attributional Complexity among orphanage students. Most of the educational activities are structured based on the various theories of educational experts.

Investigator suggests some educational programmes and classroom based activities that helps to enhance Attributional Complexity. Following activities may help in developing Attributional Complexity in students:

- Consider other's point of view when analysing a concept and give them important role in activities. Be flexible, not to be judgemental while analysing a thought.
- Think various aspects of a problem and be broad-minded and make progress towards a goal to achieve attributional complexity in orphan.
- Peer teaching are promoted in classroom and all students can present the concept in their point of view particularly in boys.
- Encourage activities like book review. It may lead to attain high attributional complexity through intelligent reading.
- Attributional complexity may be developed through playing group games by giving a situation to the students.
- Brain storming strategy may enhance the Attributional Complexity among orphan students.
- Give an anecdot to learner that will helps to enhance thinking level and helps to find many reason for a cause.
- Give students open ended project that leads to develop Attributional Complexity among orphans.
- Encourage initiatives in classroom situation that will lead a self satisfaction and self confidence in orphan students of aided and government sectors.
- Provide different types of study methods and strategies which helps to analyse the concept from different angles.

Suggestions for Further Research

The present study is conducted specifying the boundaries of the research area into the influence of Metacognition and Attributional Complexity on Academic Resilience of orphanage students in Kerala. The investigator has faced several limitations to conduct the present study. Many novel research areas has been identified in the process of study. Hence the investigator suggests a few research areas in which future research must be concentrated.

1. Parallel studies can be conducted to other sample such as primary, upper primary, secondary and graduate students and also can be conducted among various sample group of special learners.
2. Replication of the study in other states of the country may be done so that possible differences in the findings resulted from cultural variations can be known.
3. The same study can be conducted with additional independent variables like study environment, self regulated learning, stress related to IT Professionals, parenting attitude, classroom climate, teaching styles of teachers, home environment, motivational belief etc.
4. Experimental study can be conducted to identify Metacognition and Attributional Complexity among multiple group of samples like students having differently abled and persons need special care.
5. Studies can be conducted to identify other variables as predictors of academic performance and the psychological well being of students.

Studies can be conducted to compare Metacognition and Attributional Complexity on Resilience of male and female, rural and urban and government and aided secondary school students controlling the other cognitive, affective and social factors among general sample and specialist learners.

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Appendices

Appendix I

FAROOK TRAINING COLLEGE

METACOGNITION SCALE

(DRAFT)

Dr. Hassankoya M.P.
Associate Professor

Shahanas E.
Research Scholar

നിർദ്ദേശങ്ങൾ

കുട്ടികളുടെ പാഠ്യപാഠ്യേതര വ്യവഹാരവുമായി ബന്ധപ്പെട്ടു നടത്തുന്ന ഗവേഷണത്തിന്റെ ഭാഗമായ ചോദ്യാവലിയാണിത്. താഴെ കൊടുത്ത പ്രസ്താവനകൾ വായിച്ച് ശരിയായ പ്രതികരണങ്ങൾ രേഖപ്പെടുത്തുക.

<u>വ്യക്തിപരമായ വിവരങ്ങൾ</u>

1. വിദ്യാർത്ഥിയുടെ പേര് :
2. ആൺ/പെൺ :
3. ക്ലാസ് :
4. സ്കൂൾ :
5. ഗവൺമെന്റ്/എയിഡഡ്/അൺഎയിഡഡ്:
6. സ്ഥലം :
7. ഗ്രാമം/നഗരം :

രക്ഷിതാവിന്റെ വിവരങ്ങൾ

8. പിതാവിന്റെ പേര് :

   ജീവിച്ചിരിപ്പുണ്ട്/മരണപ്പെട്ടു :

9. മാതാവിന്റെ പേര് :

   ജീവിച്ചിരിപ്പുണ്ട്/മരണപ്പെട്ടു :

ക്രമ നമ്പർ	പ്രസ്താവനകൾ	എപ്പോഴും	മിക്കപ്പോഴും	ചിലപ്പോൾ	അപൂർവ്വം	ഒരിക്കലുമില്ല
1	ഒരു പ്രവർത്തനം തുടങ്ങും മുമ്പേ ആസൂത്രണം ചെയ്യാറുണ്ട്					
2	പഠന പ്രശ്നങ്ങൾ പരിഹരിക്കേണ്ടി വരുമ്പോൾ അതിന്റെ പരിണിത ഫലത്തെ കുറിച്ചുള്ള ഉൾകാഴ്ച എനിക്കുണ്ടാകാറുണ്ട്.					
3	ഫലപ്രാപ്തിയുടെ അടിസ്ഥാനത്തിൽ ഒരു പ്രത്യേക പഠനതന്ത്രത്തെ ഞാൻ അവലംബിക്കുന്നു.					
4	പരീക്ഷാ സന്ദർഭങ്ങളിൽ ഞാൻ ക്രമമായും വ്യവസ്ഥാപിതമായും അല്ല പഠിക്കാറുള്ളത്.					
5	ഒരു പ്രത്യേക പ്രക്രിയയിലൂടെയാണ് ഏതൊരു പഠന പ്രശ്നവും ഞാൻ പരിഹരിക്കാറുള്ളത്.					
6	വിഷയത്തിന്റെ വിവിധ ഭാഗങ്ങൾ പ്രാധാന്യക്രമമനുസരിച്ച് ഞാൻ ക്രമീകരിക്കാറുണ്ട്.					
7	വ്യത്യസ്ത വിഷയങ്ങളെ പ്രാധാന്യ ക്രമമനുസരിച്ച് വർഗ്ഗീകരിക്കാറുണ്ട്.					
8	പഠനാശയങ്ങൾ രൂപപ്പെട്ടത് എങ്ങനെയെന്ന് വിശകലനം ചെയ്യാറില്ല.					
9	പാഠ്യേതര വിഷയങ്ങൾ ആസൂത്രണം ചെയ്യാൻ മടിക്കാറുണ്ട്					
10	പഠന തന്ത്രങ്ങൾ രൂപപ്പെടുത്താൻ മാത്രമുള്ള വൈദഗ്ധ്യം എനിക്കില്ല.					
11	എന്റെ ചിന്തകളും വികാരങ്ങളും വ്യക്തമായി ഉൾക്കൊള്ളുകയും വിശദീകരിക്കുകയും ചെയ്യുന്നു.					
12	പാഠ്യേതര വിഷയങ്ങൾ എന്റെ താൽപര്യങ്ങൾക്കനുസരിച്ച് ഞാൻ ആസൂത്രണം ചെയ്യാറില്ല					
13	താൽപര്യമുള്ള കലാകായിക വിഷയങ്ങൾ മാത്രമാണ് ഞാൻ ആസൂത്രണം ചെയ്യാറുള്ളത്.					
14	ആസൂത്രണം എന്റെ ജീവിതത്തിന്റെ ഭാഗമായാണ് ഞാൻ കാണുന്നത്.					
15	എനിക്ക് താൽപര്യമുള്ള വിഷയങ്ങൾ മാത്രമാണ് ഞാൻ ആസൂത്രണം ചെയ്യാറ്.					
16	വസ്തുതകളെ മനസ്സിലാക്കുന്നതിനേക്കാൾ ഉള്ളടക്കം ഓർമിച്ചെടുക്കുന്നതിന് ഞാൻ മുൻഗണന നൽകുന്നു.					
17	പരീക്ഷയിൽ ജയിക്കാൻ ആവശ്യമായതിനേക്കാൾ കൂടുതൽ ഞാൻ അപൂർവ്വമായേ വായിക്കാറുള്ളു.					

ക്രമ നമ്പർ	പ്രസ്താവനകൾ	എപ്പോഴും	മിക്കപ്പോഴും	ചിലപ്പോൾ	അപൂർവ്വം	ഒരിക്കലുമില്ല
18	പഠനത്തിൽ താൽപ്പര്യം ജനിപ്പിക്കുന്ന വിവിധ ഘടകങ്ങളെകുറിച്ച് ഞാൻ ബോധവാനല്ല.					
19	പഠന സമയത്തെ ഏറ്റവും പ്രയോജനപ്രദമായ രീതിയിൽ ഞാൻ ക്രമീകരിക്കുന്നു.					
20	ഞാൻ സ്വയം ആർജ്ജിച്ചെടുക്കുന്ന കഴിവുകളാണ് എന്റെ പഠനത്തെ മുന്നോട്ട് നയിക്കുന്നത്.					
21	സാഹചര്യങ്ങൾക്കനുസരിച്ച് എന്റെ പഠനതന്ത്രങ്ങളെ മാറ്റാൻ എനിക്ക് കഴിയാറില്ല.					
22	മനനംചെയ്തുള്ള പഠനമാണ് ഞാൻ പ്രയോജനപ്പെടത്താറുള്ളത്.					
23	എന്റെ മനോഭാവം പഠനത്തെ സ്വാധീനിക്കാറില്ല					
24	അധ്യാപകർ പ്രയോഗിക്കുന്ന പഠനരീതികൾ എന്റെ പഠനപ്രവർത്തനത്തെ സ്വാധീനിക്കുന്നു.					
25	ആശയഗ്രഹണത്തിന് ഞാൻ വിവിധ തന്ത്രങ്ങൾ പ്രയോഗിക്കാറില്ല.					
26	പഠന പ്രവർത്തനങ്ങളുമായി ബന്ധപ്പെട്ട മനോവ്യാപാരങ്ങളെ വേർതിരിച്ചും വ്യതിരിക്തമായും മനസ്സിലാക്കാൻ എനിക്ക് കഴിയാറുണ്ട്.					
27	പഠന പ്രവർനത്തങ്ങളിൽ ഏർപ്പെടുമ്പോൾ എന്റെ ഓരോ പ്രവർത്തിയേയും കുറിച്ച് എനിക്ക് വ്യക്തമായ ധാരണയാണ്.					
28	എന്നെ പ്രവർത്തനക്ഷമമാക്കുന്ന വികാരങ്ങളേയും ചിന്തകളേയും കുറിച്ച് ഞാൻ ബോധവാനാണ്.					
29	എനിക്ക് പരിചയമുള്ളവരുടെ വികാരണങ്ങളെ മനസിലാക്കാൻ എനിക്ക് കഴിയാറില്ല.					
30	മറ്റുള്ളവരുടെ ചിന്തകളുടേയും വികാരങ്ങളുടെയും ഭാഗമാകാറില്ലെന്നതിനെ കുറിച്ച് ഞാൻ ബോധവാനാണ്.					
31	പഠനകാര്യങ്ങളിലെ മുൻഗണനകളെ കുറിച്ച് എനിക്ക് വ്യക്തമായ ധാരണയില്ല.					
32	എന്റെ പഠനരീതികളുടെ വിജയത്തെ കുറിച്ച് എനിക്ക് വ്യക്തമായ ധാരണയുണ്ട്.					
33	വിജ്ഞാന വികാസത്തിന് ആവശ്യമായ ധാരാളം അറിവുകൾ എനിക്ക് ലഭിക്കാറില്ല					
34	ഞാൻ ഏർപ്പെടുന്ന പാഠ്യേതര പ്രവർത്തനങ്ങളെ കുറിച്ച് എനിക്ക് നല്ല ധാരണയുണ്ട്.					

