

Running Head: EFFECTIVENESS OF BIBLIOTHERAPY AND PROGRESSIVE MUSCLE RELAXATION

**EFFECTIVENESS OF BIBLIOTHERAPY AND PROGRESSIVE MUSCLE
RELAXATION ON ACADEMIC STRESS REDUCTION AMONG
SECONDARY SCHOOL STUDENTS OF KERALA**

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Thesis
Submitted for the degree of
DOCTOR OF PHILOSOPHY IN EDUCATION

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DECLARATION

I, **PRASEEDA P. NAIR**, do here by declare that this thesis entitled as “**EFFECTIVENESS OF BIBLIOTHERAPY AND PROGRESSIVE MUSCLE RELAXATION ON ACADEMIC STRESS REDUCTION AMONG SECONDARY SCHOOL STUDENTS OF KERALA**” has not been submitted by me for the award of any Degree, Diploma, Title or Recognition before.

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I **Dr. K.P. MEERA** do hereby certify that this thesis entitled “**EFFECTIVENESS OF BIBLIOTHERAPY AND PROGRESSIVE MUSCLE RELAXATION ON ACADEMIC STRESS REDUCTION AMONG SECONDARY SCHOOL STUDENTS OF KERALA**” is a record of bonafide study and research carried out by **PRASEEDA P. NAIR**, under my supervision and guidance.

The thesis is revised as per the modifications and recommendations reported by the adjudicators and re-submitted.

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(*Supervising teacher*)

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Introduction

- *Need and Significance of the Study*
- *Statement of the Problem*
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INTRODUCTION

Present concept of the world is that of a dynamic global village. Such a challenging dynamic environment leaves no stone unturned and so children also in this flux have to find a place of their own. In order to go forward in this highly demanding surroundings they have to struggle, and this often create problems. As children do not have control over their lives, they are placed at a disadvantage when dealing with life's everyday demands.

It is true that life is not smooth running. It has problems ranging from daily hassles to national and international issues. Discussion goes on for finding solutions, but only adults are concerned in all these processes. In such circumstances the situations of children are not considered or are even ignored. The damage and human suffering from natural calamities, wars, racial struggles and epidemics subject children to as much pain, misery and loss, on an epic scale. Miseries and sufferings of children are beyond our imagination. Though we all were children, now as adults we are not able to think and feel in a child's perspective, this also adds to their miseries. Children are often maltreated, physically, sexually or emotionally abused and neglected. Our media reports verities of maltreatments and abuses and sufferings of children. These made the policy makers to issue orders for the protection of children using laws, rules and regulations. But we have to think whether these rules and laws can cure the effect of these harassments. We have to think about the traumatic effect of such miseries suffered by these children.

Though education aims at all round development, present day education equips the children for academic achievement. Development of social and

emotional aspects of children through education is not up to marks. Along with academic development all the other aspect should also be considered for all round development of children. For this we should go deep into children's problems and should understand how they face these problems. The problems that children have to deal with may create phobias, behavioural difficulties, stress, depression and neuropsychiatric disorders. It is an accepted fact that stress has become an almost endemic characteristic of our daily life, especially that of students. Students often try to cope successfully with the demands of life, but the pressure can become overwhelmed and unmanaged at times. All the threats, challenges and changes require people to respond in some way. So stress is the term used to describe physical, emotional, cognitive and behavioural response to events that are appraised as threatening or challenging. Stress, the ubiquitous term, was first used by Hans Selye, a professor at McGill University in 1936, who defined stress as a "non specific response of the body to any demand" (Selye, 1936). Stress is not only the pressure from outside, but the way human beings react to what are going on around them. The environmental demands are seen as a threat to the well being of a person when they are not certain about their physical, emotional and psychological ability to deal with the events. Stress can manifest itself in many ways such as physical, emotional, mental and behavioural aspects. Stress cannot be eliminated but can be reduced. For the healthy development of healthy body and mind children should be devoid of stress. Children have to shoulder the responsibility already initiated by us and so the future of humanity are in their hands. So it is inevitable to pay careful attention to these budding blossoms of future world.

Educational system has to take their role in helping the students cope with their problems and help them to become mentally strong. Children now-a-days cannot bear even mild scolding or punishment from their parents and teachers. They often go to the extent of killing themselves. Children get easily exhausted by the stress they have to face. So we should take measures to equip them to identify their stress and manage it. For this appropriate stress management interventions should be included in the daily scholastic environment. Useful and feasible methods of stress management can be easily transferred to children and can train them for Stress Management.

Need and Significance

Children usually go through or meet varied stress inducing environment. Different Stress has profound effect on their health, academic performance and social behaviour. Children react differently to stress than adults and consequently may lack the skills to deal effectively in their lives. So they are placed at disadvantage when dealing with life's everyday problems. Nowadays school aged children become more stressed than ever before. First and foremost stress in students is created by parental or family pressure to perform and to stand out among other children. When they cannot rise up to that expectation or during the process of meeting it, children may suffer frustration, physical stress, aggression, undesirable complexes and depression. Negative traits such as shyness, unfriendliness and jealousy may be developed by underperformers and they also may retreat into their own world to become loners.

Present education equip the children for the development of their cognitive domain, but along with this the affective domain of the students should also be taken into consideration because we can see that though the students achieve the top position in their academics they cannot even bear small negatives in their life. We had gone through reports like student committed suicide before the declaration of results, before attending exam, or for getting lower marks than expected. In such cases we should equip the students in such a way that life is full of ups and downs and it will not end with obtaining marks and positions. So we have to nurture them in a way that they can calmly and quietly face all the adverse situations in their life. Moreover, students in nuclear families are more pampered and not get enough exposure to adverse situations, so mild adversity is more than enough to prick them. In children, this over caring often develops lack of trust for everything. This also creates stress while dealing with outside world other than their parents. Present day media reports about harassment against children also create tensions in them. Though children get exposure to outer world they are not getting enough experience to compete in this world.

Elkind (1984) said that adolescence is marked by the shock of moving from the culture of childhood to the culture of adolescence. This creates a series of developmental challenges such as developing identity, achieving independence from the family while staying connected and fitting into peer group. It is also a time of physiological changes and cognitive development. Extremity of problematic circumstances, inability to cope when vulnerable to increasing pressure and uncertainties make children under severe depression

and lead them to choose suicide as an escape. This not only affect them alone but also those who are attached to them. Adolescent's problems like under achievement, despair about their future, eating disorders, alcoholism, drug abuse, bullying, vandalism and other forms of antisocial behaviour are on the increase in many communities (Frydenberg, 1997). For this the community has to find out the problems of adolescent people and find ways for managing these problems by using sound coping strategies.

Better understanding of an adolescent is only possible when we can analyze their problems, how they cope with their problems, what are the after effects and all. This helps us to equip them with necessary supports to cope effectively with situations and have a sound mental and physical health. This not only benefits the person but also the whole community including parents, teachers, policy makers, educationists, sociologists and psychologists. Schools have inevitable role as socializing agent and have the duty to understand about the adolescent population and develop policies to meet the requirements. Practicing is tougher task than making policies, so schools should give prior importance to the practicing. The policies and curriculum should be capable of meeting the emerging requirements of the adolescent population.

The education system and society have to tackle the issues related to adolescents but the sociological factors determining the concerns of youth and those ever-changing sociological factors make it a difficult task. Experience of an individual determines his reaction to his environment, which determines whether a concern in life is a stressor for the particular individual. Individuality has its role while experiencing a stress and coping with it. Same

stressor can be felt in different way by different individual. So it is highly complicated to deal with stressors of adolescents.

According to Tan and Yates (2011) and Talib and Zia (2012), Academic Stress is the major stress experienced by adolescents in the education scenario. Regarding individual each and every event in life can be stressful or not. So among a broad concept of stressors academic stress is of greater relevance for adolescent students. Though we consider academic stress as a particular stress it is the result of various stressors related to home, school, personal factors and various other factors.

According to Selye (1975), the response based definition posits that stress is the biological and psychological response of the individual to environmental demands. This definition of stress throws light into the health related effects of stress. Stress can be then understood as the reaction of our body to daily events and how we perceive these events. When the response to stress is too intense and long it becomes distress, and burnout occurs in this stage when body had used up all its adaptation energy which lead to the psychological manifestation of stress.

We know that schools cannot eliminate the stress of children but can do their role in helping the children manage their stress by handling it smoothly. Better understanding of stress lead to better management of stress. Schools can provide facilities for students to understand about their stress and to cope with their stress through different stress management interventions. For a school aged child stressors may include anxiety about school, conflicts with teachers, competition with peers or siblings, lack of parental interest, personal joy or loss, poor grades, fear of success or failure and fear of medical

visits (Kanner, Feldman, Weinberger & Ford, 1987, Lewis, Siegel & Lewis, 1984, Dickey & Henderson, 1989; Spirito, Stark, Grace & Stamoulis, 1991). All the situations that produce stress cannot be completely avoided, but it is possible to reduce the effect of such situation on the individual through proper informations and coping strategies. For this greater care should be taken from the parts of parents, and family. Beyond this schools too should render their help because schools are places that not only for providing basic skills of reading, writing and mathematics but which can also provide facilities for the better development of students. The selection and implementation of feasible and helpful stress reducing interventions need prior thinking and planning. There are various stress reducing interventions ranging from physical exercises, meditation, therapies and medications. Among them “Bibliotherapy is currently being used to help children who are experiencing a variety of emotional and developmental difficulties. These difficulties include controlling aggression, managing stress and initiating and maintaining social relationships. In addition all children can benefit from being taught a literature bibliotherapy lesson, because students are likely to encounter similar issues during their school years” (Jackson, 2006).

The idea that “art “can benefit the emotional well being of the observer, creator or reader has been around atleast since Aristotle Proposed the notion of emotional catharsis” (Pehrsson & McMillen, 2005).

Usually we feel that children are free and happy enjoying their life without any stress and burden of adult life, but reality reveals a contradiction. When we get into the life of a child, identifying ourselves as a child we can understand that children are going through an immense array of situations

which are very much stressful to them. “Today bibliotherapy is viewed as an emerging strategy that can be used not only for clinical problems but also as a technique for helping children handle developmental needs” (Pardek, 1986). Various studies conducted proved the effectiveness and importance of Bibliotherapy as an intervention for controlling and reducing the problems faced by children and adults (Briggs & Pehrsson, 2008; Harvey, 2010; Muto, Hayes & Jeffcoat, 2011; Okwilagive & Mubonyin, 2011). There are a large amount of studies proving the effectiveness of bibliotherapy. No study was conducted in Indian context to study about bibliotherapy and its effectiveness.

Considering bibliotherapy in schools, it is easy for teachers especially language teachers to identify the problems of students and select an appropriate literary material for bibliotherapy and this can be used with a single child, with a small group of children or with an entire class with minor variation in procedures. “Students while undergoing through a literature, identification of character in the story “may go beyond personal character to include others in the story and the child’s own life. Secondly a child who identifies with a fictional character may imitate that character- when at real, person in the child’s life do not provide appropriate models as fictional characters may. The third major advantage of reading as a form of intervention is that the child is in control. He can choose not to continue or to continue at a pace appropriate to his feelings” (Jackson, 2006).

A preliminary survey conducted among students and teachers revealed their preference for having stress reduction interventions in school. This study is an attempt to develop a more acceptable version of bibliotherapy that can

be easily used by teachers for the proper wellbeing of the students. In order to find out the effectiveness of bibliotherapy this was compared with another stress reduction intervention, progressive muscle relaxation strategy, which is an effective method for coping with stress. “Among the wide range of many non-conventional and sometimes doubtful treatments, relaxation based methods such as meditation, progressive muscle relaxation, applied relaxation, mindfulness and autogenic training have received the great scientific attention and validation” (Francesco, Mauro, Gianlucca & Enrico, 2009). Relaxation as proved to be a successful and well established method for reducing stress and physical ailments can be introduced in schools for the well being of children. Not being a complicated process requiring sophisticated apparatus, relaxation can be easily made use of in schools. According to Jacobson (1976) “to learn to pass from the state of tension that usually characterizes modern living into one of marked relaxation within a few minute or less; to repeat this again and again until relaxation becomes habitual is the aim of tension control”. Progressive Muscle Relaxation uses techniques of tensing and relaxing body muscles to attain a complete relaxation state. Progressive Muscle Relaxation based on Jacobson’s Method is easy to administer among students.

Progressive relaxation training is clearly an effective technique for reducing tension, anxiety and physiological arousal. A large amount of empirical work also supports the technique as an effective stress management and anxiety reduction procedure for non clinical group (Bernstein, Borkovec, & Hazlet-Stevens, 2000). “Relaxation training is effective in reducing anxiety

in any kind of participants, male or female, young or old, affected or not by physical or psychological disorder” (Francesco, Mauro, Gianlucca & Enrico, 2009). Relaxation may be seen as a behavioural state usually defined by the specific operations that are used. Implications for children are far reaching and include possibilities of enhancing application with intellectual, social and emotional development. Improvements in learning, health and general quality of life have been among the benefits of relaxation programmes. To attain the aim, present study started off with a detailed review of related studies and the present scenario of education system and the situation of the students.

Statement of the Problem

From various experiences and studies educationists understood that from the schools, children not only need academic support but psychosocial support also. As a result in schools there are counsellors to help children. But students as a whole cannot be provided such a support. Each and every student in a school needs some kind of help and support in one-way or another. Media reports often emphasize the need for giving support to children. Nowadays, children are not able to withstand any sort of problems in their life. They try to find a solution by putting an end to their life. The increase in number of suicides and suicidal attempts are clear evidence that children need special care and support to overcome their problems. Some problems are manifested as stress symptoms. Compared to counsellors, teachers get more opportunities to mingle with children, so teachers can play major role in helping the children to cope with such stress creating situations. Comparing other methods of stress reducing interventions

Bibliotherapy is an easy method which is feasible for teachers. It can be readily given to students in a classroom situation. Recently cooperate institutions also are practicing Bibliotherapy for improving the psychosocial adjustments of the employees. Various research evidences are there for proving the effectiveness of Bibliotherapy and Progressive Muscle Relaxation in reducing stress. Studies comparing bibliotherapy and Progressive Muscle Relaxation are very rare. Whether the student's Academic Stress will be reduced after giving such intervention was a query to be answered. Hence the researcher attempts to investigate the effectiveness of bibliotherapy and Progressive Muscle Relaxation in reducing the Academic Stress of secondary school students. The study is thereby entitled as **“EFFECTIVENESS OF BIBLIOTHERAPY AND PROGRESSIVE MUSCLE RELAXATION ON ACADEMIC STRESS REDUCTION AMONG SECONDARY SCHOOL STUDENTS OF KERALA”**

Definition of Key Terms

Effectiveness

“Effectiveness is the ability to achieve desired results with economy of time and efforts in relation to the amount of work accomplished” (Good, 1959).