ക്രമ നമ്പർ	പ്രസ്താവനകൾ	എപ്പോഴും	മിക്കപ്പോഴും	ചിലപ്പോൾ	അപൂർവ്വം	ഒരിക്കലുമില്ല
35	പാഠ്യേതര വിഷയങ്ങളിൽ ഞാൻ ചെലുത്തുന്ന ശ്രദ്ധ പഠനകാര്യങ്ങളിൽ ഉണ്ടാകാറില്ല.					
36	കൂട്ടുകാരുടെ പ്രവർത്തനങ്ങൾ എന്റെ പഠനത്തെ സ്വാധീനിക്കാറില്ല.					
37	എന്റെ അറിവുകളുടെ അടിസ്ഥാനം ക്ലാസ്റൂം പ്രവർത്തനങ്ങളാണ്.					
38	പഠനവുമായി ബന്ധപ്പെട്ട എന്റെ നേട്ടങ്ങളിൽ ഞാൻ അഭിമാനം കൊള്ളാറുണ്ട്.					
39	പഠന പ്രവർത്തനങ്ങൾ എളുപ്പമാക്കുന്നതിന് ചിട്ടയായ രീതിയാണ് സ്വീകരിക്കാറുള്ളത്					
40	പ്രായസമേറിയ പ്രശ്നങ്ങൾ പരിഹരിക്കുമ്പോൾ ഞാനെന്റെ മുഴുവൻ കഴിവുകളും ഉപയോഗിക്കാറുണ്ട്.					
41	പരീക്ഷയിലെ മോശം പ്രകടനത്തെ കുറിച്ച് ചിന്തിക്കാനോ തെറ്റ് തിരുത്തി മുന്നേറാനോ ശ്രമിക്കാറില്ല.					
42	അധ്യാപകരുടെ അഭിപ്രായങ്ങൾ എന്റെ പഠന പുരോഗതിക്കായി ഉപയോഗിക്കാറില്ല.					
43	പഠന പ്രവർത്തനങ്ങളുമായി ബന്ധപ്പെട്ട പൂർത്തിയാക്കേണ്ട കാര്യങ്ങളുടെ മുൻഗണന പട്ടിക തയ്യാറാക്കാറുണ്ട്.					
44	പഠന പ്രവർത്തികളിൽ കാലതാമസം നേരിടുമ്പോൾ ഞാൻ പരിഭ്രമിക്കാറില്ല.					
45	ഓരോ പാഠഭാഗവും അവസാനിക്കുന്ന സമയത്ത് തന്നെ അത് വിലയിരുത്താൻ ശ്രമിക്കാറുണ്ട്.					
46	പഠിച്ച് കഴിഞ്ഞ കാര്യങ്ങൾ കണ്ണടച്ച് ഓർത്തെടുക്കാറുണ്ട്					
47	എന്റെ ഏതൊരു പ്രവർത്തനവും ആസൂത്രണം ചെയ്യാൻ ശ്രമിക്കാറില്ല					
48	എന്റെ പഠന പുരോഗതിയുടെ അടിസ്ഥാനം ക്ലാസ്റൂം പ്രവർത്തനമാണെന്ന് ഞാൻ വിശ്വസിക്കുന്നില്ല.					
49	എന്റെ കലാപരമായ കഴിവുകൾ ഞാൻ നന്നായി ആസ്വദിക്കാറുണ്ട്					
50	വികാരങ്ങളെ നിർവചിക്കാനും വേർതിരിക്കാനും എനിക്ക് കഴിയാറില്ല.					

ക്രമ നമ്പർ	പ്രസ്താവനകൾ	എപ്പോഴും	മിക്കപ്പോഴും	ചിലപ്പോൾ	അപൂർവ്വം	ഒരിക്കലുമില്ല
51	മറ്റുള്ളവർ ആശയ സ്വാംശീകരണം നടത്തുന്നത് എന്നിൽ നിന്നും വ്യത്യസ്ഥമായ രീതിയിലാണെന്ന് ഞാൻ മനസ്സിലാക്കുന്നു.					
52	പുതിയ പാഠ്യപ്രവർത്തനങ്ങൾ നേരത്തെ പഠിച്ച ആശയങ്ങളുമായി ബന്ധിപ്പിച്ച് പഠിക്കാൻ എനിക്ക് കഴിയാറില്ല.					
53	ഏത് സാഹചര്യത്തിലും ലക്ഷ്യത്തിലെത്താൻ ഞാൻ നിരന്തരം ശ്രമിക്കാറുണ്ട്.					
54	എന്റെ അഭിപ്രായങ്ങൾ സുനിശ്ചിതമല്ലെന്നും മാറുന്നതാണെന്നും ഞാൻ മനസ്സിലാക്കുന്നു.					
55	എന്റെ പഠന രീതിക്ക് ഏറ്റവും അനുയോജ്യമായ പഠനതന്ത്രങ്ങൾ തെരെഞ്ഞെടുക്കാൻ എനിക്ക് അറിയാം					
56	പഠന പ്രവർത്തികളിൽ ഏർപ്പെടുമ്പോൾ ഓരോ ആശയവും വ്യത്യസ്ഥ കോണുകളിലൂടെ ചിന്തിക്കാൻ എനിക്ക് കഴിയാറില്ല					
57	പഠനം കൂടുതൽ സമ്പുഷ്ഠമാക്കാൻ വേണ്ടി അവയെ നൂതന ആശയങ്ങളുമായി ബന്ധിപ്പിക്കാറില്ല.					
58	ചോദ്യത്തിൽ തന്നെയുള്ള സൂചന ഉപയോഗിച്ച് പ്രശ്നപരിഹാരത്തിന് ശ്രമിക്കാറുണ്ട്					
59	ചോദ്യങ്ങൾക്ക് പരിഹാരം കാണുമ്പോൾ ഞാൻ അത്യുത്സാഹം കാണിക്കാറുണ്ട്.					
60	പഠന കാര്യങ്ങൾ ഏറ്റവും നന്നാക്കി ചെയ്യാൻ ഞാൻ കഠനാധ്വാനം ചെയ്യാറില്ല.					
61	ഒരു ചോദ്യത്തിന് ഉത്തരം കണ്ടെത്താൻ ശ്രമിക്കുമ്പോൾ നേരത്തെ പഠിച്ച രീതികൾ കാരണം തടസ്സം നേരിടാറില്ല.					
62	കളികളിൽ ഏർപ്പെടുമ്പോൾ തടസ്സങ്ങൾ നേരിട്ടാൽ അത് എളുപ്പം അതിജീവിക്കാൻ എനിക്ക് കഴിയാറുണ്ട്.					

Appendix II

FAROOK TRAINING COLLEGE

METACOGNITION SCALE

(FINAL)

Dr. Hassankoya M.P.
Associate Professor

Shahanas E.
Research Scholar

നിർദ്ദേശങ്ങൾ

കുട്ടികളുടെ പാഠ്യപാഠ്യേതര വ്യവഹാരവുമായി ബന്ധപ്പെട്ടു നടത്തുന്ന ഗവേഷണത്തിന്റെ ഭാഗമായ ചോദ്യാവലിയാണിത്. താഴെ കൊടുത്ത പ്രസ്താവനകൾ വായിച്ച് ശരിയായ പ്രതികരണങ്ങൾ രേഖപ്പെടുത്തുക.

<u>വ്യക്തിപരമായ വിവരങ്ങൾ</u>

1. വിദ്യാർത്ഥിയുടെ പേര് :
2. ആൺ/പെൺ :
3. ക്ലാസ് :
4. സ്കൂൾ :
5. ഗവൺമെന്റ്/എയിഡഡ്/അൺഎയിഡഡ്:
6. സ്ഥലം :
7. ഗ്രാമം/നഗരം :

രക്ഷിതാവിന്റെ വിവരങ്ങൾ

8. പിതാവിന്റെ പേര് :

   ജീവിച്ചിരിപ്പുണ്ട്/മരണപ്പെട്ടു :
9. മാതാവിന്റെ പേര് :

   ജീവിച്ചിരിപ്പുണ്ട്/മരണപ്പെട്ടു :

ക്രമ നമ്പർ	പ്രസ്താവനകൾ	എപ്പോഴും	മിക്കപ്പോഴും	ചിലപ്പോൾ	അപൂർവ്വം	ഒരിക്കലുമില്ല
1	ഒരു പ്രവർത്തനം തുടങ്ങും മുമ്പേ ആസൂത്രണം ചെയ്യാറുണ്ട്					
2	പഠന പ്രശ്നങ്ങൾ പരിഹരിക്കേണ്ടി വരുമ്പോൾ അതിന്റെ പരിണിതഫലത്തെ കുറിച്ചുള്ള ഉൾകാഴ്ച എനിക്കുണ്ടാകാറുണ്ട്.					
3	ഫലപ്രാപ്തിയുടെ അടിസ്ഥാനത്തിൽ ഒരു പ്രത്യേക പഠനതന്ത്രത്തെ ഞാൻ അവലംബിക്കുന്നു.					
4	പരീക്ഷാ സന്ദർഭങ്ങളിൽ ഞാൻ ക്രമമായും വ്യവ സ്ഥാപിതമായുമല്ല പഠിക്കാറുള്ളത്.					
5	ഒരു പ്രത്യേക പ്രക്രിയയിലൂടെയാണ് ഏതൊരു പഠന പ്രശ്നവും ഞാൻ പരിഹരിക്കാറുള്ളത്.					
6	വിഷയത്തിന്റെ വിവിധ ഭാഗങ്ങൾ പ്രാധാന്യക്രമമനു സരിച്ച് ഞാൻ ക്രമീകരിക്കാറുണ്ട്.					
7	വ്യത്യസ്ത വിഷയങ്ങളെ പ്രാധാന്യ ക്രമമനുസരിച്ച് വർഗ്ഗീകരിക്കാറുണ്ട്.					
8	പഠനാശയങ്ങൾ രൂപപ്പെട്ടത് എങ്ങനെയെന്ന് വിശക ലനം ചെയ്യാറില്ല.					
9	പാഠ്യേതര വിഷയങ്ങൾ ആസൂത്രണം ചെയ്യാൻ മടി ക്കാറുണ്ട്					
10	ആസൂത്രണം എന്റെ ജീവിതത്തിന്റെ ഭാഗമായല്ല ഞാൻ കാണുന്നത്.					
11	എനിക്ക് താൽപര്യമുള്ള വിഷയങ്ങൾ മാത്രമാണ് ഞാൻ ആസൂത്രണം ചെയ്യാറ്.					
12	വസ്തുതകളെ മനസ്സിലാക്കുന്നതിനേക്കാൾ ഉള്ള ടക്കം ഓർമിച്ചെടുക്കുന്നതിന് ഞാൻ മുൻ ഗണന നൽകുന്നു.					
13	പരീക്ഷയിൽ ജയിക്കാൻ ആവശ്യമായതിനേക്കാൾ കൂടുതൽ ഞാൻ അപൂർവ്വമായേ വായിക്കാറുള്ളു.					
14	പഠനത്തിൽ താൽപ്പര്യം ജനിപ്പിക്കുന്ന വിവിധ ഘടക ങ്ങളെകുറിച്ച് ഞാൻ ബോധവാനല്ല.					
15	പഠന സമയത്തെ ഏറ്റവും പ്രയോജനപ്രദമായ രീതി യിൽ ഞാൻ ക്രമീകരിക്കുന്നു.					

ക്രമ നമ്പർ	പ്രസ്താവനകൾ	എപ്പോഴും	മിക്കപ്പോഴും	ചിലപ്പോൾ	അപൂർവ്വം	ഒരിക്കലുമില്ല
16	ഞാൻ സ്വയം ആർജ്ജിച്ചെടുക്കുന്ന കഴിവുകളാണ് എന്റെ പഠനത്തെ മുന്നോട്ട് നയിക്കുന്നത്.					
17	സാഹചര്യങ്ങൾക്കനുസരിച്ച് എന്റെ പഠന തന്ത്രങ്ങളെ മാറ്റാൻ എനിക്ക് കഴിയാറില്ല.					
18	പഠന പ്രവർത്തനങ്ങളുമായി ബന്ധപ്പെട്ട മനോവ്യാപാരങ്ങളെ വേർതിരിച്ചും വ്യതിരിക്തമായും മനസ്സിലാക്കാൻ എനിക്ക് കഴിയാറുണ്ട്.					
19	പഠന പ്രവർനത്തങ്ങളിൽ ഏർപ്പെടുമ്പോൾ എന്റെ ഓരോ പ്രവർത്തിയേയും കുറിച്ച് എനിക്ക് വ്യക്തമായ ധാരണയാണ്.					
20	എന്നെ പ്രവർത്തനക്ഷമമാക്കുന്ന വികാരങ്ങളേയും ചിന്തകളേയും കുറിച്ച് ഞാൻ ബോധവാനാണ്.					
21	എനിക്ക് പരിചയമുള്ളവരുടെ വികാരങ്ങളെ മനസിലാക്കാൻ എനിക്ക് കഴിയാറില്ല.					
22	മറ്റുള്ളവരുടെ ചിന്തകളുടേയും വികാരങ്ങളുടെയും ഭാഗമാകാറില്ലെന്നതിനെ കുറിച്ച് ഞാൻ ബോധവാനാണ്.					
23	പഠനകാര്യങ്ങളിലെ മുൻഗണനകളെ കുറിച്ച് എനിക്ക് വ്യക്തമായ ധാരണയില്ല.					
24	എന്റെ പഠനരീതികളുടെ വിജയത്തെ കുറിച്ച് എനിക്ക് വ്യക്തമായ ധാരണയുണ്ട്.					
25	വിജ്ഞാന വികാസത്തിന് ആവശ്യമായ ധാരാളം അറിവുകൾ എനിക്ക് ലഭിക്കാറില്ല					
26	പഠനവുമായി ബന്ധപ്പെട്ട എന്റെ നേട്ടങ്ങളിൽ ഞാൻ അഭിമാനം കൊള്ളാറുണ്ട്.					
27	പഠന പ്രവർത്തനങ്ങൾ എളുപ്പമാക്കുന്നതിന് ചിട്ടയായ രീതിയാണ് സ്വീകരിക്കാറുള്ളത്					
28	പ്രായസമേറിയ പ്രശ്നങ്ങൾ പരിഹരിക്കുമ്പോൾ ഞാനെന്റെ മുഴുവൻ കഴിവുകളും ഉപയോഗിക്കാറുണ്ട്.					
29	പരീക്ഷയിലെ മോശം പ്രകടനത്തെ കുറിച്ച് ചിന്തിക്കാനോ തെറ്റ് തിരുത്തി മുന്നേറാനോ ശ്രമിക്കാറില്ല.					

ക്രമ നമ്പർ	പ്രസ്താവനകൾ	എപ്പോഴും	മിക്കപ്പോഴും	ചിലപ്പോൾ	അപൂർവ്വം	ഒരിക്കലുമില്ല
30	അധ്യാപകരുടെ അഭിപ്രായങ്ങൾ എന്റെ പഠന പുരോഗതിക്കായി ഉപയോഗിക്കാറില്ല.					
31	പഠന പ്രവർത്തനങ്ങളുമായി ബന്ധപ്പെട്ട് പൂർത്തിയാക്കേണ്ട കാര്യങ്ങളുടെ മുൻഗണന പട്ടിക തയ്യാറാക്കാറുണ്ട്.					
32	പഠന പ്രവർത്തികളിൽ കാലതാമസം നേരിടുമ്പോൾ ഞാൻ പരി ഭ്രമിക്കാറില്ല.					
33	ഓരോ പാഠഭാഗവും അവസാനിക്കുന്ന സമയത്ത് തന്നെ അത് വിലയിരുത്താൻ ശ്രമിക്കാറുണ്ട്.					
34	മറ്റുള്ളവർ ആശയ സ്വാംശീകരണം നടത്തുന്നത് എന്നിൽ നിന്നും വ്യത്യസ്ഥമായ രീതിയിലാണെന്ന് ഞാൻ മനസ്സിലാക്കുന്നു.					
35	പുതിയ പാഠ്യപ്രവർത്തനങ്ങൾ നേരത്തെ പഠിച്ച ആശയങ്ങളുമായി ബന്ധിപ്പിച്ച് പഠിക്കാൻ എനിക്ക് കഴിയാറില്ല.					
36	ഏത് സാഹചര്യത്തിലും ലക്ഷ്യത്തിലെത്താൻ ഞാൻ നിരന്തരം ശ്രമിക്കാറുണ്ട്.					
37	എന്റെ അഭിപ്രായങ്ങൾ സുനിശ്ചിതമല്ലെന്നും മാറുന്നതാണെന്നും ഞാൻ മനസ്സിലാക്കുന്നു.					
38	എന്റെ പഠന രീതിക്ക് ഏറ്റവും അനുയോജ്യമായ പഠനതന്ത്രങ്ങൾ തെരെഞ്ഞെടുക്കാൻ എനിക്ക് അറിയാം					
39	പഠന പ്രവർത്തികളിൽ ഏർപ്പെടുമ്പോൾ ഓരോ ആശയവും വ്യത്യസ്ഥകോണുകളിലൂടെ ചിന്തിക്കാൻ എനിക്ക് കഴിയാറില്ല					
40	പഠനം കൂടുതൽ സമ്പുഷ്ഠമാക്കാൻ വേണ്ടി അവയെ നൂതന ആശയങ്ങളുമായി ബന്ധിപ്പിക്കാറില്ല.					
41	ചോദ്യത്തിൽ തന്നെയുള്ള സൂചന ഉപയോഗിച്ച് പ്രശ്നപരിഹാരത്തിന് ശ്രമിക്കാറുണ്ട്					
42	ചോദ്യങ്ങൾക്ക് പരിഹാരം കാണുമ്പോൾ ഞാൻ അത്യുത്സാഹം കാണിക്കാറുണ്ട്.					

Appendix III

FAROOK TRAINING COLLEGE

METACOGNITION SCALE

(FINAL)

Dr. Hassankoya M.P.
Associate Professor

Shahanas E.
Research Scholar

Instructions

This is a scale that is part of the ongoing research on children's extra-curricular discourse. Read the following statement and write the correct response.

Personal Details

1. Name of the student :
2. Male/Female :
3. Class :
4. Name of the school :
5. Type of school : Govt/Unaided/Aided
6. Place :
7. Urban/Rural :

Information Related to Parents

8. Father's Name :

   Still Living/Not Living

9. Mothers name :

   Still Living/Not Living

Sl. No.	Statement	Always	Often	Frequently	Rare	Never
1	I plan myself before starting an activity.					
2	I have the insight into the consequences while solving any learning problem.					
3	I depend on a particular learning strategy based on its effectiveness in realization					
4	I am not systematic and organized while studying for an examination					
5	I solve every learning problems through specific procedures.					
6	I categorize various areas of subjects based on its importance					
7	I classify different subjects based on its importance					
8	I cannot analyse how learning concepts are formed					
9	I hesitate to plan extracurricular activities					
10	I consider planning is part of my life					
11	I am reluctant to plan topics that I am not interested in.					
12	I prefer remembering the content than understanding the facts.					
13	I rarely read more to pass an exam.					
14	I am not aware of the factors that develop interest in learning.					
15	I arrange learning time most effectively.					
16	My self-acquired skills lead forward in my studies forward.					
17	I cannot change learning techniques according to the changing circumstances.					

Sl. No.	Statement	Always	Often	Frequently	Rare	Never
18	I can distinguish mental activities according to my learning task.					
19	I have a clear understanding of each of my activities, when engaging in learning process.					
20	I am aware of those thoughts and feelings and able to express well.					
21	I cannot understand the emotions of those I am acquainted with.					
22	I am aware that I don't be a part of the thoughts and feelings of others.					
23	I don't have a clear understanding of priorities in learning.					
24	I am well aware of success of my learning skill.					
25	I don't get enough opportunity for knowledge acquisition.					
26	I am proud of my achievements related to learning.					
27	I follow systematic approach to facilitate learning activities.					
28	I use my full potential when solving difficult problems.					
29	I don't think about the poor performance in the exam or try to correct it.					
30	I don't give importance to teacher's comments for my learning progress.					
31	I used to prepare a priority list in relation to the learning activities.					
32	I never become nervous when there is delay in learning activities.					

Sl. No.	Statement	Always	Often	Frequently	Rare	Never
33	At the end of each section an attempt is made to evaluate it.					
34	I believe that the way of concept attainment is different from that of others.					
35	I don't able to learn new learning activities in connection with ideas I have already learned.					
36	I strive to reach the goal in any situation.					
37	I understand that my opinion are not definite and will subject to change.					
38	I am able to choose learning strategies inappropriate with my learning style.					
39	I doubt whether I am able to think in multiple perspectives of an idea while engaging in learning.					
40	I don't connect learning with innovative ideas in order to enrich learning experiences.					
41	I do attempt to solve a problem as per the hints given in the question.					
42	I am very excited to solve a question.					