In this study effectiveness implies the significant difference in the mean scores of Academic Stress of students before and after giving Bibliotherapy, Progressive Muscle Relaxation and those who had given no interventions.

Bibliotherapy

“Bibliotherapy is a programme of activity based on the interactive processes of media and the people who experience it. Print or non-print material, either imaginative or informational is experienced and discussed with the aid of a facilitator” (Rubin, 1978).

In this study bibliotherapy refers to the use of both imaginative, and informative and didactic literature with groups of normal individuals designed and led by teacher to maintain mental health and promote normal development and thereby reducing academic stress.

Progressive Muscle Relaxation

Relaxation of muscle fibres, that is complete absence of all contractions was seen as direct physiological opposite of tension. By systematically tensing, and releasing dozens of muscle groups and by learning to attend to and discriminate between the resulting sensations of tension and relaxation can almost completely eliminate muscle contraction and experience a feeling of deep relaxation (Jacobson, 1934).

In this study Progressive Muscle Relaxation can be explained as systematic tensing and releasing of muscles and by learning to attend to and discriminate between the resulting sensation of tension and relaxation thereby eliminating muscle contraction to experience deep relaxation.

Academic Stress

According to Selye's (1936) and Lazarus (1987) concept of stress, Academic Stress can be defined as a special stimulus-response transaction related to the academics which can be evaluated as potentially harmful, uncontrollable or exceeding one's resources for coping.

In this study Academic Stress can be defined as the stress experienced by secondary school students relating to their academics, which can be measured by Academic Stress Inventory including personal stressors, school stressors, peer stressors and parental stressors.

Variables

A preliminary survey among the secondary school teachers and students revealed that though there are physical education training, work experience classes, yoga and other extracurricular activities, there exists no systematic methods to help the children cope with their Academic Stress. So the researcher used Bibliotherapy and Progressive Muscle Relaxation to help the children cope with their Academic Stress.

Independent Variables

Independent variable is the intervention programme for stress reduction. The two intervention programmes Bibliotherapy and Progressive Muscle Relaxation are considered as the independent variables.

Dependent Variable

Academic Stress is taken as dependent variable of the study.

Objectives of the Study

The objectives of the study are:

1. To check the views of secondary school teachers and students on giving certain programmes to reduce Academic Stress.
2. To identify the existing level of Academic Stress of secondary school students for total sample and subsamples based on gender.
3. To find out the effectiveness of Bibliotherapy and Progressive Muscle Relaxation Exercise on Academic Stress of secondary school students for total sample and subsamples based on gender.
4. To compare the effectiveness of Bibliotherapy and Progressive Muscle Relaxation Exercise on Academic Stress of secondary students for total sample and subsamples based on gender.
5. To compare the adjusted mean scores of dependent variable between Experimental Groups and Control Group by considering pretest scores as covariate.

Hypotheses of the Study

The hypotheses set for the study are:

1. There is no significant difference in the pretest scores of Academic Stress of Secondary school students for Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls

2. There is significant difference in the mean posttest scores of Academic Stress of Secondary school students for Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls
3. There is no significant difference in the mean pretest scores of Academic Stress of Secondary school students for Bibliotherapy Group and Progressive Muscle Relaxation Group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls
4. There is no significant difference in the mean pretest scores of Academic Stress of Secondary school students for Bibliotherapy Group and Control Group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls
5. There is no significant difference in the mean pretest scores of Academic Stress of Secondary school students for Progressive Muscle Relaxation Group and Control Group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls

6. There is significant difference in the mean pretest and posttest scores of Academic Stress of Secondary school students for Bibliotherapy Group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls
7. There is significant difference in the mean pretest and posttest scores of Academic Stress of Secondary school students for Progressive Muscle Relaxation Group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls
8. There is no significant difference in the mean pretest and posttest scores of Academic Stress of Secondary school students for Control group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls
9. There is significant difference in the mean posttest scores of Academic Stress of Secondary school students between Bibliotherapy Group and Progressive Muscle Relaxation Group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls

10. There is significant difference in the mean posttest scores of Academic Stress of Secondary school students between Bibliotherapy Group and Control Group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls
11. There is significant difference in the mean posttest scores of Academic Stress of Secondary school students between Progressive Muscle Relaxation Group and Control Group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls
12. There is significant difference in the mean gain scores of Academic Stress of Secondary school students between Bibliotherapy Group and Progressive Muscle Relaxation Group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls
13. There is significant difference in the mean gain scores of Academic Stress of Secondary school students between Bibliotherapy Group and Control group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls

14. There is significant difference in the mean gain scores of Academic Stress of Secondary school students between Progressive Muscle Relaxation Group and Control Group for
- a) Total sample
 - b) Subsample boys
 - c) Subsample girls
15. There is significant difference in the adjusted mean scores of Academic Stress of Secondary school students between Bibliotherapy Group, Progressive Muscle Relaxation Group and Control group by considering pretest scores as co-variate.

Methodology

Methodology of the present study is described under the following headings.

Phase I- Preliminary Survey

Design

A survey was conducted among secondary school teachers and students to understand about the present situations and the need for interventions regarding stress management.

Sample

Investigator selected 50 secondary school teachers and 400 secondary school students randomly from different schools of Kozhikode district randomly selected for the study.

Tools used for the study

1. Questionnaire on Views of Students on Stress Reduction Programme
(Meera & Praseeda, 2011)
2. Questionnaire on Views of Teachers on Stress Reduction Programme
(Meera & Praseeda, 2011)

Phase II- Experimental Phase

Design

G_1	O_1	X_1	O_4
G_2	O_2	X_2	O_5
G_3	O_3	--	O_6

Where G_1 – Bibliotherapy Group

G_2 – Progressive Muscle Relaxation Group

G_3 – Control Group

O_1 – Pretest for Bibliotherapy Group

O_2 – Pretest for Progressive Muscle Relaxation Group

O_3 – Pretest for Control group

O_4 – Posttest for Bibliotherapy Group

O_5 – Posttest for Progressive Muscle Relaxation Group

O_6 – Posttest for Control Group

X_1 – Bibliotherapy

X_2 – Progressive Muscle Relaxation

Pretest posttest non-equivalent group design was employed. Bibliotherapy and Progressive Muscle Relaxation were given to two experimental groups and no such intervention was given to control group.

Sample

Secondary school students as sample for the present study was selected from a school randomly selected from the different schools selected for survey. Three classes were selected and randomly assigned as Bibliotherapy Group and Progressive Muscle Relaxation Group and Control group. Each group consisted of 30 students.

Table 1

Distribution of the Samples Selected for the Study

Bibliotherapy Group			Progressive Muscle Relaxation Group			Control Group		
Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
15	15	30	15	15	30	15	15	30

Tools

Investigator developed and used the following tools.

1. Academic Stress Inventory (Meera & Praseeda, 2012)
2. Bibliotherapy Lesson Frames (Meera & Praseeda, 2012)
3. Bibliotherapy Lesson Frame Evaluation Proforma (Meera & Praseeda, 2012)
4. Progressive Muscle Relaxation Technique (Based on Jacobson's Progressive Muscle Relaxation Techniques)

Statistical Techniques Used

1. Percentage Analysis
2. One-way ANOVA
3. Test of Significance of Difference between Means
4. ANCOVA

Scope of the Study

The main thrust of the study is the effectiveness of Bibliotherapy and Progressive Muscle Relaxation which the investigator administered for its effectiveness. In various nations the intervention appeared to be an innovative one which can be effectively applicable in classroom, especially by language teachers. Preliminary survey revealed that presently in schools no such interventions are given to students to help them cope with their stress. So such a study is the need of the hour. Teachers can help the students in proper ways by understanding their problems and effectively using Bibliotherapy. Progressive Muscle Relaxation is also an established method for stress reduction which can be easily carried out by teachers.

The dependent variable Academic Stress involved in the experimentation phase is very relevant one which is the result of various other stressors. So Bibliotherapy is focused on different problems of the students which add to the Academic Stress of the students. Bibliotherapy is such an easy method that can be implemented in intact classroom without any prior environmental settings. Teachers can make use of this strategy during teaching learning process. Progressive Muscle Relaxation another intervention for reducing stress can also be administered in schools by providing a suitable environment for effectively giving Progressive Muscle Relaxation Technique.

The review of related literature revealed the need for such a study. In this highly competitive life situation, children need utmost care and support, lack of which may lead them to the extent of thinking about killing

themselves. Along with giving content knowledge schools should also take care in helping the children to acquire their necessary capabilities to cope with their problems and lead a successful life. The therapeutic effect of literature for life enhancement is a widespread factor and instinctive in human nature. This study can help curriculum planners to include such activities for the well being of students for a bright stress free future.

Moreover in earlier days children spent time with their grandparents and parents who can tell them moral stories, which mould the character of children. Today we lack such an interaction to enforce the affective domain of our children. Nowadays children are techno fed, which supplied immensely for the cognitive domain. This creates emotional discomfort and disability which manifest as lack of coping with life situations that create stress. So we have to think seriously about such facts and find measures to help the children. It is hoped that the curriculum framers and policy makers can incorporate these strategies while implementing new curriculum.

Limitations

The experimentation phase of the study selected only IX standard students from one school only to represent the general population. The investigator hopes that the study can be generalized with a large sample from different categories.

The number of variables selected as dependent variable include only Academic Stress and all dimension included in Academic Stress are not considered. The practical reasons and more importance given to planning and

experimentation of Bibliotherapy Module restricted from selecting and giving more importance to stress as a whole.

The group involved in the experimentation could have been matched prior to the intervention with regard to relevant variables. Matching the groups may cut down the sample size which creates further disadvantage in analysis of data.

Organization of Report

The report of the study is organized in five chapters. The details included in each chapter are as follows.

Chapter I Gives a brief introduction of the problem, need and significance of the study, statement of the problem, definition of key terms used in the title, variables of the study, objectives set for the study and the hypotheses formulated, a brief description of methodology, scope and limitations of the study.

Chapter II Includes the theoretical overview of the variables in the present study and the different studies reviewed and observations of other researchers related to the variables.

Chapter III Presents the methodology of the study in detail. It comprises detailed description of design, sample, methods and materials of data collection, data collection procedure and statistical techniques used for analysis of collected data.

Chapter V Explains with the statistical analysis of the data, interpretations and discussions of results.

Chapter V Consists of summary of the study, major findings, tenability of hypotheses and conclusion derived. It also presents a detailed description of educational implications of the study and suggestions for further research.

Review of Related Literature

- *Theoretical Framework of the Variables*
- *Studies on Academic Stress*
- *Studies on Bibliotherapy*
- *Studies on Muscle Relaxation*

REVIEW OF RELATED LITERATURE

In this chapter the investigator made an attempt to explore the theoretical aspects of Stress, Academic Stress, Bibliotherapy and Progressive Muscle Relaxation for the study. Investigator scrutinized various studies conducted in the educational settings related with these variables to have a comprehensive idea about the relevance of these variables in the present educational arena. Hence this chapter comprised of two sections, the theoretical background of the variables and up-to-date studies done by other researchers.

Theoretical Framework of the Variables

The theoretical aspects of Stress, Academic Stress, Bibliotherapy and Progressive Muscle Relaxation are presented in this section.

Stress

The concept of stress was first introduced in Life Science by Hans Selye in 1936. The word 'stress' was originally derived from Latin word 'Stringere' a word need to describe hardships. According to Selye (1956) "any external event or any internal drive which threatens to upset the organismic equilibrium is stress". Weiten and Llyod (2003) defined stress as "any circumstances that threaten or are perceived to threaten one's well being and thereby tax one's coping abilities".

Transactional theory of stress focus on the cognitive and affective aspects of an individual's interaction with their environment and the behavioural coping styles they may adopt or lack. One of the most well

known theories is that of Richard Lazarus, who defined stress as resulting from an imbalance between demands and resources. Lazarus asserts that a person evaluates a particular incident, demand or an ongoing situation. This initial evaluation is primary appraisal, this involves continuous monitoring of environment and analysis of whether a problem exists or not. If a problem is recognized the stress response may be activated and unpleasant feelings and emotions may be experienced. In the next stage, secondary appraisal follows when the person evaluate his or her resources and options. Once recognized and if the demands are greater than the resources then only does stress occur. If the resources are greater than the demands the person may view the situation as a challenge and not as the stress scenario. If the person is too inexperienced to recognize that a particular problem exists it would not be considered as a stress scenario. It is the subjective and not objective assessment of any scenario that may trigger the stress response (Lazarus & Folkman, 1984).

According to Selye (1976) “response has universality; that is all stimuli above perception threshold can trigger similar psychological stress responses across different species and across situations”. Sarafino (2002) also gave description about this universal cascade of events, which includes:

1. “Environmental stimuli that are judged to be of subjective importance trigger cortical activation that sends chemical messages to the hypothalamus, where
2. They stimulate the production of corticotrophic releasing factor (CRF) and other chemical messengers that, in turn, activate two distinct tracks of bodily reactions.

3. In the first track (also commonly referred to as the sympathetic adrenal medullary axis), these messengers feel information forward to the pituitary gland which
4. Changes the chemical structure of the messengers and release adreno corticotropic hormone ACTH into the blood stream.
5. When ACTH reaches the adrenal glands, it initiates the production of cortisol, which in turn, increase metabolic rate. Cortisol exhibits the function of phagocytes and lymphocytes in the immune systems (i.e., it serve as a messenger for needed adaptations of the immune system).
6. On the second track (commonly referred to as the hypothalamus pituitary axis), chemical messengers leave the hypothalamus and trigger electrochemical changes that advance as signals down the brain stem and the spinal cord toward the adrenal glands.
7. At the level of the adrenal gland this activation leads to release of epinephrine, which supplies extra glucose to muscles and brain. Epinephrine also increases suppressor T-cells and decreases helper T-cells, thus revealing a second connective pathway of stress reactivity to immune function.
8. The adrenal glands also release norepinephrine, which then speeds up heart rate and increase cardiac output and blood pressure.
9. Ultimately these activities and their results are fed back to the hypothalamus, which serves as the “master controller” of this whole process”.

This cascade of physiological response to challenge involve intricate interplay and feedback loops of biochemical and electro physiological processes that regulate autonomic nervous, endocrine and immune system

activity. Within the autonomic nervous system, activation of the sympathetic branch (viz., release of ACTH) prepares organs for the fight-or-flight response by dialating pupils and brochi, increasing rate and force of the hearts pumping action, construction of blood vessels, secretion of epinephrine and decreasing peristalsis. An important physiological control function is assigned to the parasympathetic branch of the autonomous nervous system that opposes these actions and is functionally designed to facilitate recovery (Linden, 2005).

Always more focus was given on negative aspects of stress by researchers. Researcher shows that positive emotion also occurs during periods of stress. Selye (1974) divided stress into eustress and distress. Where stress enhances function, it may be considered eustress and persistent stress that is not resolved through coping or adaptation, deemed distress. As explained by Nixon, 1979 (as cited in Maymand, Shakhsian & Hosseiny, 2012) stress can manage and facilitate good performance to a level. This is illustrated in figure 1.