Appendix IV

FAROOK TRAINING COLLEGE

ATTRIBUTIONAL COMPLEXITY SCALE

(DRAFT)

Dr. Hassankoya M.P.
Associate Professor

Shahanas E.
Research Scholar

നിർദ്ദേശങ്ങൾ

കുട്ടികളുടെ പാഠ്യപാഠ്യേതര വ്യവഹാരവുമായി ബന്ധപ്പെട്ടു നടത്തുന്ന ഗവേഷണത്തിന്റെ ഭാഗമായ ചോദ്യാവലിയാണിത്. താഴെ കൊടുത്ത പ്രസ്താവനകൾ വായിച്ച് ശരിയായ പ്രതികരണങ്ങൾ രേഖപ്പെടുത്തുക.

<u>വ്യക്തിപരമായ വിവരങ്ങൾ</u>

1. വിദ്യാർത്ഥിയുടെ പേര് :
2. ആൺ/പെൺ :
3. ക്ലാസ് :
4. സ്കൂൾ :
5. ഗവൺമെന്റ്/എയിഡഡ്/അൺഎയിഡഡ്:
6. സ്ഥലം :
7. ഗ്രാമം/നഗരം :

രക്ഷിതാവിന്റെ വിവരങ്ങൾ

8. പിതാവിന്റെ പേര് :

   ജീവിച്ചിരിപ്പുണ്ട്/മരണപ്പെട്ടു :
9. മാതാവിന്റെ പേര് :

   ജീവിച്ചിരിപ്പുണ്ട്/മരണപ്പെട്ടു :

ക്രമ നമ്പർ	പ്രസ്താവനകൾ	എപ്പോഴും	മിക്കപ്പോഴും	ചിലപ്പോൾ	അപൂർവ്വം	ഒരിക്കലുമില്ല
1	ഒരു വിഷയം പഠിക്കുമ്പോൾ അതിനാവശ്യമായ വിവിധ രീതികളെ കുറിച്ച് ഞാൻ ആലോചിക്കാറുണ്ട്.					
2	നേരത്തെ ഹൃദിസ്തമാക്കിയപഠന പ്രവർത്തനങ്ങൾ ഞാൻ വിശകലനം ചെയ്യാറുണ്ട്.					
3	പുതിയ ആശയങ്ങൾ ഏറ്റവും നന്നായി എങ്ങനെ ഹൃദിസ്ഥ മാക്കാൻ പറ്റും എന്ന് വിശകലനം ചെയ്യാറുണ്ട്.					
4	സമയബന്ധിതമായി ചെയ്യുന്ന പ്രവർത്തികൾ കൂടുതൽ ഫലപ്രാപ്തിയുള്ളതാണ്.					
5	എന്റെ പഠന പ്രവർത്തനങ്ങളെ പതിവായി വിശകലനം ചെയ്യാറില്ല					
6	ഓരോ പഠന പ്രവർത്തനത്തെയും വിലയിരുത്താൻ ഞാൻ ശ്രമിക്കാറുണ്ട്.					
7	കൂടുതൽ സഹായകമായ പഠന തന്ത്രങ്ങൾ ഉപയോഗിക്കു ന്നതിൽ എനിക്ക് പ്രാവീണ്യം ഇല്ല.					
8	എന്റെ പാഠ്യേതരപ്രവർത്തനങ്ങളെ ഞാൻ പതിവായി വിശ കലനം ചെയ്യാറുണ്ട്					
9	പഠന പ്രവർത്തനങ്ങൾ ഓരോന്നും ജീവിത ഗന്ധിയാണോ എന്നത് വിലയിരുത്താൻ ഞാൻ ശ്രമിക്കാറുണ്ട്					
10	എന്റെ ഗ്രഹണശേഷി ഞാൻ ഇടക്കിടെ പരിശോധിക്കാറില്ല					
11	ലക്ഷ്യസാക്ഷ്യാത്കാരത്തിന് അനുസൃതമായി ഞാൻ എന്റെ സമയത്തെ ക്രമപ്പെടുത്താറില്ല					
12	കൂട്ടുകാരുമൊത്ത് ഓരോ പ്രവർത്തികളേയും ഞാൻ വിശക ലനം ചെയ്യാറില്ല.					
13	എനിക്ക് പാഠഭാഗങ്ങൾ മനപാഠമാക്കാനുള്ള കഴിവുണ്ടെന്ന് ഞാൻ വിചാരിക്കുന്നു.					
14	കുടുംബപരമമായ പ്രശ്നങ്ങൾ പരിഹരിക്കേണ്ട വരുമ്പോൾ വ്യത്യസ്ത സാധ്യതകളെ കുറിച്ച് ഞാൻ അന്വേഷിക്കാറു ണ്ട്.					
15	ഒരുവ്യക്തി വ്യത്യസ്ത സ്വഭാവ സവിശേഷതകൾ കാണി ക്കുന്നതിന് കാരണം ലളിതമല്ലെന്നും സങ്കീർണ്ണമാണെന്നും ഞാൻ മനസ്സിലാക്കുന്നു.					

ക്രമ നമ്പർ	പ്രസ്താവനകൾ	എപ്പോഴും	മിക്കപ്പോഴും	ചിലപ്പോൾ	അപൂർവ്വം	ഒരിക്കലുമില്ല
16	മറ്റൊരാളെ മനസ്സിലാക്കുന്നതിനായി എന്റെ ചിന്തയെ ഞാൻവിശകലനം ചെയ്യാറുണ്ട്.					
17	ചോദ്യങ്ങൾക്ക് ഉത്തരം തേടുമ്പോൾ ചോദ്യത്തിന്റെ വ്യത്യസ്ഥ വകഭേദങ്ങളെ ഞാൻ പരിഗണിക്കാറില്ല.					
18	പ്രശ്ന പരിഹാരത്തിന് ശേഷം എല്ലാ സാധ്യതകളേയും പരിഗണിച്ചിട്ടുണ്ടോ എന്ന് ഞാൻ ആലോചിക്കാറില്ല.					
19	സങ്കീർണ്ണമായ ആശയങ്ങളെ ചെറിയ ഭാഗങ്ങളായി വർഗ്ഗീകരിച്ച് ആശയം ഗ്രഹിക്കാറാണ് പതിവ്.					
20	ആശയത്തിന്റെ പ്രത്യേക അർത്ഥത്തേക്കാൾ സമഗ്ര അർത്ഥം ഞാൻ പരിഗണിക്കുന്നു.					
21	ഒരു പ്രശ്നത്തിന് വ്യത്യസ്ത പരിഹാര രീതികൾ ഉണ്ടെന്ന് ഞാൻ വിചാരിക്കുന്നില്ല.					
22	സാമൂഹിക പ്രശ്നങ്ങൾ പരിഹരിക്കേണ്ടി വരുമ്പോൾ വ്യത്യസ്ത സാദ്ധ്യതകൾ ഞാൻ അന്വേഷിക്കാറില്ല					
23	ഏതൊരു ആശയത്തിന്റെയും ഉപ ആശയങ്ങളാണ് സമഗ്ര അർത്ഥത്തിനായി പരിഗണിക്കുന്നത്.					
24	സാമൂഹിക പ്രശ്നങ്ങൾ വ്യക്ത്യാധിഷ്ടിതമാണോ എന്ന് നോക്കാറില്ല					
25	സങ്കീർണ്ണമായ ആശയങ്ങൾ കാണാതെ പഠിക്കാറാണ് പതിവ്					
26	കൂട്ടുകാർ അഭിപ്രായപ്രകടനം നടത്തുമ്പോൾ അതിന്റെ യാഥാർത്ഥ്യത്തെ കുറിച്ച് ഞാൻ ശ്രദ്ധാലുവാകാറുണ്ട്					
27	ക്ലാസ് റൂം പ്രവർത്തനങ്ങൾക്കിടയിൽ അധ്യാപകരുടെ ചോദ്യത്തിന് ഉത്തരം നൽകേണ്ട സന്ദർഭത്തിൽ ഞാൻ നന്നായി ചിന്തിക്കാറുണ്ട്.					
28	എന്നെ കുറിച്ച് കൂട്ടുകാരുടെ മനോഭാവം പലപ്പോഴും മാറ്റിയെടുക്കാൻ എനിക്ക് പറ്റുമെന്ന് വിശ്വസിക്കുന്നു.					
29	ഏതൊരു കാര്യത്തിലും മറ്റുള്ളവരുടെ പ്രതികരണം ആത്മാർത്ഥതയുള്ളതാണെന്ന് ഞാൻ വിചാരിക്കുന്നില്ല.					

ക്രമ നമ്പർ	പ്രസ്താവനകൾ	എപ്പോഴും	മിക്കപ്പോഴും	ചിലപ്പോൾ	അപൂർവ്വം	ഒരിക്കലുമില്ല
30	മറ്റുള്ളവർക്ക് അവരെ ബാധിക്കാത്ത കാര്യമെന്ന നിലക്ക് അശ്രദ്ധമായി വിടുന്ന കാര്യങ്ങൾ ഞാൻ ഗൗരവത്തോടെ എടുക്കാറുണ്ട്.					
31	മറ്റുള്ളവരുടെ പ്രവർത്തികളുടെ കാരണങ്ങൾ എന്താണെന്നുള്ളതുമായി ബന്ധപ്പെട്ട ചർച്ചകൾക്ക്ഞാൻ അവസരം നൽകാറില്ല.					
32	ഒരു വ്യക്തിയെ കുറിച്ച് അറിയാൻ ശ്രമിക്കുമ്പോൾ ആ വ്യക്തിയുടെ മനോഭവും സ്വഭാവ സവിശേഷതകളും അറിയേണ്ടത് അനിവാര്യമാണെന്ന് എനിക്ക് തോന്നുന്നില്ല.					
33	മറ്റുള്ളവരുടെ പ്രവർത്തികളുടെ വേരുകൾ ചികയുന്നത് ഞാൻ ആസ്വദിക്കുന്നു.					
34	ഒരു വ്യക്തിയുടെ മനോഭാവവും സ്വഭാവ സവിശേഷതയും തമ്മിലുള്ള ബന്ധം നേരെ ചെവ്വേ ആണെന്ന് ഞാൻ വിചാരിക്കുന്നു.					
35	ഒരു പ്രത്യേക പ്രവർത്തനവുമായി ബന്ധപ്പെട്ട എന്റെയും കൂട്ടുകാരുടേയും മനോഭാവം ഓരേ തരത്തിലാകാറുണ്ട്.					
36	കൂട്ടുകാരുടെ പ്രശ്നങ്ങൾ എന്റെ തന്നെ പ്രശ്നമായാണ് കാണാറുള്ളത്.					
37	കൂട്ടൂകാർക്ക് ആവശ്യമായ സന്ദർഭത്തിൽ അവസരോചിതമായി ഞാൻ കാര്യങ്ങളിൽ ഇടപെടാറില്ല.					
38	ഒരാളുടെ ചിന്തയെ കുറിച്ച് സ്വയം വിശകലനം ചെയ്യുന്നത് പ്രാധാന്യമർഹിക്കുന്നതാണെന്ന് ഞാൻ വിചാരിക്കുന്നു.					
39	മറ്റുള്ളവരെ കുറിച്ച് അഭിപ്രായ പ്രകടനം നടത്തുന്നതിൽ ഞാൻ തൽപ്പരനാണ്.					
40	ഒരാളുടെ ഇപ്പോഴത്തെ പ്രവർത്തി അയാളുടെ മുൻകാല അനുഭവവുമായി ബന്ധപ്പെട്ടതാണെന്ന് ഞാൻ വിശ്വസിക്കുന്നു.					
41	മറ്റുള്ളവർ എന്റെ സ്വഭാവ രൂപീകരത്തിൽ ചെലുത്തുന്ന സ്വാധീനത്തെ കുറിച്ച് ഞാൻ അത്രയധികം ബോധവാനാകാറില്ല.					
42	ആശയങ്ങളുടെ അർത്ഥം പൂർണ്ണമായി ഗ്രഹിക്കാൻ വേണ്ടി ഞാൻ ഉദാഹരണങ്ങളിലൂടെ ചിന്തിക്കാറുണ്ട്.					

ക്രമ നമ്പർ	പ്രസ്താവനകൾ	എപ്പോഴും	മിക്കപ്പോഴും	ചിലപ്പോൾ	അപൂർവ്വം	ഒരിക്കലുമില്ല
43	പഠനവുമായി ബന്ധപ്പെട്ട ഏതൊരു ആശയവും എന്റെതായ വാക്കുകളിലേക്ക് മാറ്റാനുള്ള കഴിവ് എനിക്കില്ല					
44	കൂട്ടുകാർക്ക് സ്വാധീനക്കാവുന്ന തരത്തിലാണ് എന്റെ പ്രവർത്തനങ്ങളെന്ന് ഞാൻ വിശ്വസിക്കുന്നു.					
45	പാഠ്യവിഷയുമായി ബന്ധപ്പെട്ടപ്രവർത്തനങ്ങളോട് പ്രതികരിക്കാൻ ഞാൻ കൂടുതൽ സമയമെടുക്കാറില്ല.					
46	പഠനപ്രവർത്തനവുമായി ബന്ധപ്പെട്ട ആശയകുഴപ്പം ഉണ്ടാകുമ്പോൾ ഞാൻ അത് വീണ്ടും വിശകലനം ചെയ്യാറുണ്ട്.					
47	ഒരു പ്രവർത്തനത്തിൽ എന്റെ മനോഭാവം സ്വാധീനിക്കപ്പെടാറില്ല.					
48	എന്റെ മനോവ്യവഹാരങ്ങൾ കൂടുതലും കൂട്ടുകാരെ കുറിച്ചുള്ളതാണ്					
49	ഞാനുമായി വളരെ അടുത്ത് നിൽക്കുന്നവരുടെ കുടുംബപഞ്ചാത്തലത്തെ കുറിച്ച് അന്വേഷിക്കാറുണ്ട്.					
50	എന്റെ പ്രവർത്തികൾക്ക് ജീവിതത്തിൽ വളരെ വലിയ പങ്കുണ്ടെന്ന് ഞാൻ വിശ്വസിക്കുന്നു.					

Appendix V

FAROOK TRAINING COLLEGE

ATTRIBUTIONAL COMPLEXITY SCALE

(FINAL)

Dr. Hassankoya M.P.
Associate Professor

Shahanas E.
Research Scholar

നിർദ്ദേശങ്ങൾ

കുട്ടികളുടെ പാഠ്യപാഠ്യേതര വ്യവഹാരവുമായി ബന്ധപ്പെട്ടു നടത്തുന്ന ഗവേഷണത്തിന്റെ ഭാഗമായ ചോദ്യാവലിയാണിത്. താഴെ കൊടുത്ത പ്രസ്താവന കൾ വായിച്ച് ശരിയായ പ്രതികരണങ്ങൾ രേഖപ്പെടുത്തുക.

വ്യക്തിപരമായ വിവരങ്ങൾ

1. വിദ്യാർത്ഥിയുടെ പേര് :
2. ആൺ/പെൺ :
3. ക്ലാസ് :
4. സ്കൂൾ :
5. ഗവൺമെന്റ്/എയിഡഡ്/അൺഎയിഡഡ്:
6. സ്ഥലം :
7. ഗ്രാമം/നഗരം :

രക്ഷിതാവിന്റെ വിവരങ്ങൾ

8. പിതാവിന്റെ പേര് :

   ജീവിച്ചിരിപ്പുണ്ട്/മരണപ്പെട്ടു :

9. മാതാവിന്റെ പേര് :

   ജീവിച്ചിരിപ്പുണ്ട്/മരണപ്പെട്ടു :

ക്രമ നമ്പർ	പ്രസ്താവനകൾ	എപ്പോഴും	മിക്കപ്പോഴും	ചിലപ്പോൾ	അപൂർവ്വം	ഒരിക്കലുമില്ല
1	ഒരു വിഷയം പഠിക്കുമ്പോൾ അതിനാവശ്യമായ വിവിധ രീതികളെകുറിച്ച് ഞാൻ ആലോചിക്കാറുണ്ട്.					
2	നേരത്തെ ഹൃദിസ്തമാക്കിയ പഠന പ്രവർത്തനങ്ങൾ ഞാൻ വിശകലനം ചെയ്യാറുണ്ട്.					
3	പുതിയ ആശയങ്ങൾ ഏറ്റവും നന്നായി എങ്ങനെ ഹൃദിസ്ഥ മാക്കാൻ പറ്റും എന്ന് വിശകലനം ചെയ്യാറുണ്ട്.					
4	സമയബന്ധിതമായി ചെയ്യുന്ന പ്രവർത്തികൾ കൂടുതൽ ഫലപ്രാപ്തിയുള്ളതാണ്.					
5	എന്റെ പഠന പ്രവർത്തനങ്ങളെ പതിവായി വിശകലനം ചെയ്യാറില്ല					
6	ഓരോ പഠന പ്രവർത്തനത്തെയും വിലയിരുത്താൻ ഞാൻ ശ്രമിക്കാറുണ്ട്.					
7	കൂടുതൽ സഹായകമായ പഠന തന്ത്രങ്ങൾ ഉപയോഗിക്കു ന്നതിൽ എനിക്ക് പ്രാവണ്യം ഇല്ല.					
8	കുടുംബപരമമായ പ്രശ്നങ്ങൾ പരിഹരിക്കേണ്ടി വരുമ്പോൾ വ്യത്യസ്ത സാധ്യതകളെ കുറിച്ച് ഞാൻ അന്വേഷിക്കാറു ണ്ട്.					
9	ഒരുവ്യക്തി വ്യത്യസ്ത സ്വഭാവ സവിശേഷതകൾ കാണിക്കു ന്നതിന് കാരണം ലളിതമല്ലെന്നും സങ്കീർണ്ണമാണെന്നും ഞാൻ മനസ്സിലാക്കുന്നു.					
10	മറ്റൊരാളെ മനസ്സിലാക്കുന്നതിനായി എന്റെ ചിന്തയെ ഞാൻ വിശകലനം ചെയ്യാറുണ്ട്.					
11	ചോദ്യങ്ങൾക്ക് ഉത്തരം തേടുമ്പോൾ ചോദ്യത്തിന്റെ വ്യത്യസ്ഥ വകഭേദങ്ങളെ ഞാൻ പരിഗണിക്കാറില്ല.					
12	പ്രശ്ന പരിഹാരത്തിന് ശേഷം എല്ലാ സാധ്യതകളേയും പരിഗണിച്ചിട്ടുണ്ടോ എന്ന് ഞാൻ ആലോചിക്കാറില്ല.					
13	സങ്കീർണ്ണമായ ആശയങ്ങളെ ചെറിയ ഭാഗങ്ങളായി വർഗ്ഗീക രിച്ച് ആശയം ഗ്രഹിക്കാറാണ് പതിവ്.					
14	ആശയത്തിന്റെ പ്രത്യേക അർത്ഥത്തേക്കാൾ സമഗ്ര അർത്ഥം ഞാൻ പരിഗണിക്കുന്നു.					

ക്രമ നമ്പർ	പ്രസ്താവനകൾ	എപ്പോഴും	മിക്കപ്പോഴും	ചിലപ്പോൾ	അപൂർവ്വം	ഒരിക്കലുമില്ല
15	ഒരു പ്രശ്നത്തിന് വ്യത്യസ്ത പരിഹാര രീതികൾ ഉണ്ടെന്ന് ഞാൻ വിചാരിക്കുന്നില്ല.					
16	കൂട്ടുകാർ അഭിപ്രായപ്രകടനം നടത്തുമ്പോൾ അതിന്റെ യാഥാർത്ഥ്യത്തെകുറിച്ച് ഞാൻ ശ്രദ്ധാലുവാകാറുണ്ട്					
17	ക്ലാസ് റൂം പ്രവർത്തനങ്ങൾക്കിടയിൽ അധ്യാപകരുടെ ചോദ്യത്തിന് ഉത്തരം നൽകേണ്ട സന്ദർഭത്തിൽ ഞാൻ നന്നായി ചിന്തിക്കാറുണ്ട്.					
18	എന്നെ കുറിച്ച് കൂട്ടുകാരുടെ മനോഭാവം പലപ്പോഴും മാറ്റി യെടുക്കാൻ എനിക്ക് പറ്റുമെന്ന് വിശ്വസിക്കുന്നു.					
19	ഏതൊരു കാര്യത്തിലും മറ്റുള്ളവരുടെ പ്രതികരണം ആത്മാർത്ഥതയുള്ളതാണെന്ന് ഞാൻ വിചാരിക്കുന്നില്ല.					
20	മററുള്ളവർ അവരെ ബാധിക്കാത്ത കാര്യമെന്ന നിലക്ക് അശ്രദ്ധമായി വിടുന്ന കാര്യങ്ങൾ ഞാൻ ഗൗരവത്തോടെ എടുക്കാറുണ്ട്.					
21	മറ്റുള്ളവരുടെ പ്രവർത്തികളുടെ കാരണങ്ങൾ എന്താണെന്നു ള്ളതുമായി ബന്ധപ്പെട്ട ചർച്ചകൾക്ക് ഞാൻ അവസരം നൽകാറില്ല.					
22	ഒരു വ്യക്തിയെ കുറിച്ച് അറിയാൻ ശ്രമിക്കുമ്പോൾ ആ വ്യക്തിയുടെ മനോഭാവവും സ്വഭാവ സവിശേഷതകളും അറിയേണ്ടത് അനിവാര്യമാണെന്ന് എനിക്ക് തോന്നുന്നില്ല.					
23	മറ്റുള്ളവരുടെ പ്രവർത്തികളുടെ വേരുകൾ ചികയുന്നത് ഞാൻ ആസ്വദിക്കുന്നു.					
24	ഒരാളുടെ ചിന്തയെ കുറിച്ച് സ്വയം വിശകലനം ചെയ്യുന്നത് പ്രാധാന്യമർഹിക്കുന്നതാണെന്ന് ഞാൻ വിചാരിക്കുന്നു.					
25	മറ്റുള്ളവരെ കുറിച്ച് അഭിപ്രായ പ്രകടനം നടത്തുന്നതിൽ ഞാൻ തൽപ്പരനാണ്.					
26	ഒരാളുടെ ഇപ്പോഴത്തെ പ്രവർത്തി അയാളുടെ മുൻകാല അനു ഭവവുമായി ബന്ധപ്പെട്ടതാണെന്ന് ഞാൻ വിശ്വസിക്കുന്നു.					
27	മറ്റുള്ളവർ എന്റെ സ്വഭാവ രൂപീകരത്തിൽ ചെലുത്തുന്ന സ്വാധീനത്തെ കുറിച്ച് ഞാൻ അത്രയധികം ബോധവാനാകാ റില്ല.					