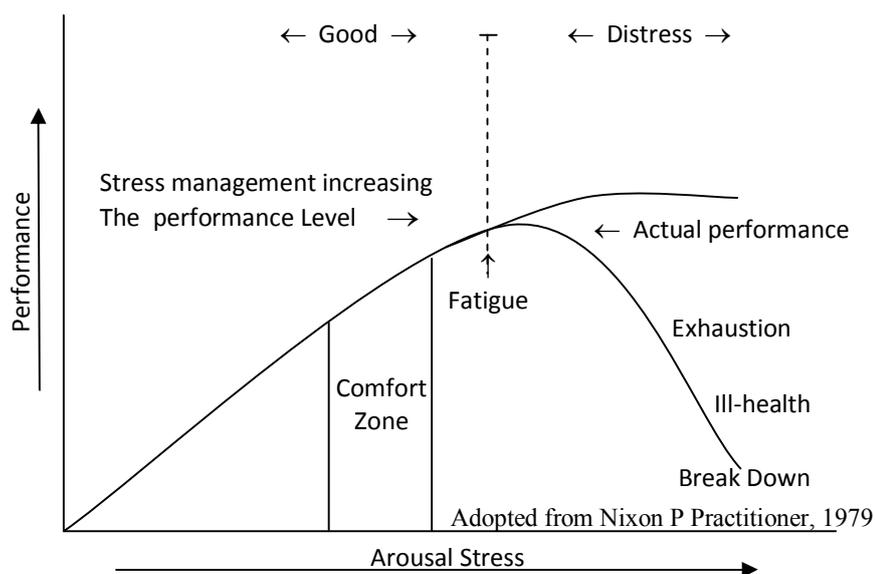


Figure 1. Stress response curve

As shown by the graph the performance level increases when stress management is effective. Stressors such as pressure and demands can facilitate better stress response and then higher levels of performance. The curve shows that as the level of stress increases the performance level also increases to the point of eustress or healthy stress. Near the point of fatigue an identified area called comfort zone indicates the ranges of stress level that can absolutely manage and facilitate good performance level.

People struggle with various stressors every day, most of them come and go without leaving any enduring imprint. Human response to stress is complex and multidimensional. Although stress can have beneficial effects, when stress is severe or demands pick up, stress may have long lasting effects. These effects are often called ‘adaptational outcomes’. They are relatively durable consequences of exposure to stress (Weiten & Lloyd, 2003). Most of the theories of stress assume that stressful events have a ‘cumulative’ impact (Seta, Seta & Wang, 1991).

Academic Stress

Performing the role as a student is highly stressful. There are various factors that induce stress for the students. “Academic problems are one of the most common reported sources of stress for adolescents as they spend considerable amounts of time within school environment” (Tan & Yates, 2011).

Academic Stress is the product of a combination of academic related demands that exceeds the adaptive resources available to an individual. It is

widely acknowledged that a student's academic achievement and academic ability depend on both internal and external factors such as proper study habits, intelligence, educational aspiration of self and parents, medium of instruction and so on. If situation are not conducive for learning, they may lead to academic stress (Kadapatti and Vijayalaxmi, 2012). Poor performance of students is a result of various causes and one among which is Academic Stress. Academic Stress is the result of various other sources which should be identified and remedied to develop a healthy internal and external environment for the student for better performance. "The self identity stress, interpersonal stress, future development stress and academic stress can jointly predict student academic stress" (Lin & Huang, 2014).

According to Frydenberg (1997) "Adolescence is that period between childhood and adulthood when the individual is confronted by a series of developmental hurdles and challenges. First there are normative tasks such as development of identity, achieving independence from the family while staying connected and fitting into a peer group. Second there are transitions from childhood to adulthood which are characterized by physiological changes in the body and by cognitive development". Considering the academic arena there are several stressors that create stress for the adolescent students. From the various investigations conducted it has been found that various problems beyond academics create academic stress for student which lead to poor academic achievement and related affects which when cumulated leads to psychosomatic problems.

Suldo, Shaanessy and Hardesty (2008) suggest that “psychological models focus on the concept of perceived stress, which refers to interactions between an environmental precipitant (external stress); the physiological reactions of the body (distress); and a person’s cognitive, emotional and behavioural response to this interaction. Stress is perceived when an external event causes aversive physiological and cognitive distress in an individual that exceeds his or her emotional and behavioural repertoire designed to negate the harmful effects of external stressors”.

Environmental or contextual locations of youth can be classified under four major spheres of influences; the school, the home, the peer group and the broader community with its specific characteristics. The school environment exerts an important influence, where the characteristic of school type, location, organization and curriculum offered are important considerations. The home environment and family relationships also exert an influence. The impact of parents, the number and characteristics of siblings and general home environment all play their part in producing stress. The peer group made up of friends and comrades from the school or community setting also create stress for adolescents (Frydenberg, 1997).

The investigator went through different situations which act as stressors for the adolescent students and from them investigator identified and selected certain stressors related to personal, school, familial and peer relations which add to students stress related to academics.

Stress creating personal factors.

How a person perceives the stressors and react to it decides whether the stressor create stress for the individual. Therefore there can be numerous

factors that create stress for the individual. In this study, the major factors identified by the investigator are (i) lack of self efficacy, (ii) lack of personality hardiness, (iii) lack of mastery motive and (iv) lack of optimism.

Lack of self-efficacy.

General self-efficacy is one's competence to cope with a broad range of stressful or challenging demands (Luszczynska, Scholz & Schwarzer, 2005). One of the theoretical constructs commonly associated with efficacy approaches is that of self-efficacy, a term developed and reported by Albert Bandura (1997, 1977 & 1986). The self efficacy approach highlights way in which individuals perceive their capacities rather than the recording of actual behaviour. It focuses on beliefs that an individual holds about his/her or capacity to deal effectively with a particular situational demand. Self efficacy is the hallmark of people who judge themselves as able to handle situations that would otherwise be intimidating or overwhelming. Such people believe they have an ability to control anxiety and exercise control over potential threat.

Developing self-efficacy or belief in one's own abilities to deal with stress is of considerable value (Wiedenfeld, Bandura, Levine, O-Leary, Brown, & Roska, 1990). When individual feels that they are gaining self-efficacy over a stressor the effect of stressor on the immune system decreases. Thus individuals feelings that they could exercise self-efficacy and control a stressor reduce the negative effects of stress on the immune system. They also supported the protective function of Self-efficacy in reducing the body's response to stress and also that self efficacy was found to moderate the relationship between stress and immune system response. They also suggest

that individual's perceptions of their self-efficacy moderate their immunological responses. In particular, the effect of stress on immune system decreases when individuals feel that they are gaining self efficacy over a stressor, thus self-efficacy appearing to be a protective function in individual's response to stress (Roddenberry & Renk, 2010).

Lack of personality hardiness.

Hardness is a personality style associated with superior resistance to stress. Persons with hardiness have a sense of personal commitment to self, work, family and other stabilizing values. They feel that they have control over their lives and their work. Such persons have a tendency to see life as a series of challenges rather than as a series of threats or problems (Coon, 2004). Research studies with a variety of population had demonstrated that hardiness appears to protect against stress and predict healthy functioning and hardiness describes a generalized style of functioning characterized by a strong commitment, control and challenge (Bartone, 2000).

According to Hystad, Eid, Laberg, Johnsen and Bartone (2009), the critical assumption of hardiness theory of stress resiliency is that the hardy personality type is not as easily threatened or disrupted by ordinary stressful aspects of human condition. From a theoretical point of view, a hardy undergraduate is expected to react to the new settings with a sense of genuine interest and purpose, appraise the academic requirements as challenging obstacles that can be overcome with dedication and committed endeavor, and apply the necessary amount of effort to succeed and adjust to the academic environment.

Lack of achievement motivation.

“Achievement motivation is a person’s tendency to strive for successful performance, to evaluate her performance against standards of excellence, and to feel pleasure at having performed successfully” (Hetherington & Parke, 2003). Motivational research has proposed that achievement has important role in subjective well being (Miller, Connolly & Maguire, 2013). When the personal goal orientation are congruent with motive disposition, they are associated with high emotional well being and vice versa. Students who have mastery-orientation are interested in self-improvement and try to compare their current level of achievement to their own previous achievement. Studies shows that motivation not only influence the effectiveness of learning, but that being intrinsically motivated is also associated with better well being and an increased amount of satisfaction (Ryan & Deci, 2000). Variations in achievement motivation and performance are often related to a child’s emotion and opinion of himself as a person and lowness in short to self esteem. Researchers identified two categories of achievement motivation, mastery oriented and helplessness. Children with mastery oriented achievement motivation maintained or improved their level of performance despite of their failure or some problem. They expressed neutral or even positive emotions at failure (Diener & Dweck, 1978).

Lack of optimism.

Optimism is essentially a habit of mind about remaining enthusiastic, hopeful and confident (Frydenberg, 1997).It s the word derived from Latin word optimum. Assessment of incoming freshmen on a range of personality

factors like optimism, self control, locus of control etc revealed that freshmen who scored more on optimism before entering college were reported to have lower levels of psychological distress. Over time it was found that more optimistic students were found to be less stressed, less lonely and less depressed than their more pessimistic peers. This shows the strong link between psychological well-being and optimism (Scheier & Carres, 1992). Optimism is characterized by positive expectation of the future and has been linked to the process of coping with stress. Optimism has a profound impact on one's expectancies and therefore can serve as a useful predictor of behaviour. It is "found that optimism serves as a moderator between stress and psychological well being and also has a direct impact on psychological adjustment" (Krypel and King, 2010). According to Chang, Rand and Strunk (2000), optimists may be less likely to experience emotional exhaustion and physical symptoms related to burnout.

Stress creating familial factors.

Several studies investigated the relationship between an adolescent's coping strategies and their experience of life in the family. The way in which the family is perceived by adolescent may not be a view completely shared by other members of the family (Frydenberg, 1997). Parental support, interaction between parents and children, study facilities at home and parental involvement in studies add to students stress. The socio economic status of the family is another important factor that creates stress for students. Family is an interpersonal social system held together by strong bonds of attachment, affection, caring and yet exercised control, approval and discipline on each other (Harvey & Byrd, 2000). Authoritative parents who are warm, involved

and responsive shows pleasure and support of child's constructive behaviour. They consider child's wishes and solicit their opinion and offers alternatives. Such parent sets standards, communicates with them clearly and enforces them firmly. They do not yield to child's coercion, shows displeasure at bad behaviour and confronts disobedient child. Such children's with authoritative parents become energetic and friendly, cheerful self controlled and self reliant, purposive and achievement oriented. They show interest and curiosity in novel situations. They show high energy level, maintain friendly relations with peers, cooperates with adults and is tractable. Such children cope well with stress (Hetherington & Park 2003). There are different family situations which create stress for students which lead to academic stress. In this study lack of parental support, lack of interaction with parents and children, lack of study facilities at home and lack of parental involvement in studies are considered.

Lack of parental support.

Lack of parental support in the studies of children affects the children and causes stress for them which leads to Academic Stress. According to Gonzales-Pienda (2002) "parental support criteria were developed according to six dimensions namely, Parents expectations about their children's achievement, Parents expectations about their children's capacity to achieve important goals, Parents behaviours that reveal interest in their children's school work, Parents degree of satisfaction or dissatisfaction with their children's level of school achievement, Parents level and type of help provided when their children do homework and Parents reinforcement behaviour of their children's achievement".

According to Chohan and Khan (2010), “the pivotal role of parents till continues as it has been recognized by the teachers and parents themselves that they are essential for complete development of the personality and career for their children. The children also seek emotional support from parents when they face some academic problems at school. Research shows that students develop sense of responsibility and better performance as they grow up. The extent and effectiveness of parental support depends on variety of reasons such as ethnicity, family income, home environment and their awareness about the importance of education”.

Parental emotional support was a protective factor that contributed to better mental health among children and important for academic achievement (Leung, Yeung & Wong, 2010; Ong, Phinney & Dennis, 2006).

Lack of interaction with parents and children.

Regarding the interaction or communication between parents and children it is striking that even limited pleasant interaction can provide a basis for development of positive self regard and helps in the development of vulnerability of resilience.

According to Frydenberg (1997) ideal family is one where

- Communication is positive and effective
- Adolescents receive strong support from parents
- Adolescents are free to express feelings and opinions
- Issues are discussed and conflicts raised
- Family plans are negotiated.

- Cooperation and trust exist between parents and adolescents.
- Parents can express concerns about likely consequences.

Problematic parent-adolescent communication is consistently associated with increase in a wide range of risky behaviour (Wang, Stanton, Li, Cottrell, Deveaux, & Kaljee, 2013).

Lack of study facilities at home.

Keeping away the emotional environment provided at the home, the physical as well as materialistic facilities provided for the children helps them in their studies. Lack of physical settings creates problems for children. Phillips (2008) suggested that young people are more aggressive due to disorderly homes, catastrophic breakdown of parenting, emotional choices and absence of love and care in their disorderly homes increasingly resulting in aggression as their instinctive response to the slightest setback. Students do not have appropriate role models to support them. The disintegration of nuclear and extended families had led to formally effective support mechanism disappearing (Dave, 2009). Moreover attitude of parents and priority they give to other things such as TV, radio and other entertainments also adds to the home environment which induce stress in children.

Lack of parental involvement in studies.

Parental involvement takes many forms including good parenting at home, including the provision of a secure and stable environment, intellectual stimulation, parent child discussion, good models of constructive social and educational values and high aspiration relating to personal fulfillment and good citizenship; contact with schools to share information; participation in

school events; participation in the work of the school and participation in school governance. “The most important finding is that parental involvement in the form of ‘at-home good parenting’ has a significant positive effect on children’s achievement and adjustment even after all other factors shaping attainment have been taken out of the equation” (Desforger & Abouchaar, 2003). The importance of parental involvement is reinforced by the considerable amount of research evidence which is now available to support the contention that improving parental involvement increases the effectiveness of education that children receive and facilitates children’s development (Horney, 2000). When socio-economic status is controlled for, parental involvement is the only variable with an appreciable positive impact on high school student’s educational attainment (Wade, 2004)

Stress creating factors at school.

Human relationships are the heart of schooling. The interactions that take place between students and teachers and among students are more central to student success than any method of teaching literacy or science, or mathematics. Powerful and intimate relationship between teacher and student can keep away almost all the factors that affect the students to some extent. Resilient children usually have four attributes in common, social competence, problem solving skills, autonomy and a sense of purpose and future. A school that strives to be a resilient learning community, builds its culture, designs curriculum, instruction and assessment and designs roles and responsibilities that foster these four attributes (Krovetz, 2008). Major school factors considered for the present study are lack of good teacher behavior, lack of

student friendly teaching learning process, lack of proper physical environment of school and undesirable school policies.

Lack of good teacher behaviour.

Teacher's Verbal Behaviour in the classroom determine socio-emotional climate or general tone of the classroom. This climate has direct effects on the attitudes, belief system, perception and classroom behaviour of the pupils. Teachers whose behaviour are liked by the pupil are considered to be more effective, as such teachers prove to be more successful in bringing about more desirable change and modification and improvement in pupil behaviour and academic achievement (Malik, 1991). Personality, character, attitudes and observable actions are all factors that determine the effectiveness of teacher-student relationships. Students usually try to live up with teacher's expectations. If a teacher expects the worst of his students, they seldom disappoint him. On the other hand if he believes in them and show confidence in their ability to become good citizens students usually justify that faith (Alcorn, Kinder & Schunert, 1970). In Sharma (1997) it is said that teachers are urged to run structured, orderly, teacher-directed classrooms, with clear academic focus, frequent monitoring, and supervision while maintaining a warm encouraging climate.

Lack of student friendly teaching learning process.

Teaching leads to a variety of learning related reactions on the part of the student and what the student does is actually more important in determining what is learned than what the teacher does (Sharma, 1997). Another important

outcome is whether the student feels that the learning experience was positive and fulfilling or not. Formal teaching learning program sometimes fails to meet the needs of many students who represent such diversity in interest, abilities and backgrounds. Where there is no immediate relief from the dissatisfaction of students with the curriculum, the teacher will need to exercise the utmost imagination and ingenuity to interest student in the work to be done. Not only curriculum but the methods used by the teachers are also important. Monotonous routines and inappropriate instructional procedures lead to behaviour problems (Alcorn, Kinder & Schunert, 1970). Effective teachers bring about intended learning outcomes. They manage students behaviour in the classroom, organize instructions, assess students learning and adjust learning activities in response to students needs and abilities (Ryan, Cooper & Tauer, 2008).

Lack of proper physical environment of school.

‘When we examine the furniture, colour, lighting density, temperature and attractiveness and consider how these aspects of the physical environment affect, how we feel and subsequently how we act and interpret the actions of others’, Basset and Smythe (1979) opines that the use of coordinated colour selection in schools can have positive effects on students achievement and attitudes. Overcrowding for brief periods has negative effects on mood and satisfaction, excessive heat has negative effect on mood and on liking for the environment and tasks, unattractive surroundings have negative effects on mood as well as on learning. The environment can have a significant influence on learning, moods and interpersonal communication. The ultimate effect of

the environment depends on how people adapt to it. It is important that a healthy beautiful and refreshing environment which sooth the eyes and refresh the soul and where the intellectual forces of teachers and pupils functions at their best is required. So we should realize that the students spend a good deal of their time in school premises. Dingy, crowded and unattractive maintenance create confusion and disorder (Aggarwal, 1972). Maintenance of proper temperature, ventilation and lighting in the classroom is important for good physical and mental health of students.

Undesirable school policies.

For any individual child the curriculum of a school actually includes every experience, which he has in the classroom, in the corridors and special room, and on play ground. Person to person relationship maintained between teachers and pupils in democratically administered schools are more wholesome, more sympathetic and based on more often on insights into children's needs (Shukla, 2003). Power discrepancies between teachers and students is identified as a potential source of conflict. Classroom rules should be precise and consistent. It is probably best not to have unnecessary rules. The fewer there are the more likely they are to be observed. What rules there are need to be understood by pupils and if possible, endorsed by them too (Sharma, 1997). Over disciplinary actions contribute to truancy, defiance and tense classroom atmosphere. At the same time, well behaved children and adolescents who are given leeway in making their own decision at school experience strong efficacy and this supports academic success (Deci & Ryan, 2000). Rules and policies are explicit statements to students about what

behaviour is acceptable and desirable. Effective rules are essential to maintain a safe orderly and fair environment, such an environment can only promote good mental functioning for students without any stress while it will also lead to academic achievement (Ryan, Cooper & Tauer, 2008).

Peer relations as stressors.

Relationships are of vital importance to teenagers life. The esteem of friends and support gained from a stable friendship group is central to most young peoples feelings of happiness and well being at a time when they are acutely aware of changing body image and establishing their identity in terms of personal opinions and beliefs. In their desire to be accepted as a part of an 'in' group, young people can be vulnerable to peer stress (Harries, 2006).

The global spread of adolescent culture could have resulted in a globalization of perceived stress in close relationship with parents and peer (Schiegel, 2001). The function and significance of relationships with friends also change and peer groups assumes an important role in the lives of adolescents (Rubin, Bukowski, & Parker, 1998).

Functions, relationships with peers and friends also create a potential source of stress. One major concern of adolescents is being rejected by their peers, which is reported to be half the source of major stress related to peers (Bowker, Kulcowski, Hymel & Sippola, 2000). Within the peer group the child has an equal chance of communication because the group has no basis for existence except sociability. In terms of influence it is within this group that the child often find person he can imitate and identify with; they do much

to shape his personality development. Success, failure or simply relationships found in the school setting all have an impact on personality formation (Glimer, 1973). The impact of peer group is significant in determining adolescent stress. Early adolescence is said to be vulnerable to exclusion and based on cliquishness and social prejudice. There is disillusionment when teenagers discover that new fixed objectives of their affects turn out to be less perfect than imagined. Connell and Wellborn (1991) posited that ‘humans have fundamental needs for structure, autonomy and relatedness, and that the extent to which they can fulfill these needs within a certain context will produce their engagement in that context, and ultimately, their performance’. Applied to educational contexts, the model states that interpersonal relations within school context provide students to a varying degree with structure, autonomy support and relatedness. These self system processes are then hypothesized to catalyze engagement versus disaffection towards school activities, which are considered a primary motivational influence on student’s academic performance. According to Connell (1990) “need for relatedness is the need to feel securely connected to the social surround and ready to experience oneself as worthy and capable of love and respect”. There are several peer experiences or circumstances in the peer context that can be considered to threaten affiliation or status related goals, such as peer rejection, lack of support and lack of friends. Another chronic situations is “victimization that is, being repeatedly exposed to harassment and humiliation by peers” (Salmivalli & Isaacs, 2005). “Experience of victimization have not only been considered as correlates of peer stress but as an indicator of stress in peer context” (Rose & Rudolph, 2006).

According to Parker, Rubin, Price and DeRosier, (1995) the quality of relationships between any two people in any culture determines and is determined by emotional factors. Attraction, rejection, attachment, conflicts, trust, jealousy and intimacy all reflect emotional dimensions of relationships. Friendships and peer interactions require emotional skills and also contribute to children's general social and emotional adjustment. One of the prominent attribute of adolescence is peer pressure which is the "pressure to think or behave along certain peer- prescribed guidelines. Peer group relations form an integral component of adolescent socialization and facilitate individual development of a sense of identity" (Erickson, 1968). The central feature of most notions of peer pressure is that individuals are motivated to act and think in certain ways because they have been waged, encouraged or pressured by a peer to do so (Santor, Messervey, & Kusumakar, 2000). "Increased risk for interpersonal difficulties, peer victimization and stressful events involving close friendships and romantic relationships have been found to be major forms of peer stress" (Rose & Rudolph, 2006).

Peer groups, though commonly referred to as a negative influence in adolescence, are actually an essential proving ground for adolescent relationships and behaviour which leads to lack of problem behaviour (Padilla-Walker & Bean, 2009). The need to be liked, to be accepted, and to belong are universal feelings but perhaps at no time more emphatically felt than at adolescence. This is true because during this period the adolescent is undergoing many new and varied experiences evolving the self accept, physiological and physical changes, attempts to resolve the revived Oedipal conflict, making a heterosexual adjustment and choosing a career. With such

burdens, it is small wonder that the adolescent seeks his fellows out with such intensity of feeling. The need to succeed in these developmental tasks is primary and since, generally, he cannot relate to or communicate with his parents he finds refuge with his own age. The alienation from parental control generally compels the adolescent to externalize his conflicts and to control his behaviour along standards determined by his group. Thus, for a time, the group criteria may dominate the adolescent's attitude (Keill, 1964). Social relationships at school are sources of stress for many students. Stress can come from competition among students, concerns about not having enough friends, or not being in the same class as friends (Peece, 2008; Scott, 2008; Sedere, 2010). Some students experience the stress of victimization at school when they are teased intimidated, or bullied by other students (Killby, 2009, Scott, 2008).

Symptoms of stress.

Stress usually manifest cognitive, behavioural and physical symptoms.

Cognitive distress symptoms.

Stressful situation sometimes produce

- Lack of concentration
- Poor memory
- Fuzzy or illogical thinking
- Mental block
- Difficulty in organizing thoughts
- Inward preoccupation

- Bizarre disjointed thoughts
- Interfering with listening
- Nightmares

Behavioural distress symptoms.

This can be classified into direct and indirect symptoms.

Direct symptoms.

- Compulsive spur of the moment action
- Stuttering or stumbling in speech
- Talking faster than usual
- Grinding teeth
- Easily startled
- Difficulty sitting still
- Significant interpersonal conflict
- Withdrawal
- Lashing out at someone or something
- Crying spells

Indirect symptoms.

- Increased smoking
- Use of television as an escape
- Increased alcohol consumption
- Increased use of the counter aids for sleeping or relaxation
- Use of sleep as an escape

- Use of illegal drugs
- Increased consumption of coffee, tea, colas or chocolate
- Irrational spending
- Seeing medical doctor for tension related health problems.

Physical distress symptoms.

- Toe jiggling and foot tapping often reflect impatience and irritability.
- Tight, hunched shoulders, which can become chronically sore, can signal anxiety, fear or embarrassment.
- Tightly folded arms may signal disapproval, anger apprehension, or desire to be left alone.
- Tightly crossed or coiled legs can convey several messages wanting to be left alone, anxiety, fearful anticipation.
- Sagging, sloping shoulders and back can reflect fatigue temporary or cumulative or feeling burdened.
- Nail biting often conveys worry, tension, anxiety and low self esteem.
- A jutting jaw often shows apprehension and tension.
- Clenched hands or tight fingers reflect anxiety, usually of a current or anticipatory kind.
- Furrows and frowns in the forehead are another sign of worry, fatigue or depression.

Other manifestation of physical distress are

- Trembling or nervous twitch
- Dryness of mouth or throat

- General fatigue or heaviness
- Pounding of heart
- Diarrhea
- Constipation
- Frequent need to urinate
- Upset stomach
- Neckpain
- Back pain
- Dizzy spells
- Loss of appetite
- Increase of appetite
- Chest pain
- Heart palpating
- Tension throughout the body

Although it is difficult to attribute the cause of illness to any particular stress, the literature relating to skin disorders, respiratory disorders and digestive disorders are manifestations of stress in school, personal and interpersonal arenas, giving strong support for the part that stress plays in illness. Similarly, behavioural problems are often associated with the stresses experienced by the individual. Some of the manifestation of stress that have been observed by school psychologist are given as presented in Frydenberg (1997) was given in table 2.

Table 2
Indicators of Stress in Adolescence

Home	School	Community
▪ Aggression	▪ Anger	▪ Alcohol addiction
▪ Arguing	▪ Antisocial behaviour	▪ Apathy
▪ Boredom	▪ Arguing	▪ Burglary
▪ Chronic fatigue	▪ Attention seeking behaviour	▪ Cruelty
▪ Conflict with siblings	▪ Bragging	▪ Drug addiction
▪ Cries easily	▪ Bullying	▪ Excessive fooling around
▪ Excessive TV viewing	▪ Confusion in problem solving	▪ Gang behaviour
▪ Excessive weight gain or loss	▪ Difficulty in completing work requirements	▪ Homelessness
▪ Inability to manage daily routine	▪ Exhaustion	▪ Indifference
▪ Lack of interest	▪ Fighting	▪ Non participation
▪ Over-eagerness to please	▪ Fooling around	▪ Promiscuity
▪ Physically abusive	▪ Illness such as glandular fever	▪ Tobacco addiction
▪ Procrastination	▪ Inability to commence new task	▪ Vandalism
▪ Rebellion	▪ Isolation/being withdrawn	▪ Violence
▪ Sadness	▪ Non-participation	
▪ Short temper	▪ Poor concentration	
▪ Shouting	▪ Showing off	
▪ Skin disorders	▪ Teasing/taunting	
▪ Sleeping disorders	▪ Truancing	
▪ Sulking	▪ Violence in the school yard	
▪ Ulcers		
▪ Uptightness		

Potential effect of stress.

Major effects of stress results in impaired task performance, disruption of cognitive functioning, burnout and post traumatic stress characters.

Stress effects one's ability to perform effectively, pressure to perform often makes people self-conscious and that this elevated self consciousness disrupts their attention (Baumester, 1984). Keinan (1987) opined that stress increases subject's tendency to jump to a conclusion too quickly without considering all their options and to do an unsystematic, poorly organized review of their available options. Studies also suggested detrimental effects of stress on certain aspects of memory functioning.

Burnout is explained as the physical and emotional exhaustion, cynicism and a lowered form of self efficacy that is attributed to work related stress. Exhaustion includes chronic fatigue, weakness and low energy. Cynicism is manifested in highly negative attitudes to oneself, one's work and life. In general, reduced self efficacy involves declining feelings of competence, which gives way to feelings of hopelessness and helplessness. Work stress is not the only cause for burn out. It is possible that chronic stress from other roles, such as parenting or being a student may lead to burnout (Weiten & Lloyd, 2003).

According to Pestonjee (1999), every era in history has been characterized by some debilitating disease. Stress is unique in the category of disease. It has no biological carrier such as a germ or virus. It is the result of how our mind and body function and interact. It is psychosomatic in the true

sense of the word- psyche meaning 'mind' and 'soma' meaning 'body'. It is the consequence of how we do not regulate the mental and physical functioning of our being. It is the disease created by the abuse of our minds and bodies and can lead to totally different symptoms in different people. Though its symptoms are many, it comes and often goes unrecognized and untreated.

Girdano, Everly and Dusek (1993) states that, "stress is the body reading. It is physiological (mind-body) arousal that can fatigue body systems to the point of malfunction and disease". According to Sarafino (2002) physically or psychologically challenging events or circumstances are called stressors and the person's psychological or physiological response to a stressor is called strain and stress as a condition in which person-environment transaction lead to a perceived discrepancy between the physical or psychological demands of a situation and the resources of the individual's biological, psychological or social systems. Stressors can produce strain in the person's biological, psychological and social systems. Selye (1956) called the series of physiological reactions the general adaptation syndrome (GAS) which consisted of three stages. Stage 1 Alarm reaction which mobilize the body's resources. At first the blood pressure drops below normal and then rises immediately which is the result of activation of the hypothalamus-pituitary-adrenal axis: the hypothalamus triggers the pituitary glands, to release epinephrine, nor epinephrine and cortisol into the blood stream. By the end of this stage in the GAS the body is fully mobilized to resist the stressor strongly. In the second stage of GAS, stage of resistance the body tries to

adapt the stressor. Physiological arousal declines somewhat but remains higher than normal and the body replenishes the hormones released by the adrenal glands. Despite this continuous physiological arousal, the organism may show few outward signs of stress. But ability to react new stressors may be impaired for long period of time. As a result organism become increasingly vulnerable to health problems including ulcers, high blood pressure, asthma and illness that result from impaired immune system. In the third stage of GAS that is, stage of exhaustion, prolonged physiological arousal produced weakens the immune system and depletes the body's energy reserves until resistance is very limited. If stress continues disease and damage to internal organs are likely and death may occur.