ക്രമ നമ്പർ	പ്രസ്താവനകൾ	എപ്പോഴും	മിക്കപ്പോഴും	ചിലപ്പോൾ	അപൂർവ്വം	ഒരിക്കലുമില്ല
28	ആശയങ്ങളുടെ അർത്ഥം പൂർണ്ണമായി ഗ്രഹിക്കാൻ വേണ്ടി ഞാൻ ഉദാഹരണങ്ങളിലൂടെ ചിന്തിക്കാറുണ്ട്.					
29	പഠനവുമായി ബന്ധപ്പെട്ട ഏതൊരു ആശയവും എന്റെതായ വാക്കുകളിലേക്ക് മാറ്റാനുള്ള കഴിവ് എനിക്കുണ്ട്					
30	കൂട്ടുകാർക്ക് സ്വാധീനിക്കാവുന്ന തരത്തിലാണ് എന്റെ പ്രവർത്തനങ്ങൾ എന്ന് ഞാൻ വിശ്വസിക്കുന്നു.					
31	പാഠ്യവിഷയവുമായി ബന്ധപ്പെട്ട പ്രവർത്തനങ്ങളോട് പ്രതികരിക്കാൻ ഞാൻ കൂടുതൽ സമയം എടുക്കാറില്ല.					

Appendix VI

FAROOK TRAINING COLLEGE

ATTRIBUTIONAL COMPLEXITY SCALE

(FINAL)

Dr. Hassankoya M.P.
Associate Professor

Shahanas E.
Research Scholar

Instructions

This is a scale that is part of the ongoing research on children's extra-curricular discourse. Read the following statement and write the correct response.

Personal Details

1. Name of the student :
2. Male/Female :
3. Class :
4. Name of the school :
5. Type of school : Govt/Unaided/Aided
6. Place :
7. Urban/Rural :

Information Related to Parents

8. Father's Name :

   Still Living/Not Living

9. Mothers name :

   Still Living/Not Living

Sl. No.	Statement	Always	Often	Frequently	Rare	Never
1	When I study a subject, I often think of different ways to do it.					
2	I used to analyse previously imbibed learning activities.					
3	I always search about how new ideas to be memorised easily.					
4	Time bound actions are more effective.					
5	I don't usually analyse my learning activities.					
6	I do evaluate each learning tasks.					
7	I am not skilful in using learning strategies which are helpful.					
8	I seek all the possibilities while solving family problems.					
9	I know the reason behind a person showing different behavioural traits is very complex.					
10	I often analyse before evaluating someone else.					
11	I don't consider the different variants of the question while looking for the answers to question.					
12	I don't think if all possibilities have been considered before solving a problem.					
13	I usually conceive the complex ideas by dividing in to different components.					
14	I always consider the holistic meaning of a concept rather than specificities of it.					
15	I don't think there are different solutions to a problem					
16	I paid attention on the reality of friend's comment.					
17	I think well about situation where I have to answer to a teacher's question during learning activities.					
18	I believe that I can change the attitude of my friends towards me.					
19	I don't think that the response of others to any matter is sincere.					
20	I take seriously the matters that are left unattended by others as that does not affect them.					
21	I don't bother about reasons behind other's action.					

Sl. No.	Statement	Always	Often	Frequently	Rare	Never
22	It is not essential to know ones attitude and character to know him really.					
23	To know the reason behind one's action is really enjoyable to me.					
24	I believe that self analysis of one's thinking is important.					
25	I am interested in commenting on others.					
26	I believe that one's present action is related to their past experiences.					
27	I am not aware of the influence that others have on my character on my character formation.					
28	I try to understand a concept meaningfully through examples.					
29	I have the ability to put any learning concept in my own words.					
30	I believe that all my actions are influenced by my friends.					
31	I don't take much time to respond to subject related learning activities.					

Appendix VII

FAROOK TRAINING COLLEGE

ACADEMIC RESILIENCE SCALE

(DRAFT)

Dr. Hassankoya M.P.
Associate Professor

Shahanas E.
Research Scholar

നിർദ്ദേശങ്ങൾ

കുട്ടികളുടെ പാഠ്യപാഠ്യേതര വ്യവഹാരവുമായി ബന്ധപ്പെട്ടു നടത്തുന്ന ഗവേഷണത്തിന്റെ ഭാഗമായ ചോദ്യാവലിയാണിത്. താഴെ കൊടുത്ത പ്രസ്താവനകൾ വായിച്ച് ശരിയായ പ്രതികരണങ്ങൾ രേഖപ്പെടുത്തുക.

<u>വ്യക്തിപരമായ വിവരങ്ങൾ</u>

1. വിദ്യാർത്ഥിയുടെ പേര് :
2. ആൺ/പെൺ :
3. ക്ലാസ് :
4. സ്കൂൾ :
5. ഗവൺമെന്റ്/എയിഡഡ്/അൺഎയിഡഡ്:
6. സ്ഥലം :
7. ഗ്രാമം/നഗരം :

രക്ഷിതാവിന്റെ വിവരങ്ങൾ

8. പിതാവിന്റെ പേര് :

   ജീവിച്ചിരിപ്പുണ്ട്/മരണപ്പെട്ടു :

9. മാതാവിന്റെ പേര് :

   ജീവിച്ചിരിപ്പുണ്ട്/മരണപ്പെട്ടു :

ക്രമ നമ്പർ	പ്രസ്താവനകൾ	എപ്പോഴും	മിക്കപ്പോഴും	ചിലപ്പോൾ	അപൂർവ്വം	ഒരിക്കലുമില്ല
1	ഞാൻ ലക്ഷ്യബോധമുള്ളവനാണ്					
2	ഏതൊരു പ്രവർത്തിക്കും നല്ലതോ ചീത്തയോ ആകട്ടെ കൃത്യമായ ലക്ഷ്യമുണ്ടെന്ന് ഞാൻ വിചാരിക്കുന്നു.					
3	വിജയത്തിനാവശ്യമായ ഗുണങ്ങൾ എനിക്കുണ്ടെന്ന് ഞാൻ വിശ്വസിക്കുന്നു.					
4	വേദനാജനകമായ അനുഭവങ്ങളെ തുടർന്ന് ശുഭകരമായ കാര്യങ്ങളുണ്ടാകണമെന്ന് ഞാൻ വിശ്വസിക്കുന്നില്ല.					
5	ഏതൊരു പ്രവർത്തനത്തിലും വിജയത്തിലെത്തുന്നത് വരെ ഞാൻ പരിശ്രമിക്കാറുണ്ട്.					
6	ഒട്ടുമിക്ക മേഖലകളിലും മികച്ച രീതിയിൽ പ്രവർത്തിക്കാൻ കഴിയാറില്ലെന്ന് ഞാൻ വിചാരിക്കുന്നു.					
7	ഭാവിയിൽ ധാരാളം ശുഭകരമായ കാര്യങ്ങൾ ചെയ്യാനു ണ്ടെന്ന് ഞാൻ വിശ്വസിക്കുന്നു.					
8	സന്തോഷകരമല്ലാത്ത ഭാവി എനിക്കുണ്ടാകുമോ എന്ന് ഞാൻ ഭയപ്പെടാറുണ്ട്					
9	ഇഷ്ടമില്ലാത്തതാണ് സംഭവിക്കാൻ പോകുന്നതെങ്കിൽ പോലും ഞാൻ വ്യാകുലപ്പെടാറില്ല.					
10	ഈ ലോകത്തുള്ള എല്ലാ വസ്തുക്കൾക്കും കൃത്യമായ നിർവചനം ഉണ്ടെന്ന് ഞാൻ വിശ്വസിക്കുന്നില്ല.					
11	ഏതൊരു പ്രവർത്തനത്തിലുടേയും അന്തിമ വിജയത്തെകുറി ച്ച് എനിക്ക് ശുഭാപ്തി വിശ്വാസമുണ്ട്.					
12	നന്നായി പ്രവർത്തിക്കാൻ കഴിയാതെ വരുമ്പോൾ നൂതന മാർഗ്ഗങ്ങളെ കുറിച്ച് ഞാൻ ചിന്തിക്കാറുണ്ട്,					
13	ഭാവിയെ കുറിച്ചുള്ള ആകുലത എനിക്കില്ല.					
14	വിജയത്തിലെത്താത്ത പ്രവർത്തികളെ കുറിച്ച് പിന്നീട് ഞാൻ ആലോചിക്കാറേയില്ല.					
15	മികച്ച രീതിയിലുള്ള പ്രവർത്തനം എന്റെ മനസ്സിന് സന്തോഷം നൽകാറുണ്ട്.					
16	ഞാനെന്റെ കഴിവിന്റെ പരമാവധി ചെയ്താൽ എന്റെ ലക്ഷ്യ ങ്ങൾ കൈവരിക്കാം എന്ന വിശ്വാസം എനിക്കുണ്ട്.					