According to Pelletier 1994, "Psychoneuroimmunology research opens a window on to the complex psychological and behavioural factors that influence the onset and course of stress and immune-related diseases. Correlation between high levels of stress and myriad health problems have been found, including cardiovascular disease, high blood pressure, headaches, back pain, ulcers, anxiety, insomnia, depression, increased accident rates, alcohol and drug abuse, suicide, increased susceptibility to infection diseases, autoimmune disorders (such as lupus) and even the common cold".

Psychosomatic illness properly refers to sickness in which the mind plays a causative part. Illness usually do not have one single origin, but rather, result from the convergence of a number of factors deficient nutrition, fatigue, exposure to germs, weakened immunity and more. Through emotional and cognitive distress, the mind sometimes contributes to illness in four ways:

1. Long-term wear and tear from excessive stress makes the body more susceptible to breakdown, such as peptic ulcers, cancer, migraines or high BP.
2. An acute episode of intense emotional stress can directly precipitate physical ailments such as heart attacks, tensions, headaches or muscle spasms in the back.
3. High stress chronic or acute can aggravate an existing illness, such as angina, diabetes, arthritis or hypertension.
4. Stress can alter health habits, such as alcohol consumption, exercise, sleep or adherence to prescribed medications there by raising chances of illness.

Coping with stress.

Inorder to avoid the after effects of stress one has to cope effectively with stress. As Frydenberg (1997) says “coping is made up of the responses (thoughts, feeling and action) that an individual uses to deal with problematic situations that are encountered in everyday life and in particular circumstance. Sometimes problems are solved and sometimes they are ignored in an individuals attempt to deal with the environment”. According to Lazarus (1991), “coping is the cognitive and behavioral efforts to manage specific external or internal demands (and conflicts between them) that are appraised as taxing or exceeding the resources of a person”. There are three key aspects of Lazarus’ definition of coping:

1. Coping is context bound rather than primarily driven by stable personality characteristics.

2. Coping strategies are defined by effort, which accounts for just about anything an individual does in their transaction with the environment that is purposeful. Therefore coping need not be a successfully complete act but an attempt to deal with the problem. The concern is with the attempt rather than the effectiveness of the outcome. The attempt may consist of behavioural acts or cognitive.
3. Coping is seen as a process that changes over time during a particular encounter. There is an appraisal of the situations prior to initiating a coping action and the consequences of coping efforts set the stage for reappraisal of the situation and determine the call on coping resources (Lazarus, 1991). Research in the area of adolescent coping generally focus on situational determinants, individual characteristics and coping action (Frydenberg, 1997). As said in Frydenberg (1997) coping is

$$C = f(P - S + PS)$$

C – Coping

P – Personal characteristics

S – Situational

PS – Perception of situation

We need to be looking for factors and processes that may distinguish effective coping across a wide variety of stressful experiences. The coping strategy required in a situation of exam failure is very different from what may be regarded as an effective way of dealing with a quarrel with one's parents.

This overview makes a convincing case that stress reduction (however brought about) has far reaching beneficial consequences for physiological adaptation and health maintenance, and prevention of exhaustion. The analysis and reflection about the nature of stress provides clues about the stimulus controllability and most promising first intervention. This does not demand help from professionals but mere commonsense and life experience will do a lot. First step in managing stress is clear understanding of stressors' properties. Stress management develops an ability to cope in a competent manner with stressors and increases one's understanding about one's stress and help to exercise a control over the stress.

Bibliotherapy

Bibliotherapy is a program of activity based on the interactive process of the use of print and non print materials whether imaginative or informational, facilitated by a librarian or other professional, to achieve insight into normal development or to effect changes in emotionally disturbed behaviour (Rubin, 1978). The "idea that the arts can benefit the emotional well-being of the observer, creator or reader has been around at least since Aristotle proposed the notion of emotional Catharsis" (Pehrsson & McMillen, 2005). According to Caroline Shrodes human response to literature is

A portrayal of a personal relationship, a conversation, a reflection of mood, a traumatic experience, an act of aggression, presented in literature may become a symbolic equivalent of a personal relationship, a conversation, a mood, a traumatic experience... As such it must

evolve, at least in part, the same effective responses as did the original experience (Shrodes 1950).

Bibliotherapy derived from the two words *biblion* (means books) and *therapia* (means healing) was first coined by Samuel McChord Crothers a Unitarian Minister and essayist in 1916, (Crothers, 1916). In 1961, American Library Association (ALA) accepted Webster's Third New International Dictionary's definition of bibliotherapy, which define it as "the use of selected reading materials as therapeutic adjuncts in medicine and psychiatry; also guidance in the solution of personal problems through directed reading" (Webster, 1961). According to Shrodes (1950), Bibliotherapy is "the process of dynamic interaction between personality of the reader and literature under the guidance of trained helper". Major synonyms of Bibliotherapy are bibliocounseling, bibliopsychology, book matching, literatherapy, library therapeutics, guided reading and biblio guidance (Pehrsson & McMillan, 2005).

However, bibliotherapy is not restricted to the medical or physical context. More importantly, bibliotherapy does not claim to cure, but to 'enlighten' in the truest sense of the word. Webster's defines 'enlighten' as 'to give the light of fact and knowledge to; reveal truths to; free from ignorance, prejudice, or superstition; to give clarification to a person as to meanings, intentions and more' (Rubin, 1978).

The goal of bibliotherapy should be insight and understanding. To understand is to stand under, to stand away, to stand apart, in order to see something from different perspective; to learn; to know, and then to integrate that knowledge into the self. Insight is the power of thinking, feeling person

to look within and beneath the surface of things; it is an ability that can be strengthened through bibliotherapy. It is especially important that bibliotherapists be aware of the power they can engender in the client, as opposed to the power that is removed. The only demonstration of power for a helpless person is through a nervous breakdown or through commission of a crime. By “acting out”, he or she can command attention and sympathy- this is power over others. When a person in therapy learns about the motives for his or her behavior, that power is often removed. Any effective therapy must replace the destructive power with a new, constructive one-that of insight and understanding. Bibliotherapy and other activity therapies help clients gain an appreciation of their abilities in dance, art, or understanding. These therapies also offer opportunities to try out new behaviors.

Ancient Greeks wrote on the entrance of their libraries as “Medicine for the Soul”. Books were prescribed for physical and moral purposes in the 18th century Europe when libraries were founded in psychiatry hospitals. However Bibliotherapy turned out to be a popular topic in the second part of the 20th century for counselors, social workers, psychologist and educators (Tanrikulu, 2011).

Mainly there are three types of Bibliotherapy. Details of which are presented below:

Table 3

Types of Bibliotherapy

	Institutional	Clinical	Developmental
Format	Individual or group; usually passive	Group-active; voluntary or involuntary	Group- active; voluntary
Client	Medical or psychiatric patient, prisoner, or client in private practice	Person with an emotional or behavioural problem	‘normal’ person, often in a crisis situation
Contractor	Society	Society or the individual	Individual
Therapist	Physician and librarian team	Physician, mental health worker, or librarian, often in consultation	Librarian , teacher, or other
Material used	Traditionally didactic	Imaginative literature	Imaginative literature and/or didactic
Technique	Discussion of material	Discussion of material, with emphasis on client’s reactions and insights	Discussion of material, with emphasis on client’s reactions and insights
Setting	Institution or private practice	Institution, private practice or community	Community
Goal	Usually informational, with some insight	Insight and/or behavior change	Normal development and self actualization

The focus of Bibliotherapy can be remedial (clinical) or developmental. Remedial or clinical bibliotherapy involves the clinical use of guided reading with individual experiencing serious emotional behavioural

problems. Developmental Bibliotherapy refers to the use of guided reading with regular readers as a dynamic interaction between a reader's personality and literature. Developmental Bibliotherapy may be used by teachers and other lay helpers to facilitate normal development and self-actualization with an essentially healthy population. It is the developmental nature of bibliotherapy which is most applicable to elementary classroom (Rubin, 1978).

Among various stress reduction programmes "Bibliotherapy is currently being used to help children who are experiencing a variety of emotional and developmental difficulties. These difficulties include controlling aggression, managing stress and initiating and maintaining social relationships. In addition all children can benefit from being taught a literature bibliotherapy lesson because students are likely to encounter similar issues during their school years" (Jackson, 2006).

Teachers can use children's literature to help their students solve problem and generate alternative response to their issues. Bibliotherapy can be used with a single child, with a small group of children or with an entire class with minor variations in procedure. Considering bibliotherapy in schools it is easy for teachers to identify the problems of students and select appropriate literary material for bibliotherapy. Considering the students, while going through a literature, "identification of character may go beyond personal character to include others in the story and child's own life. Second a child who identifies with fictional character may imitate that character. When real person in child's life do not provide appropriate model, fictional characters

may. The third important advantage of reading as a form of intervention is that the child is in control. He can choose not to continue or to continue at a pace appropriate to his feelings” (Jackson, 2006).

According to Pardek (1986), nowadays “bibliotherapy is viewed as an emerging strategy that can be used not only for clinical problems but also a technique helping children handle developmental needs. The National standard for school counseling program published by American School Counseling Association states that “the school counseling program has characteristics similar to other educational program including a slope and sequence; student outcomes or competencies; activities and process to assist students in achieving the outcomes”.

As explained by Jackson (2006) Bibliotherapy has 3 processes. Key elements in the process of Bibliotherapy are,

- *Identification* - Children come to realize that they are not the only person with particular stressful living condition. By recognizing similarities between themselves and with the characters they work out their problems vicariously. Identification is not limited to a reader’s identification of self with a story character, but the child may develop a better understanding and appreciation of the real person. Identification helps in recognizing the thoughts and behaviour of others.
- *Catharsis* - Catharsis builds upon identification. When a child who identifies with a fictional character lives through situation and shares feelings with that character the child experience Catharsis. This vicarious experience may produce a relax of tension or an imitation of

character's behaviour. When this happens it is important that child should have someone to share this, on a one to one basis or in a group. After releasing emotional tension individuals become better able to apply what they have learned to their own similar situation resulting in insight. An advantage of reading a therapeutic experience is that reader can back off, it will not force the child to participate.

- *Insight*: Through reading children may become more aware of human motivations and of rationalization for their own behaviours. They may develop a more realistic view of their abilities and self-work because the written words tends to carry authority. Insights targets an individual's specific problem and brings issues to the surface. So they can be addressed. Children who feel doubt and suspicious towards adults and peers tend to be sure of books. Authors of fiction generally become trusted because they rarely impose judgement explicitly.

Gregory & Versey (2004) discussed that insight happens when a child realizes he or she has a problem similar to one of the story characters. Thus after an awareness of the problem, child may begin the process of problem solving.

Reading can serve multiple psychological purposes, which includes fantasy expression and gratification, channeling impulsive expression, providing information that aids testing, offering ideas and values that can guide behaviour dealing with universal conflicts and feelings and nurturing cognitive development and functioning. Reading can also serve to liberate oneself from one's own environment, offer comic relief, find pleasure in words and ideas and prepare for any integration of life experiences.

The teacher, who wants to use books to help children understand the challenges, stressful events and situations, childhood traumas and problems of growing up, need not be a clinical psychologist. The main qualifications are an interest in and concern for children and a willingness to become familiar with children's literature. Children's literature provide special medium or teaching technique, many teachers feel comfortable using in classroom since it involves reading, listening to and analysing a story. When used in a stress intervention, the story selected has as its theme a particular stressor, and the procedure consists of encouraging children to react through discussion to the story elements and the character's behavioural reactions. The cognitive and language skills of reading, listening, speaking and analysis are employed, just as in other familiar language activities. The use of children's book as a reactive intervention can be used with a single, child, with a small group of children or with an entire class.

Objectives of bibliotherapy includes,

- Help the students to identify the stresses felt by them.
- Equip the children to cope with stressors.
- Equip the children to cope with stressors in identical situation in their life as told in the story.
- Involve children in the story telling process.
- Actively engage the child in therapeutic process and help in search for the means to reach desired outcome.

Bibliotherapy among children.

Various studies conducted proved the effectiveness and importance of Bibliotherapy as an intervention for controlling and reducing the problems faced by children and adults. Muto, Hayed and Jeffcoat (2011) through their study established that moderately depressed or stressed and severely, anxious students showed improvement compared to those not receiving books. A study conducted by Pam (2010) investigated bibliotherapy use in a regional Australian City with adolescents who have chronic illness. It explored the responses of members of welfare teams (welfare co-ordinators, school nurses and teacher librarians) within secondary schools to question on how books are used with students experiencing such issues. Findings indicated that although bibliotherapy practice is formal process within schools, its central phenomenon of a reader, forming a relationship with a book and then changing in some significant way as a result is a concept that most participants understood and attempted to utilize with the students in their care. Brigg & Pehrsson (2008) provided an overview of historical and contemporary constructs of grief counselling and presented Bibliotherapy, a creative counselling tool as an appropriate intervention when counselling grieving clients. Study conducted by Okwilagwe & Mubonyin (2011) investigated the role of bibliotherapy in value system formation by undergraduates in seven faculties of the university of Ibadan Nigeria. Findings indicate that “bibliotherapy exerts determining influence on value system formation by under graduation with respect to group, -self-society-environment and nation-oriented values”. These findings corroborated previous studies by educators, librarians, physicians, nurses, psychologists

and occupational therapists or bibliotherapists who are of the consensus that the book exerts influence on the human spirit and impacts heavily on human behaviour and formation of value system. Many elementary school children may cope with difficult life struggles such as disabilities, abuse, loss, and identity issues. This article details original, student generated, bibliotherapeutic book creations and how this genre teaches positive ways for children at-risk to cope with tough life circumstances. Pre-service, elementary college graduate students created their own biblio-therapeutic books in this author's literacy course in order to demonstrate the home to school connection by heightening empathy skills. This author and professor had students create coping themes they felt most compelled them in their own childhoods and/or were issues they felt needed to be explored in children's literature. Four, bibliotherapy, coping themes are discussed as well as students' originally created, corresponding lesson activities. Students reflections on this emotionally charged project, report highly favourable results.

“Reading guidance or bibliotherapy can be a simple procedure. However professional therapeutic skills are necessary if the child's problem is severe” (Jackson, 2006). Teachers are persons who are always in contact with children, so they are able to understand and identify the problems faced by children. As story telling had been used for moralising, healing and passing information from the very day of human communication it can also be used by teachers effectively in their classrooms. First of all teachers have to identify the problems of children then select suitable stories which can provide necessary help regarding the problem of the child. Bibliotherapy lesson plans are available which can be made use for preparing and planning

the selected stories for the purpose. By giving bibliotherapy to the whole class severity, most of the similar problem felt by students can be reduced, when the teacher feels that special therapy was needed for a particular child, teachers can make necessary requirements for the further therapy of the student. As language teachers are always in contact with different types of literature it will be very easy for them to select the suitable stories according to the requirement of the children.

Prater, Johnstun, Dyches & Johnstun (2006) opine that “teacher can use literature as bibliotherapy for both children and adolescents to create a safe distance allowing them to deal with sensitive issues related to these problems, as well as to teach social skills that can help prevent school failures as a result of social, economic and family stress factors”.

Relaxation

We have already discussed that children are often confronted by different problems which are not fully controllable by them. Adults control most of the situations in schools and home and so children have to cope with such situations. All these situations arouse discomfort for children which may manifest in different forms affecting the psychological and physical aspects of the children. Nowadays in schools various programmes are introduced to reduce such problematic situations which induce various stress among students. Techniques like Yoga, Meditation, dance and music are practiced in schools to reduce student’s stress. “Relaxation Training is probably the most used pharmacological, both stand-alone and psychotherapy combined approach for the treatment of many medical and psychological diseases.

Among the wide range of many non-conventional and sometimes doubtful treatments, relaxation based methods such as meditation, progressive muscle relaxation, applied relaxation, mindfulness and autogenic training have received the great scientific attention and validation” (Francesco, Mauro, Gianluca & Enrico, 2009). Relaxation as proved to be a successful and well established method for reducing stress and physical ailments can be introduced in schools for the well being of children. Not being a complicated process requiring sophisticated apparatus, relaxation can be easily made use of in schools. Relaxation training can be easily given to teachers so that they can help students practice relaxation to get a grip over their tensions and stress. This will help them to acquire a relaxed state which will promote their mental and physical well being which inturn improves their overall performances including academics.

“Relaxation techniques belong to the main coping strategies that are supplied to children to improve stress management” (Lohaus and Klein - heBling 2000). Lazarus and Folkman (1984) differentiated coping strategies into two general types: Problem focused and emotion focused coping strategies. Problem focused strategies are oriented to specific changes of external environment or to changes of personal characteristics. The target of emotion focused strategies is the regulation of somatic or emotional reactions resulting from stress experience. Spirito, Stark, Grace and Stamoules (1991) showed through their study that children aged 6-9 mainly use problem solving strategies while emotion regulating strategies are seldom used in this group. As the age increases the significance of emotion regulating strategies increases. It was also found that problem solving strategies are used in all age

group and do not show comparable developmental trends. So they concluded that using relaxation techniques may be of importance in increasing the use of emotion regulating strategies especially in younger age group.

According to Jacobson (1976) relaxation in any muscle means complete absence of all contractions. During complete relaxation no messages are carried by the nerves to and from these muscles and so nerves are completely inactive. When an individual take rest by lying for a long time actually that individual remain sleepless and nervously restless. Signs of mental activity, organic excitement, anxiety and other emotional disturbances are showed. So a complete rest is not attained and so relaxation is not perfect. This is a state of residual tension and this can be explained as a state that appears to be a fine continued contraction of muscle along with slight movements of reflexes. According to Jacobson this residual tension can be done away with Relaxation Training. When the individual relaxes beyond the state of residual tension slight breathing irregularities are lost, pulse rate decline to normal, blood pressure and pulse rate falls, knee jerks diminishes and almost all parts of the body feel relaxed and mental and emotional activity disappears for brief periods. In such a condition the individual lies quietly with flaccid limbs and no traces of stiffness. Eye lids become motionless, previously present tremor get diminished and even a slight shift of trunk, or limb or a finger will not take place. This is most restful and natural form of sleep. When such a relaxation is limited to a particular part of the body and when it includes entire body it is called general relaxation.

Jacobson (1934) developed a physiological method of combating tension and anxiety. Earlier investigation by Jacobson concluded that

shortening of muscle fibers arose tension which is reported as anxiety and such anxiety can be removed by removing the tension. Jacobson discovered that systematic tensing and releasing dozens of muscle groups, learning to attend and discriminate between resulting sensation of tension and relaxation can help a person to completely eliminate muscle contractions and experience a feeling of deep relaxation. For convenience in clinical situation Wolpe (1958) shortened the standard Jacobsonian Progressive Relaxation Training (PRT) programme making it possible to complete in six 20-minute sessions, supplemented by twice daily at home practice sessions of 15 minutes each. Wolpe's procedures were similar to Jacobson's in terms of tensing and releasing muscle groups, but in Wolpe's version the therapist have to play a more active role, which included running instructions to guide clients in the tension-release cycles and providing them with suggestions to facilitate awareness of the bodily sensations accompanying those cycles. Wolpe's work in relation with PRT allowed the therapist to focus not only on relaxation training but to help client's relaxation to inhibit anxiety responses to specific environmental situations. According to Jacobson (1976) relaxation is called progressive in three aspects. (1) "The subject relaxes a group, for example the muscle that bend the right arm, further and further each minute. (2) He learns one after the other to relax the principal muscle groups of his body. With each new group he simultaneously relaxes such parts as have received practice previously. (3) As he practices from day to day, he progress towards a habit of response tends towards a state in which quiet is automatically maintained".

Procedure of progressive muscle relaxation.

According to Jacobson (1976) to learn to pass from the state of tension that usually characterizes modern living into one of marked relaxation within a few minute or less; to repeat this again and again until relaxation becomes habitual is the aim of tension control. For relaxing the first and foremost a quiet environment devoid of all interruptions is inevitable. All types of interruptions including sound and light should be averted. Though a complete darkroom is preferred it is not practicable for the trainer to watch the subject. Sometimes a darkroom may influence negatively. Then as a next step a comfortable couch or bed should be selected which provides completely comfortable posture for the individual for practicing progressive muscle relaxation. Beside the environment subjects clothing and accessories also should be considered to provide maximum comfortable free movement. The most important requirement is the maximum physical and psychological comfort for the client.

As a second phase through proper explanation and justification of the procedure, the trainer should instill in the subject a feeling of confidence in the trainer and the technique and enthusiasm to carry out the 'homework' assignment. The trainer should first of all present a rationale of the progressive muscle relaxation training including what is PRT, how it is given, what are the results, why it is useful, how it help the subject and all. After the subject has understood and accepted the rationale underlying PRT, the trainer should satisfactorily answer the queries of the subject. Care should be taken that the training programme should follow the sequence outlined in the rationale.

In the PRT suggested by Jacobson the sixteen muscle groups involved are the following.

1. Dominant hand and forearm
2. Dominant biceps
3. Non dominant hand and forearm
4. Non dominant biceps
5. Forehead
6. Upper cheeks and nose
7. Lower cheeks and Jaws
8. Neck and throat
9. Chest, shoulders and upper back
10. Abdominal or stomach region
11. Dominant thigh
12. Dominant calf
13. Dominant foot
14. Non dominant thigh
15. Non dominant calf
16. Non dominant foot

In teaching relaxation, the following sequence of events must occur with respect to each muscle group:

- 1) The client's attention should be focused on the muscle group.
- 2) At a predetermined signal from the therapist the client tenses the muscle group.
- 3) Tension is maintained for a period of 5-7 seconds (this duration is shorter in the case of the feet).

- 4) At a predetermined cue the client releases the muscle group.
- 5) The client focuses attention upon the muscle group as it relaxes.

In the procedure how the therapist speaks is as important as what is said. Subtle features of volume and inflections are of vital importance in the adequate presentation of PRT to the client. The therapist should begin the first relaxation session in a conversational tone and over the course of the first session the therapist voice should become progressively quieter, consistent with the client's progressively increasing relaxation. In addition to speaking more softly the pace of speech should also become slow as the relaxation session is one half to two thirds completed.

After providing all informations regarding the PRT therapist can give a description of at-home practice procedure. Relaxation is a skill that should be practiced for a period of 15-20 minutes atleast twice daily.

The therapist uses standard set of instructions to direct the subject to the sequential procedure of PRT. For this instructions are first given to attain a suitable atmosphere by closing the eyes for three or four minutes. The subject should neither speak nor be spoken to. Step by step the instructor gives instructions to the subject to focus on the muscle or muscle groups to be tensed. First the instructor gives direction to produce tension in the desired muscle, then instructions are given to retain the tension for 5-7 seconds according to the muscle tensed. After that instructions are given to release tension from the muscles to feel the relaxation. In order to get exact time and exact length of tension and relaxing the therapist instructs the subject to give specific tension signals. Then therapist terminates the tension with standard

statements like “O.K relax”. This is repeated twice or thrice, till the subject feel relaxed. After completing the cycle of relaxation through all the muscles mentioned earlier, complete relaxation is assured by the use of hand signal agreed upon during the rationale presentation.

In the post relaxation session, therapist asks about the experience of subjects, the difficulties felt by them, and whether they are able to get complete relaxation on all muscles. After identifying the problems, corrective procedures can be given to make sure that no residual tension exists anywhere in the body, the session can be terminated.

Then the importance of home practice procedure is informed. The subject is encouraged to practice every day twice for a period of about 15-20 minutes each time with atleast 3 hours separating the two daily practice sessions.

After the achievement of complete relaxation the therapist can terminate the session. For this therapist can count from 4 to 1 and give the instructions to move each part of body while counting 4, 3, 2 and 1. That is begin to move legs while counting 4, arms and hands on counting 3, head and neck on counting 2 and open eyes on counting 1. The therapist can instruct the subjects to slowly awake from a short nap because arousal from deep relaxation is similar to waking up.

Progressive muscle relaxation among children.

Progressive muscle relaxation training is clearly an effective technique for reducing tension, anxiety and physiological arousal. A large amount of empirical work also supports the technique as an effective stress management and anxiety reduction procedure for non clinical group (Bernstein, Borkovec,

& Hazlet-Stevens, 2000). Relaxation training is effective in reducing anxiety in any kind of participants, male or female, young or old, affected or not by physical or psychological disorder (Francesco, Mauro, Gianluca & Enrico, 2009).

Dave (2009) recommended for teaching students relaxation techniques to help them feel calm. More students bring a lot of emotional baggage with them to school because of the difficulties they face at home or in the community with the challenge of gangs or the difficulties they face with their learning and mixed messages they receive from the media. Courtney (2005) also suggested that children's stress comes from a variety of situations such as bullying, divorce, high stakes testing and peer pressure. Because many children are not exposed to stress management techniques, stressful situations often result in unhealthy coping mechanisms. Such as over eating, acting out and substance abuse behaviours. Relaxation activities can be taught to provide students with method of coping with these situations in a healthy manner. These strategies can be used during school, outside of school and throughout life. Lohaus and Klein-heBling (2000) concluded in their study, that children who participated in relaxation activities during school experience reduced blood pressure and heart rate and their self report ensured improvement in feelings of calmness and physical well being.

Relaxation may be seen as a behavioural state usually defined by the specific operations that are used. Implications for children are far reaching and include possibilities of enhancing application with intellectual, social and emotional development. Improvement in learning, health and general quality of life have been among the benefits of relaxation programmes.

Studies on Academic Stress

Lin and Huang (2014) surveyed academic burnout and life stresses among college students and further assessed whether reports of life stresses can serve as a predictor of academic burnout. The 'Undergraduate Life Stress Scale' and 'Learning Burnout Scale' were used as research tools to collect data from 2640 students. Female students and upper year students reported higher values of life stresses. The self-identity stress, interpersonal stress future development stress and academic stress could jointly predict student academic burnout.

Perera and McIlveen (2014) conducted a study on 236 undergraduates to that the conceptual formulation that academic and psychological adjustment are associated with optimism. The result showed that optimism was a direct predictor of the greater use of engagement coping and better psychological adaptation to college transition. Further empirical test of mediation revealed that the relationships of optimism with academic and psychological adaptation were mediated by engagement coping.

Jameson (2014) conducted study to determine if an increase in hardiness and a decrease in perceived stress in junior baccalaureate nursing students occurred in those who participated in a hardiness intervention. The study was conducted on a sample of full time junior level baccalaureate nursing students. Analysis of pretest post test scores of non-equivalent experimental and control group showed statistically significant effect on decrease in perceived stress scores.

Kiand, Andrews, Steen, Supple and Gonzalez (2013) revealed that socio-economic stress has long been found to place youth at risk, with low family income conferring disadvantages in adolescent school achievement and success. This study investigated the role of socio economic stress on academic adjustment and pinpoints family obligation as a possible buffer of negative associations. Investigators examined direct and interactive effects at two time points in the same sample of Asian American adolescents-early high school (N=180, 9-10th graders; 60 % female) and 2 year later in late high school (n=156 11-12 graders, 87% of original sample). Results suggested that socio-economic stress is associated with poor academic adjustment, measured broadly through self-reported GPA, importance of academic success, and educational aspirations and expectations. Family obligations was positively related to adjustment and was found buffer the negative effects of socio-economic stress, but only during adolescents later high school years. Adolescents reporting more family obligation experienced less of the negative effects of financial stress on academic outcomes than those reporting lower obligation.

Kim, Yang, Ae.Jung and Lin (2013) conducted a study to identify the association among levels of persistent academic stress, appetite and dietary habits and to determine the specific types of sweet foods consumed by Korean high-school students according to their academic stress levels. 333 high school students in 10 to 12th grades in Kyunggi province in Korea was taken as sample. The result revealed that students with high stress level had larger meals than those students with low stress level and had a higher frequency of

sugar intake from the following food types: confectionaries, candies, chocolates, breads, and flavoured milk.

Ming-Te and Jacquelynn (2013) conducted a longitudinal study adopting a multidimensional prospective to examine the relationships between middle school student's perception of school environment (structure support, provision of choice, teaching for relevance, teacher and peer emotional support), achievement motivation (academic self-concept and subject task value) and school engagement (behavioural, emotional and cognitive engagement) adopting a multidimensional perspective. Study on an urban sample of ethnically diverse adolescents indicated that student perceptions of distinct aspects of school environment contributed differentially to the three types of school engagements. These associations were fully or partially mediated by achievement motivation and student perceptions of the school environment influenced their achievement motivation and in turn influenced all three types of school engagement specifically.

Moghimislam, Jafari and Hosseini (2013) studied the effect of stress management on students' academic achievement scores before and after interventions. The average difference between the pre-test and post test scores of group given intervention and group that does not given intervention was found to be significant. The study concluded that stress management training can lead to students academic achievement.

Seiffge-Krenke, Persike, Keraman, Cok, Herera, Rohail, Macek and Hyeyoun (2013) found that among 2000 adolescents from middle class families in six countries, adolescents from Costa Rica, Korea and Turkey

perceived parent related and peer-parent related stress greater than peer related stress, but stress levels in both relationship types were similar in Czech Republic, Germany and Pakistan. Female adolescents reported more peer-related stress than male adolescents.