ക്രമ നമ്പർ	പ്രസ്താവനകൾ	എപ്പോഴും	മിക്കപ്പോഴും	ചിലപ്പോൾ	അപൂർവ്വം	ഒരിക്കലുമില്ല
17	ക്ലാസ്റൂം സാഹചര്യങ്ങളിൽ വ്യായാമം ചെയ്യാൻ ഞാൻ ഇഷ്ടപ്പെടുന്നു.					
18	എനിക്ക് ടെൻഷൻ ഉണ്ടെങ്കിലും ഏല്ലാ പ്രവർത്തികളിലും ഞാൻ പങ്കെടുക്കാറുണ്ട്.					
19	സംശയാസ്പദമായ ചോദ്യങ്ങൾ ഞാൻ സുഹൃത്തുക്കളു മായി ചർച്ച ചെയ്യാറുണ്ട്.					
20	എന്റെ പ്രകടനത്തിൽ എനിക്ക് ആത്മവിശ്വാസമുണ്ട്.					
21	എന്റെ ദൈന്യംദിന കാര്യങ്ങളെക്കുറിച്ച് ഞാൻ ശരിയായി ചിന്തിക്കാറില്ല.					
22	ഏതൊരു ദിവസം അവസാനിക്കുമ്പോഴും ഞാൻ സന്തോഷ വാനാണ്					
23	ഞാനൊരു നല്ല കേൾവിക്കാരനാണെന്ന് എനിക്ക് വിശ്വാസമില്ല.					
24	മറ്റുള്ളവർ എന്നെക്കുറിച്ച് എന്താണ് ചിന്തിക്കുന്നത് എന്നതി നെക്കുറിച്ച് ഞാൻ വിഷമിക്കാറില്ല.					
25	എന്റെ ഉള്ളിൽ തന്നെയുള്ള ഒരു ശക്തിയിൽ പ്രചോദിത നാണ് ഞാനെന്ന് വിശ്വസിക്കുന്നില്ല.					
26	ബൗധിക ലോകത്തെ നിയന്ത്രിക്കുന്ന ഒരു നിർണ്ണാ യകശക്തിയുടെ സാന്നിദ്ധ്യത്തിൽ ഞാൻ വിശ്വസിക്കുന്നില്ല.					
27	ആത്മീയതാണ് എന്റെ ജീവവായു എന്ന് ഞാൻ വിശ്വസിക്കു ന്നു.					
28	മനസാക്ഷിയെ വഞ്ചിക്കുന്ന പ്രവർത്തികൾ ഞാൻ ഇഷ്ടപ്പെ ടുന്നില്ല.					
29	മനസാക്ഷിയെ പ്രീതിപ്പെടുത്തുന്ന പ്രവർത്തികൾ മാത്രമേ ചെയ്തിട്ടുള്ളു എന്ന് ഓരോ ദിവസത്തിന്റെയും അന്ത്യ ത്തിൽ ആത്മപരിശോധന നടത്താറുണ്ട്.					
30	പ്രതിബന്ധങ്ങൾ നേരിടാൻ ഉള്ള കരുത്ത് എനിക്കില്ലെന്ന് ഞാൻ വിചാരിക്കുന്നു.					
31	നല്ല ഒരു വ്യക്തിയാണെന്നതിൽ ഞാൻ സന്തുഷ്ടനാണ്.					
32	എനിക്ക് ശക്തിയും ദൗർലഭ്യങ്ങളും ഉണ്ടെന്ന് ഞാൻ വിശ്വ സിക്കുന്നു.					

ക്രമ നമ്പർ	പ്രസ്താവനകൾ	എപ്പോഴും	മിക്കപ്പോഴും	ചിലപ്പോൾ	അപൂർവ്വം	ഒരിക്കലുമില്ല
33	എല്ലാ പ്രശ്നങ്ങൾക്കും ശരിയായ പരിഹാരം ഉണ്ടെന്ന് ഞാൻ വിശ്വസിക്കുന്നു.					
34	ഏതൊരു പ്രവർത്തിയും മറ്റുള്ളവരേക്കാൾ നന്നായി ചെയ്യാൻ എനിക്ക് കഴിയുമെന്ന് ഞാൻ വിശ്വസിക്കുന്നില്ല					
35	എളുപ്പത്തിൽ സാമൂഹ്യബന്ധങ്ങൾ ഉണ്ടാക്കാൻ കഴിയുമെന്ന് ഞാൻ വിചാരിക്കുന്നു.					
36	ജീവിതത്തിൽ എനിക്ക് ധാരാളം പ്രതീക്ഷകളും ആഗ്രഹങ്ങളും ഉണ്ട്.					
37	ആഗ്രഹങ്ങൾ പൂർത്തീകരിക്കാൻ എനിക്ക് കഴിയുമെന്ന് ഞാൻ വിചാരിക്കുന്നില്ല.					
38	എന്റെ ആഗ്രഹങ്ങൾ പൂർത്തീകരിക്കാൻ ആവശ്യമായ പ്രവർത്തികളിൽ മാത്രമേ ഞാൻ ഏർപ്പെടാറുള്ളു					
39	എനിക്ക് ആവശ്യമുള്ള കാര്യങ്ങൾ നേടിയെടുക്കാൻ കഴിയുമെന്ന് ഞാൻ വിശ്വസിക്കുന്നില്ല.					
40	ഞാൻ കഴിവുറ്റ ഒരു വ്യക്തിത്വമാണെന്ന് വിചാരിക്കുന്നു.					
41	എന്റെ പ്രവർത്തികളുടെ അടിസ്ഥാനം എന്റെ വ്യക്തിത്വമാണെന്ന് ഞാൻ വിശ്വസിക്കുന്നു.					
42	എന്റെ പ്രവർത്തികളും ആഗ്രഹങ്ങളും തമ്മിൽ യാതൊരു ബന്ധവും ഇല്ല.					
43	കൂട്ടുകാരുടെ പിന്തുണയില്ലെങ്കിൽ പോലും ഒരു ക്ലാസ് റൂം പ്രവർത്തനത്തിൽ ഉറച്ചു നിൽക്കാൻ എനിക്ക് കഴിയാറുണ്ട്					
44	വെല്ലുവിളി ഉയർത്തുന്ന പഠന പ്രവർത്തനം ഞാൻ ഇഷ്ടപ്പെടുന്നില്ല.					
45	എനിക്ക് ആകർഷകമായ ഒരു വ്യക്തിത്വം ഉണ്ടെന്ന് ഞാൻ വിശ്വസിക്കുന്നു.					
46	എന്റെ സാഹചര്യങ്ങൾ എന്നെ സ്ഥിരോൽസാഹി ആക്കുന്നതിൽനിന്നും തടയുമെന്ന് ഞാൻ വിശ്വസിക്കുന്നു.					
47	എന്റെ കുടുംബം എന്നെ കുറിച്ച് അഭിമാനം കൊള്ളാറുണ്ട്.					
48	കൂട്ടുകാർ ഞാനുമായി ഊഷ്മളബന്ധം കാത്തു സൂക്ഷിക്കുന്നുണ്ടെന്ന് ഞാൻ വിശ്വസിക്കുന്നു.					

ക്രമ നമ്പർ	പ്രസ്താവനകൾ	എപ്പോഴും	മിക്കപ്പോഴും	ചിലപ്പോൾ	അപൂർവ്വം	ഒരിക്കലുമില്ല
49	മറ്റുള്ളവർ ഒഴിവാക്കുന്ന സങ്കീർണ്ണ പ്രവർത്തനങ്ങൾ ഏറ്റെടുക്കുന്നതിൽ ഞാൻ മടികാണിക്കാറുണ്ട്.					
50	വ്യത്യസ്ഥ വീക്ഷണക്കാരായ ധാരാളം കൂട്ടുകാർ എനിക്കുള്ളതായി ഞാൻ മനസ്സിലാക്കുന്നു.					
51	എന്റെ പ്രവർത്തന രീതികൾ കൂട്ടുകാരെ ആവേശം കൊള്ളിക്കാറുണ്ട്.					
52	എന്റെ കുടുംബ പാശ്ചാത്തലം എന്റെ വളർച്ചക്ക് അനുയോജ്യമാണെന്ന് ഞാൻ വിശ്വസിക്കുന്നു.					
53	ഒരു ഉത്തരവാദിത്വം ഏറ്റെടുത്താൽ അത് പൂർത്തീകരിക്കുമെന്ന വിശ്വാസം എനിക്കില്ല					
54	പഠന പ്രവർത്തനങ്ങൾ നല്ല രീതിയിൽ ചെയ്യാൻ എനിക്ക് കഴിയുമെന്ന് ഞാൻ വിശ്വസിക്കുന്നു.					
55	പൂർത്തിയാക്കാൻ പറ്റില്ലെന്ന് തോന്നുന്ന ഒരു പ്രവർത്തനവും ഞാൻ ഏറ്റെടുക്കാറില്ല.					
56	വെല്ലുവിളി ഉയർത്തുന്ന ഏതൊരു പഠനപ്രവർത്തനവും താൽപര്യം ജനിപ്പിക്കുന്നതാണെന്ന് എനിക്ക് തോന്നുന്നു.					

Appendix VIII

FAROOK TRAINING COLLEGE

ACADEMIC RESILIENCE SCALE

(FINAL)

Dr. Hassankoya M.P.
Associate Professor

Shahanas E.
Research Scholar

നിർദ്ദേശങ്ങൾ

കുട്ടികളുടെ പാഠ്യപാഠ്യേതര വ്യവഹാരവുമായി ബന്ധപ്പെട്ടു നടത്തുന്ന ഗവേഷണത്തിന്റെ ഭാഗമായ ചോദ്യാവലിയാണിത്. താഴെ കൊടുത്ത പ്രസ്താവനകൾ വായിച്ച് ശരിയായ പ്രതികരണങ്ങൾ രേഖപ്പെടുത്തുക.