Foret, Scult, Wilcher, Chudnofsky, Malloy, Hasheminejad and Park (2012) conducted a study on students of 10th and 11th grade at Nadeem High School. Fifty-four 10th graders were taken as intervention group using non-randomized cohort study with wait list. Students were given a 4-week, 8-session-based curriculum training by the BHIEI and surveys before and after the interventions were completed. Intervention group student's levels of perceived stress and the anxiety were reduced as expected by the RR-based curriculum and students who participated in the intervention demonstrated a positive change in perceived stress, anxiety and health promoting behaviors.

Fried and Chapman (2012) found that students who used goal-oriented motivation regulation strategies were more resilient than others and contrasting results were obtained when investigating the ability of each emotion regulation strategy type to predict engagement and resilience. Students who used avoidant strategies developed resilience less likely than others.

Pederson (2012) using a stress-carry-over perspective examined the relationship between stress stemming from school and family domains and physical and mental health outcomes. 268 undergraduate men and women from a Midwestern university was the sample. OLS regression was used for analysis and separate questions were estimated for men and women. Men and women report higher school than family spillover, and women reported higher

school stress spillover than men. Regression models reported that both men and women showed more days of poor mental health when school spillover is high. Negative association was found with school spill over for women and with family spill over for men.

Talib and Zia-Ur-Rehman (2012) studied relationships between perceived stress and academic performance using correlation coefficient among 199 university graduates and undergraduate of Rawalpindi and Islamabad. Perceived stress was negatively correlated with academic performance of students and the mean score among low academic achiever versus high academic achiever as well as low stress level and high stress level group were found to differ significantly. Male and female students do not differ significantly in their stress but differ between engineering students and management science students based on perceived stress score.

Yusoff (2012) conducted study on students of Malaysian public university. 185 international students from various countries and regions were taken as sample to examine the relationship between self-efficacy, perceived social support and psychological adjustment of these international students. The results revealed that self-efficacy and only one dimension of perceived social support significantly selected students related with psychological adjustment.

Doron, Stephan, Maiano and LeScanff (2011) assessed coping strategies, academic motivation and achievement goals among 199 undergraduate students. Regression analysis showed that problem-focused coping is

positively predicted by identified regulation and negatively by motivation . Emotion focused coping in positively predicted by introjected regulation and motivation. Mastery approach goals positively contributed to problem-focused coping. Unique positive contribution was made by identified regulation and master approach goals to problem-focused coping and motivation was negatively related.

Elias, Ping and Abdullah (2011) selected students in a local university from different disciplinary areas as sample to investigate stress and academic achievement. 376 undergraduate students were selected through cluster sampling. Academic Achievement of the undergraduate students referred to their results, Grade Point Average (CPA) for the previous semester referred to academic achievement and College Undergraduate Stress Scale (CUSS) was used. The stress levels were compared based on their year of study in university, and their degree programs. The result showed that, the undergraduate students experienced moderate levels of stress and most sources of stress were from students academics. There existed a significant but weak negative relationship between undergraduate students' stress level and their academic achievement.

Hasel, Abdolhoseini and Ganji (2011) a model hardiness training programme was investigated on 27 college students to determine whether perceived stress could be reduced and hardiness could be increased among college students. Then experimental group was given six-week hardiness training program. Analysis of pre-test and post test scores showed significant decrease in perceived stress level and significant increase in hardiness.

Liu and Lu (2011) examined relationship between Chinese school student's stress in the school and their academic achievement on a sample of 466 Chinese school students. One class consisted of 87% of students whose academic stress negatively predicted their academic achievements. For the 13% of students, their stress did not predict their academic achievement. It was also found that gender did not moderate the relationship between student's stress in the school and their academic achievements.

Liu and Lu (2011) study on longitudinal relationship between adolescents stress in school and the change rates of their academic achievement showed that students' stress from teacher-student interaction significantly predicted the change rates of their academic achievement.

Parto and Besharat (2011) studied the relationship of self-efficacy and problem solving with mental health in adolescents. 914 students completed the general self-efficacy scale, problem solving inventory, the coping scale and the general health questionnaire. Results exposed that self-efficacy and problem solving were the powerful direct predictors of mental health.

Sadaghiani (2011) 300 female students in Tabriz senior high schools were selected to study the relations between stressors, hardiness and biological, mental, cognitive syndrome. The findings revealed a positive and significant correlation between stress, and biological, mental and cognitive syndromes and there was a negative correlation between components of hardiness and mental, biological and cognitive syndromes.

Tan and Yates (2011) measured parent, teacher and self expectations as sources of academic stress in Asian adolescents. Tool was administered to

176 Singaporean secondary and college students one month before their major examinations. Tools used were the Academic Expectations Stress Inventory AESI, developed by Ang and Huan (2006). The item thresholds showed the AESI measurement of the student trait range adequately and provided an understanding of role of parents, teachers and self expectations as sources of academic stress among students from a CHC background.

Meera and Noora (2010) conducted a survey on a representative sample of 520 secondary school students of Malappuram, Thrissur and Kozhikode district of Kerala to know about the effect of life style factors on Academic Stress. The result revealed that there existed significant effect between the life style factors on Academic Stress fro total sample and subsamples based on locale, gender and type of management.

Muola (2010) conducted study on randomly selected 235 standard eight Kenyan pupils from 6 urban and rural primary schools of Machakos district. Information on the pupils levels of academic motivation and home environment were collected using simple profile (SP) and home environment questionnaire. Result revealed significant positive relationship between six of the home environment factors that is fathers occupation, mothers occupation, fathers education, mothers, education, family size and learning facilities at home and academic achievement motivation. The only factor that was not significantly related to academic motivation was parental encouragement.

Leung, Yeung and Wong (2010) studied the role of paternal support in the relation between Academic Stress and mental health among 1,171 fifth

and sixth graders of primary schools in Hong Kong. The results revealed that academic stress was a risk factor that heightened student anxiety levels and that parental emotional support was a protective factor that contributed to better mental health among children. However, during times of high academic stress paternal informational support delivered to children appeared to higher student anxiety levels.

Delahaij, Guillard and Dan (2010) investigated coping style and coping self-efficacy as mediating variables. In the longitudinal design, hardiness, coping style and coping self-efficacy and responses (i.e., appraisal and coping behavior) to a stressful military exercise were assessed at different points in time during basic military training in two independent samples (n=109, n=98). The result revealed that coping self-efficacy mediated the relationship between hardiness and appraised, whereas coping style mediated the relationship between hardiness and coping behaviour.

Krypel and King (2010) investigated the meanings that undergraduate students make of their education and how these meaning relate to student's perceived stress, styles of coping with stress and optimism. Participants completed a meaning of education questionnaire, the perceived stress scale, the COPE (a measure of coping styles) and the life Orientation Test Revised. The result revealed that optimists were less likely to see education on a source of stress or an escape and students who used disengagement coping styles were more likely to see education as a source of stress or as an escape.

Bakker, Ormel, Verhulst and Oldehinkel (2010) conducted study on 2,084. Dutch young adolescents to test whether boys and girls are sensitive to

different types of peer stressors and peer stress was associated with different mental health problems in boys and girls. The result found that peer stress is likely to be associated with different mental health problems in boys and girls.

Leung and He (2010) conducted study among 695 fifth and 6th grades from four major districts of Shanghai to examine the interaction of academic stress and student resourcefulness on subject grade and to identify the factors of parental support that contribute to student resourcefulness. Result revealed that student resourcefulness moderated Academic Stress and subject grade perceived parental emotional support and maternal informational support contributed significantly to student resourcefulness.

Hystad, Eid, Labery, Johnsen and Bartone (2009) studied the capacity of personality hardiness to buffer the relationship between academic stress and health. Negative association of hardiness with both academic stress and number of health complaints, and that hardiness moderated the association between academic stress and health was revealed through the study.

Sing and Bussey (2009) presented the reliability and validity of a newly developed measure designed to assess children's self-efficacy for coping with peer aggression. 2,161 participants who ranged in age from 10-15 years represented the sample. The exploratory and confirmatory factor analysis supported the four conceptualized coping self-efficacy domains: Self-efficacy for proactive behaviour, self-efficacy for proactive behaviour, self-efficacy for avoiding aggressive behaviour, self-efficacy for avoiding self-blame and self-efficacy for victim-role disengagement. Greater self efficacy was found to be associated with less social anxiety, cognitive depression and externalizing symptoms.

Pang, Villacortai, Chin and Morrison (2009) studied 106 American and 79 Singaporean students to find out relations between implicit and explicit Hope of Success (HS) and fear of failure (FF) and memory and liking for successful and unsuccessful peers. Implicit motives were expected to predict memory and explicit motive to predict liking of peers. Result supported the implicit-explicit motive distinction as well as a link between its and the successful peer and between FF and unsuccessful peer. Result also indicated that achievement motives affect interaction and reaction towards peer and provide evidence for differential validity of implicit and explicit motives.

Huan, See, Ang and Har (2008) examined the contributing role of the different aspects of adolescent concerns on the academic stress of youths in Singapore. Adolescent concerns measure and Academic Expectation Stress Inventory was used to collected data and considered four different aspects of adolescent concerns namely: family, personal, peer and school concern. From result for boys and girls only the scores of the personal concerns subscale were positively associated with the academic stress arising from self and other expectations. School related concerns were predictive of academic stress arising from other expectations for girls and obtained significantly higher scores on the Academic Expectations Stress Inventory than boys.

Hampel, Meier and Kummel (2007) investigated the effectiveness of a school-based universal preventive stress management training programme for early and middle adolescents. The intervention effects of age (early versus middle adolescents) and gender on perceived stress, interpersonal coping and self-efficacy prior, immediately after as well as 3 months after the

intervention was found. The result from the sample, 320 adolescents (age 10-14) participated in the study. The result showed that experimental group scores higher on perceived self efficacy compared to the control group at follow up assessment. Less perceived stress and more adaptive coping at the post and follow up assessment was showed by the experimental group.

Ang and Huan (2006) collected data of 1,108 Asian Adolescents (12-18 age group) from a secondary school in Singapore. Using Baron and Kenny's (*J. Pers Soc Psychol*, 51: 1173-1192, 1986) framework, this study tested the prediction that adolescent depression mediated the relationship between academic stress and suicidal ideation in four-step process. Result showed that previously significant relationship between academic stress and suicidal ideation was significantly lower in magnitude when depression was included.

Ooi, Ang, Fung, Wong and Cai (2006) conducted study on a clinical sample of 91 boys with descriptive behaviour disorder ranging from 8 to 12 years of age. Result of multiple regression analyses found that the quality of parent-child attachment significantly predicted parent-rated aggression, social stress and self-esteem. Lower levels of parent-rated aggression and lower level of social stress and higher levels of self-esteem were associated with higher quality of parent-child attachment.

Chong, Huan, Yeo and Ang (2006) investigated the respective contributions of perceived support from parents, peers, and school to the psychological adjustment and the mediating role, dispositional optimism

plays on the sample consisting of 519 thirteen year-old Asian Adolescents from a middle school in Singapore. Results revealed are important contextual factors influencing the psychological well-being of these adolescents. Dispositional optimism partially mediates support from each of these three sources and psychological adjustment.

Huan, Yeo, Ang, & Chong (2006) investigated the role of optimism together with gender on students perception of academic stress. Collected data was two self reports namely the life orientation test and the academic expectation stress inventory from 430 secondary school students in Singapore. Result revealed a significant negative relationship between optimism and academic stress in students. Gender was not found to be a significant predictor of academic stress.

Study conducted by McGeorge, Samter and Gillihan (2005) found that Academic Stress is related with a variety of negative health outcomes, including depression and physical illness. The capacity of supportive communication reports as being received from friends and family to buffer the association between academic stress and health was studied. Sample of college students completed measurers of academic stress, supportive communication received (emotional and informational) and health status (depression and symptoms of physical illness). Result revealed that informational support increased, positive association between Academic Stress and Depression decreased as informational support increased and emotional support was negatively associated with depression across levels of academic stress.

LePine, LePine and Jackson (2004) conducted a study on 696 learners and found that stress associated with challenges in the learning environment was positively related with learning performance and that stress associated with hindrances in the learning environment was negatively related with learning performance. These learning performance relationships were partially mediated by exhaustion and motivation to learn. Stress was positively related to exhaustion and exhaustion showed a negative relation to learning performance. Hindrance stress was negatively related to motivation to learn and challenge stress was positively related to motivation to learn and motivation to learn was positively related to learning performance.

Torsheim & Wold (2002) investigated the relationship between shared psychosocial school environment and subject health complaints. A representative sample of 1585 Norwegian grade 8 students (mean age 13.5 years) from 82 school classes completed scales on health complaints, academic stress, the teacher and classmate support scale, decision control and noise and disturbances in class to investigate the relationship between shared psychological school environment and sub health complaints. Analysis showed that level of health complaints varied across school classes. School class differences in psychosocial environment accounted for 40% of the between school class variance in health complaints. Test of cross-level interactions showed a significant statistical interaction between mean school class level of classmates support and individual level of academic stress.

Beasley, Thompson and Davidson (2003) tested the sample of mature age university students (N=187) completing measures of life event stress and traumatic life experiences (independent variables), cognitive hardiness and

coping style (moderator variables) and general health, somatization, anxiety and depression (dependent variables). The direct effects and buffering models in relation to cognitive hardiness and coping for general health and psychological functioning was found. Results showed a direct effects model of the relationship between life stress and psychological health and supported for a buffering model in which cognitive hardiness moderated the effects of emotional coping or adverse life events on psychological distress.

Credit and Garcia (1999) in a study analyzed that there was high level stress among middle and high school students which adversely affected various situations including academic and social. A stress reduction program including parent newsletters, teacher-led relaxation exercises and implementation of a time and stress management program was administered. The program included lessons in role-playing and problem solving, worksheets and stress logs. Post intervention data indicated that students internalized coping techniques for stress.

Rajendran and Kaliappan (1990) conducted a factorial study of sources of students academic stress. A sample of 100 high school boys whose age between 12-15 years were selected. Factorial analysis showed that academic stress is the outcome of personal inadequacy, fear of failure, interpersonal difficulties and lack of study facilities.

Studies on Bibliotherapy

Eliasa and Iswanti (2014) investigated the influence of bibliotherapy with the career topic on the increase of the students career motivation of guidance and counselling. Classroom Action Research (CAR) based on

research method by Kemmis and McTaggart model was conducted in one cycle. The data were collected by observation, interview, documentation and questionnaire from students of Guidance and Counselling Department of faculty of education sciences of Yogyakarta state university and subsample were selected using the criteria: (1) fifth semester students, (2) those who have taken career counseling course and (3) those who have problems with career shown in the questionnaire as under population average. The qualitative result from observation and interview showed that bibliotherapy within career topic leads the students to have the positive change of expression, gesture and self confidence to become a counselor in the future. The result of qualitative analysis of questionnaire revealed a career motivation aspect which means that the bibliotherapy treatment has succeeded in enhancing the knowledge and utility of textbook for counseling. Therefore it is concluded from the study that bibliotherapy within career topic could be developed to overcome the career problems, especially career motivation.