വ്യക്തിപരമായ വിവരങ്ങൾ

1. വിദ്യാർത്ഥിയുടെ പേര് :
2 ആൺ/പെൺ :
3 ക്ലാസ് :
4. സ്കൂൾ :
5. ഗവൺമെന്റ്/എയിഡഡ്/അൺഎയിഡഡ്:
6. സ്ഥലം :
7. ഗ്രാമം/നഗരം :

രക്ഷിതാവിന്റെ വിവരങ്ങൾ

8. പിതാവിന്റെ പേര് :
   ജീവിച്ചിരിപ്പുണ്ട്/മരണപ്പെട്ടു :
9. മാതാവിന്റെ പേര് :
   ജീവിച്ചിരിപ്പുണ്ട്/മരണപ്പെട്ടു :

ക്രമ നമ്പർ	പ്രസ്താവനകൾ	എപ്പോഴും	മിക്കപ്പോഴും	ചിലപ്പോൾ	അപൂർവ്വം	ഒരിക്കലുമില്ല
1	ഞാൻ ലക്ഷ്യബോധമുള്ളവനാണ്					
2	ഏതൊരു പ്രവർത്തിക്കും നല്ലതോ ചീത്തയോ ആകട്ടെ കൃത്യ മായ ലക്ഷ്യമുണ്ടെന്ന് ഞാൻ വിചാരിക്കുന്നു.					
3	വിജയത്തിനാവശ്യമായ ഗുണങ്ങൾ എനിക്കുണ്ടെന്ന് ഞാൻ വിശ്വ സിക്കുന്നു.					
4	വേദനാജനകമായ അനുഭവങ്ങളെ തുടർന്ന് ശുഭകരമായ കാര്യങ്ങളുണ്ടാകണമെന്ന് ഞാൻ വിശ്വസിക്കുന്നില്ല.					
5	ഏതൊരു പ്രവർത്തനത്തിലും വിജയത്തിലെത്തുന്നത്വരെ ഞാൻ പരിശ്രമിക്കാറുണ്ട്.					
6	ഒട്ടുമിക്ക മേഖലകളിലും മികച്ച രീതിയിൽ പ്രവർത്തിക്കാൻ കഴിയാറില്ലെന്ന് ഞാൻ വിചാരിക്കുന്നു.					
7	ഭാവിയിൽ ധാരാളം ശുഭകരമായ കാര്യങ്ങൾ ചെയ്യാനു ണ്ടെന്ന് ഞാൻ വിശ്വസിക്കുന്നു.					
8	സന്തോഷകരമല്ലാത്ത ഭാവി എനിക്കുണ്ടാകുമോ എന്ന് ഞാൻ ഭയപ്പെടാറുണ്ട്					
9	ഇഷ്ടമില്ലാത്തതാണ് സംഭവിക്കാൻ പോകുന്നതെങ്കിൽ പോലും ഞാൻ വ്യാകുലപ്പെടാറില്ല.					
10	ഞാനെന്റെ കഴിവിന്റെ പരമാവധി ചെയ്താൽ എന്റെ ലക്ഷ്യ ങ്ങൾ കൈവരിക്കാം എന്ന വിശ്വാസം എനിക്കുണ്ട്.					
11	ക്ലാസ്റൂം സാഹചര്യങ്ങളിൽ വ്യായാമം ചെയ്യാൻ ഞാൻ ഇഷ്ടപ്പെടുന്നു.					
12	എനിക്ക് ടെൻഷൻ ഉണ്ടെങ്കിലും ഏല്ലാ പ്രവർത്തികളിലും ഞാൻ പങ്കെടുക്കാറുണ്ട്.					
13	സംശയാസ്പദമായ ചോദ്യങ്ങൾ ഞാൻ സുഹൃത്തുക്കളു മായി ചർച്ച ചെയ്യാറുണ്ട്.					
14	എന്റെ പ്രകടനത്തിൽ എനിക്ക് ആത്മവിശ്വാസമുണ്ട്.					
15	എന്റെ ദൈനൃംദിന കാര്യങ്ങളെക്കുറിച്ച് ഞാൻ ശരിയായി ചിന്തിക്കാറില്ല.					
16	ഏതൊരു ദിവസം അവസാനിക്കുമ്പോഴും ഞാൻ സന്തോഷ വാനാണ്					

ക്രമ നമ്പർ	പ്രസ്താവനകൾ	എപ്പോഴും	മിക്കപ്പോഴും	ചിലപ്പോൾ	അപൂർവ്വം	ഒരിക്കലുമില്ല
17	ഞാനൊരു നല്ല കേൾവിക്കാരനാണെന്ന് എനിക്ക് വിശ്വാസ മില്ല.					
18	മറ്റുള്ളവർ എന്നെക്കുറിച്ച് എന്താണ് ചിന്തിക്കുന്നത് എന്നതി നെക്കുറിച്ച് ഞാൻ വിഷമിക്കാറില്ല.					
19	പ്രതിബന്ധങ്ങൾ നേരിടാൻ ഉള്ള കരുത്ത് എനിക്കില്ലെന്ന് ഞാൻ വിചാരിക്കുന്നു.					
20	നല്ല ഒരു വ്യക്തിയാണെന്നതിൽ ഞാൻ സന്തുഷ്ടനാണ്.					
21	എനിക്ക് ശക്തിയും ദൗലഭ്യങ്ങളും ഉണ്ടെന്ന് ഞാൻ വിശ്വസി ക്കുന്നു.					
22	എല്ലാ പ്രശ്നങ്ങൾക്കും ശരിയായ പരിഹാരം ഉണ്ടെന്ന് ഞാൻ വിശ്വസിക്കുന്നു.					
23	ഏതൊരു പ്രവർത്തിയും മറ്റുള്ളവരേക്കാൾ നന്നായി ചെയ്യാൻ എനിക്ക് കഴിയുമെന്ന് ഞാൻ വിശ്വസിക്കുന്നില്ല					
24	എളുപ്പത്തിൽ സാമൂഹ്യബന്ധങ്ങൾ ഉണ്ടാക്കാൻ കഴിയു മെന്ന് ഞാൻ വിചാരിക്കുന്നു.					
25	ജീവിതത്തിൽ എനിക്ക് ധാരാളം പ്രതീക്ഷകളും ആഗ്രഹ ങ്ങളും ഉണ്ട്.					
26	ആഗ്രഹങ്ങൾ പൂർത്തീകരിക്കാൻ എനിക്ക് കഴിയുമെന്ന് ഞാൻ വിചാരിക്കുന്നില്ല.					
27	എന്റെ ആഗ്രഹങ്ങൾ പൂർത്തീകരിക്കാൻ ആവശ്യമായ പ്രവർത്തികളിൽ മാത്രമേ ഞാൻ ഏർപ്പെടാറുള്ളു					
28	കൂട്ടുകാരുടെ പിന്തുണയില്ലെങ്കിൽ പോലും ഒരു ക്ലാസ്റൂം പ്രവർത്തനത്തിൽ ഉറച്ചു നിൽക്കാൻ എനിക്ക് കഴിയാറുണ്ട്					
29	വെല്ലുവിളി ഉയർത്തുന്ന പഠന പ്രവർത്തനം ഞാൻ ഇഷ്ടപ്പെ ടുന്നില്ല.					
30	എനിക്ക് ആകർഷകമായ ഒരു വ്യക്തിത്വം ഉണ്ടെന്ന് ഞാൻ വിശ്വസിക്കുന്നു.					
31	എന്റെ സാഹചര്യങ്ങൾ എന്നെ സ്ഥിരോൽസാഹി ആക്കുന്ന തിൽനിന്നും തടയുമെന്ന് ഞാൻ വിശ്വസിക്കുന്നു.					
32	എന്റെ കുടുംബം എന്നെ കുറിച്ച് അഭിമാനം കൊള്ളാറുണ്ട്.					

ക്രമ നമ്പർ	പ്രസ്താവനകൾ	എപ്പോഴും	മിക്കപ്പോഴും	ചിലപ്പോൾ	അപൂർവ്വം	ഒരിക്കലുമില്ല
33	കൂട്ടുകാർ ഞാനുമായി ഊഷ്മളബന്ധം കാത്തു സൂക്ഷിക്കുന്നുണ്ടെന്ന് ഞാൻ വിശ്വസിക്കുന്നു.					
34	മറ്റുള്ളവർ ഒഴിവാക്കുന്ന സങ്കീർണ്ണ പ്രവർത്തനങ്ങൾ ഏറ്റെടുക്കുന്നതിൽ ഞാൻ മടികാണിക്കാറുണ്ട്.					
35	വ്യത്യസ്ത വീക്ഷണക്കാരായ ധാരാളം കൂട്ടുകാർ എനിക്കുള്ളതായി ഞാൻ മനസ്സിലാക്കുന്നു.					
36	എന്റെ പ്രവർത്തന രീതികൾ കൂട്ടുകാരെ ആവേശം കൊള്ളിക്കാറുണ്ട്.					
37	എന്റെ കുടുംബ പാശ്ചാത്തലം എന്റെ വളർച്ച് അനുയോജ്യമാണെന്ന് ഞാൻ വിശ്വസിക്കുന്നു.					

Appendix IX

FAROOK TRAINING COLLEGE

ACADEMIC RESILIENCE SCALE

(FINAL)

Dr. Hassankoya M.P.
Associate Professor

Shahanas E.
Research Scholar

Instructions

I am doing research at Farook Training College. As part of my research I am conducting a study on the topic Influence on Metacognition, Attribution Complexity on Resilience of Orphanage students of Kerala. Certain personal information regarding children in your institution is given below. Kindly record the responses against all the information. I assure you that the responses will be kept confidential and they will be used only for my research purpose. Expecting your valuable co-operation.

Personal Details

1. Name of the student :
2. Male/Female :
3. Class :
4. Name of the school :
5. Type of school : Govt/Unaided
6. Place : Urban/Rural
7. Religion :

Information Related to Parents

8. Father's Name :
   Still Living/Not Living
9. Mothers name :
   Still Living/Not Living

Sl. No.	Statement	Always	Often	Frequently	Rare	Never
1	I am conscious of my aim.					
2	I think every action is purposive if it is good or bad.					
3	I believe that I have the qualities for being successful.					
4	I don't think that good things will proceed to a painful experience					
5	I strive for any activities until it become successful.					
6	I realize I couldn't perform well at many areas.					
7	I believe I have many good things to do in future.					
8	I am afraid of something unhappy is going to happen.					
9	I don't care about what is going to happen even if it is unhappy.					
10	If I do my best, I will acheive my learning goals.					
11	I like to do exercises in classroom situation.					
12	I participate all the activities in classroom if I am tensed.					
13	I discuss the doubtful questions with friends.					
14	I am confident in my performance.					
15	I don't rethink about my day to day affairs.					
16	At the end of any day, I am very happy.					
17	I am not confident that I am a good listner					
18	I don't bother about what others think about me.					
19	I believe that I don't have the strength to face the obstacles.					
20	I am proud to be a good person.					
21	I believe that I have my strength and my weakness.					
22	I believe that every problem has a solution.					
23	I am doubtful whether I can do any work well, than someone else do.					

Sl. No.	Statement	Always	Often	Frequently	Rare	Never
24	I believe I can easily make social connections.					
25	I cherish many hope and desire in life.					
26	I believe that I can never fulfil my desires.					
27	I engage only those activities which are needed to fulfil my dreams.					
28	I am able to pursue a classroom activity even without the support of friends.					
29	I am not interested in challenging learning activity.					
30	I believe I have an attractive personality.					
31	I believe that the circumstances will prevent me from becoming enthusiastic.					
32	My family is being proud of me.					
33	I believe that my friends maintain a warm relationship with me.					
34	I am reluctant to undertake the complex tasks that others avoid.					
35	I understand that I have a lot of friends with different perspectives.					
36	My friends get excited about my wave of doing activity.					
37	I believe that my family background is favourable for my upliftment.					