Sharma, Sood, Prasad, Loehrer, Schroeder, & Brent (2014) explored the effectiveness of bibliotherapy to decrease stress and anxiety and increase resilience and mindfulness among 37 employer at a large medical centre. The effectiveness of self directed stress Management and Resiliency Training (SMART) was used for 12 weeks. Brief self directed program to reduce stress and to enhance resilience and mindfulness proved effective in enhancing resilience, mindfulness and quality of life and decreasing stress and anxiety.

Scogin, Fairchild, Yon, Welsh and Presnell (2013) found the impact of two self-administered treatments namely cognitive bibliotherapy and

bibliotherapy plus memory training to a waitlist control condition on measures of memory functioning and depression. The group included older adults experiencing depressive symptom and memory complaints. The result showed partial support for cognitive Bibliotherapy as a treatment for depressive symptom, while memory training did not produce improvements.

Carlbring, Maurin, Sjomark, Maurin, Westling, Ekselius, Cuijpers, and Anderson (2011) tested difference between giving a full book as therapy and receiving one of individual chapter every week as therapy. The treatments showed promising results with effect maintained up to 2 years and within group effect size between 0.95 and 1.11. Results also revealed that when treatment is guided by therapist pacing of text material in bibliotherapy for panic disorders is not needed.

Chai (2011) explored the use of bibliotherapy delivered by teachers in a natural classroom environment as an intervention to increase social problem solving skills in young children. 96 students from kindergarten and first grade students from classroom in a demographically diverse elementary school located in a large urban school district was the sample. Treatment group were given bibliotherapy intervention with reinforcement activities while the wait, but control group received no intervention. Pre-test – post test experimental design was analyzed using One way ANOVA, ANCOVA and correlation. The result showed that the social problem-solving skills significantly higher than the wait-list control group.

Muto, Hayes and Jeffcoat (2011) conducted study on 70 Japanese international students in Western University in US. Experimental group

received a Japanese translation of a broadly focused Acceptance and Commitment Therapy (ACT) self help book. Experimental group showed significantly better general mental health of post and follow up studies. Moderately depressed or stressed and severely anxious students improved compared to those not received the book. Overall data suggested improvement in mental health and psychological flexibility of Japanese international students who received ACT bibliotherapy.

Oshiotse and Marie-Louse (2011) studied the role of bibliotherapy in value system formation on 1, 372 (746males and 626 females) undergraduates in seven faculties of the University of Ibadan, Nigeria. The chi-square statistical method showed significant determining influence of bibliotherapy on value system formation with respect to group-self-society-environment and nation-oriented values by undergraduates.

Betzalel and Shechtman (2010) compared the outcomes of cognitive and affective bibliography treatment given to 79 children and adolescents in a residential home in Israel. Revised Children's Manifest Anxiety Scale by Reynolds and Richmond (1985) was used to measure anxiety and Achenbuch's (1991) Teacher's Report form was used to measure adjustment symptoms. Result indicated reduced social anxiety in both treatment groups compared to control group and reduced adjustment symptoms was found only under affective Bibliotherapy conditions.

Harvey (2010) investigated the use of bibliotherapy in a regional Australian city with adolescents who have chronic illness. Study explored responses of members of welfare team within secondary schools to questions

on how books are used with students experiencing issues. Findings indicated that though a formal process of bibliotherapy was not concluded in schools, its central phenomenon of reader forming a relationship with a book and then changing in some significant way as a result is a concept that most participants understood and attempted to utilize.

Karacan and Guneri (2010) examined the effect of self-esteem enrichment bibliocounseling program on the self-esteem. Out of 66 sixth grade students 24 (13 female, 11 male) were assigned as treatment group and control group. Eight week self-esteem enrichment bibliocounseling program was given to treatment group. Mixed design repeated-measures analysis of variance (ANCOVA) showed a significant increase in self esteem scores of treatment-group subjects, as measured by the Coopersmith Self-Esteem Inventory (CSEI).

Liu, Chen, Li, Wang, Mok and Huang (2008) studied the efficacy of cognitive bibliotherapy in the treatment of depressive symptoms. Sample consisted of 52 Chinese individuals from Tiwan with depressive symptom . Sample were assigned to treatment condition or delayed treatment condition. Participants were given pre-treatment and post-treatment and 3-month follow-up. Results revealed that cognitive bibliotherapy may be promising treatment option for Chinese individuals with symptoms of depression.

Shechtman (2007) studied the contribution of Bibliotherapy to the counseling of aggressive boys by novice counselor in Israel. 3 Boys from 24 classroom were randomly assigned to 1 of 3 groups, Integrative counseling (IC); Integrative Counseling Plus bibliotherapy (ICB), or no counseling.

Result revealed an increased empathy and reduced aggression in IC and ICB group when compared with control group. A difference between IC and ICB was found for empathy and therapist satisfaction. ICB condition, boys showed higher stages of change and had higher frequency of insight and therapeutic change compared with boys in IC condition.

Floyd, Scogin, McKendree-Smith, Floyd and Rokke (2004) studied effectiveness of individual cognitive psychotherapy and bibliotherapy on 31 community residing older adults aged 60 or above. Three month follow up study showed that bibliotherapy group improved after post treatment. Result suggested the effectiveness of both individual psychotherapy and bibliotherapy in treatment of depression in older adults.

Shechtman (2000) tested the effectiveness of an intervention designed to reduce aggressive behaviour of adolescent children . 70 special education student's behaviour problem in 5-9 grades living in Israel were taken as sample. A short-term multidimensional programme utilizing bibliotherapy and classifying process was introduced and was found to be effective in promoting behaviour adjustment and reducing aggression.

Shechtman (1999) tested the effectiveness of utilizing bibliotherapy or its primary mode of intervention on the aggressive boys. The effectiveness of treatment was tested in single subject design by comparing treatment children and their matched counterparts. Results showed reduced aggression in treatment children than control children by self and teacher report. Result also showed increased constructive behaviour in group of all participants.

Long, Rickert and Aschcraft (1993) investigated the effectiveness of bibliotherapy as an adjunct to stimulant medication in the treatment of children with ADHD. Subjects were randomly assigned as experimental group and control group. Parents of experimental group were given a written protocol (bibliotherapy) outlining behavioural techniques for managing oppositional child behaviour. The results revealed significant difference favouring the experimental group on standardized measures of the intensity of behaviour problems in the home, parental knowledge of behavioural principles and teacher rating of behaviour. Bibliotherapy approach is an inexpensive adjunct to stimulant medication in the treatment of ADHD when individual or group behaviour management training is not feasible.

Studies on Muscle Relaxation

In an experimental study conducted by Flora, Monir, Bitra and Shahnaz (2013). 40 girls students of 7th grade were selected using random cluster sampling from one middle school in Tehran and divided into test and control groups by random assignment. Initially they were assessed by working memory capacity test. Then the test group through 12 educational sessions (one hour sessions, 3 sessions per week) was taught relaxation techniques, and no such education was given to control group. Upon completion of educational sessions, both experimental and control groups were assessed again with the working memory capacity test. In the case of academic achievement, the grade point average of the first semester for pre-test were used. multivariate analysis of covariable showed that relaxation training increase working memory capacity and its components, storage and processing

and academic achievement. Therefore, relaxation training is a useful technique for student progress.

Regehr, Glancy and Pitts (2013) conducted a systematic review of literature and meta-analysis to examine the effectiveness of interventions aimed at reducing stress in university students. Twenty four studies including 1931 students included in meta-analysis, cognitive, behavioural and mindfulness interventions were found to be effective in reducing stress of university students was revealed by the study.

Srilekha, Soumendra and Chattopadhyay (2013) conducted a study on sixty-four primary school going boys of the Indian sub-continent in the age range of 9-12 years having high trait anxiety and attention-deficits. Half of the sample were taken from residential school in Bangladesh and the other half from residential school in India. The experimental group was given abbreviated Progressive Muscle Relaxation and the control group was given no intervention. Both groups were given pre-intervention assessment of attentive capacity, electrical muscle potentiality and different variables of conductance measure. There after experimental group were introduced to the training of APMR for 5 mins/day; three days/week for a period of two months during the afternoon sessions under the guidance of a qualified and trained instructor. The result revealed that long-term, practice of APMR was effective in reducing anxiety level and in developing better attentive capacity in the children of both countries, who are exposed to respective intervention.

Ricks, Naquin, Vest, Hurtt and Cole (2011) provided stress management techniques via podcasts in health and stress classes. Seven techniques were

practiced for seven days statistically significant increases in relaxation was reported for five of the seven techniques positively. Self reports included perceptions of decreased stress symptoms after practicing the strategies.

Dehghan-nayeri and Adib-Hajbaghery (2011) studied the effect of relaxation techniques on anxiety and the quality of life of female dormitory students. A non randomized controlled trial was conducted on 200 students of 4 female dormitories. 200 students of four dorms of Tehran University of Medical Sciences were randomly allocated to the experimental and control groups. The tools used were the Spielberger Inventory and a modified version of WHO quality life questionnaire. After two months relaxation technique for experimental group post test was conducted on both groups. Significant differences between anxiety and quality of life was noticed for the two groups after the intervention and overall quality of life score was significantly higher in experimental group.

Larson, El Ramahi, Conn, Estes, and Ghibellini (2010) conducted a study on 177 third grade students of two Midwestern public elementary schools to reduce the negative effect of self perceived test anxiety. Students at one school were taught relaxation techniques while control group received no training. The Westside test anxiety scale, elevator breathing and guided relaxation were the tools used. The result showed that the relaxation intervention had a significantly reduce test anxiety.

Balaram and Nagendra (2010) investigated the effect of two year based relaxation techniques namely cyclic meditation (CM) and spine rest (SR) using the six letter collection task (SLCT). The sample of 208 school students

(132 boys, 76 girls) of 13-16 years were assessed on SLCT before and immediately after both yoga based relaxation techniques. The net score change in CM session was significantly larger than the change in SR. After the practice, the total and net scores showed significant increase, inspite of gender and age. As assessed by SLCT, CM & SR led to improvement in performance but the change caused by CM was greater than SR.

Agree, Danoff-Burg, and Grant (2008), studied a sample of forty three adults from the community and randomly assigned five week Mindfulness Mediation Course MM (n=19) or PMR (n=24) courses. After responding to flyers and other advertisements for a free stress management course there existed statistically significant reduction from pre treatment to post treatment in general psychological distress for both groups.

Winterdyk, Ray, Lafave, Flessati, Huston, Danelesko and Murray (2008) tested the effectiveness of four distinct mind/body interventions on reported perceived stress, anxiety and health promoting behaviours in college students. There were four experimental group namely nutritional, exercise, relaxation or cognitive behavioural therapy. There were almost 18 students per experimental group and 18 students in control group. the tools used were The Symptom Checklist-90-Revised (SCL-90) Spielberger State-Trait Anxiety Inventory (STAI). ANOVA results showed that all the mind/body training methods proved to assist college students in their perceived levels of stress.

Bussone, Grazzi, D'Amico, Leone, and Adrasik (1998) conducted study on Juvenile tension-type headache sufferers by randomly assigning them to biofeedback assisted relaxation or relaxation placebo and followed one year.

After treatment, both groups showed reduced headache (approximately 50%). Over time, children receiving biofeedback assisted relaxation continued to improve and were superior to the control condition at a 6 and 12- month follow-up (86% versus 50%) over time.

Larson and Carlsson (1996) conducted study on 26 (10-15 years old) school children with chronic tension-type headache by randomly assigning to a school based nurse administered relaxation training and no treatment condition. Results revealed that headache activity in the children treated with relaxation training was scientifically more reduced than among those in the no-treatment control group at post-treatment as well as the 6 month follow up.

Doan, Plante and Michael (1995) studied a sample of 52 undergraduate students who were randomly assigned to: aerobic exercise, relaxation training or control (i.e., magazine reading) to compare effect of these activities on coping with test taking anxiety. Anxiety measured three times during the experiment using an abbreviated version of the multiple affect adjective checklist and found that aerobic exercise and relaxation training were associated with reduction of general and test taking anxiety.

Kiselica, Baker, Thomas and Reedy (1994) found the effectiveness of preventive stress inoculation program consisted of progressive muscle relaxation, cognitive restructuring and assertiveness training for adolescents (n=48). Significantly greater improvement on self report measures of trait anxiety and stress related symptoms were shown by experimental group.

Kwako (1981) studied a sample of 16 hyperactive, learning disabled 16 boys (8 to 12 years old) from a private school providing special education

was assigned randomly into an experimental and control group to study the effectiveness of a relaxation therapy program. Relaxation procedures Jacobson and Bruno were done twice weekly for 11 weeks during 20 minute sessions. The developmental test of visual-motor integration, motor accuracy subtest of Southern California, Sensory Integration Tests, Abbreviated Parent and Teacher Questionnaire, House-Tree Person Test and Sophistication of Body Concept Scale were used to the study. Result concluded that relaxation therapy has a direct effect upon the hyperactivity syndrome.

Summary of Related Studies

Related Studies on Academic Stress

Year	Author/s	Title of the Study	Major Findings
2014	Lin & Huang	Life Stress and Academic Burnout	Students who have self identity stress, interpersonal stress and academic stress could jointly predict student academic burnout.
2014	Perera and McIlveen	The role of optimism and engagement coping in college adaptation: A career construction mode	The relationships of optimism with academic and psychological adaptation were mediated by engagement coping.
2014	Jameson	The effect of hardiness educational intervention on hardiness and perceived stress of junior baccalaureate nursing students	Students who participated in a hardiness intervention showed decrease in perceived stress.

Year	Author/s	Title of the Study	Major Findings
2013	Kiand, Andrews, Steen, Supple and Gonzalez	Socio-economic stress and academic adjustment among Asian American adolescents: The protective role of family of obligation	Socio-economic stress is associated with poor academic adjustment. Adolescents reporting more family obligations experienced less of the negative effects of financial stress on academic outcome than those reporting lower obligations.
2013	Kim, Yang, Ae.Jung and Lin	Academic stress levels were positively associated with sweet food consumption among Korean high-school students.	Students with high stress level had larger meals and had higher frequency of sugar intake from the following food types confectionaries, Candies, Chocolate, breads, and flavoured milk.
2013	Ming-Te and Jacquelynne	School context, achievement motivation and academic engagement: A longitudinal study school engagement using a multi-dimensional perspective	Students perceptions of the school environment influenced their achievement motivation and inturn influenced all three types of school engagement namely behavoiural, emotional and cognitive.
2013	MoghimIslam, Jafari and Hosseini	Impact of stress management training on the girl high school students academic achievement	Stress management training can lead to students achievement.

Year	Author/s	Title of the Study	Major Findings
2013	Sciffge-Krenke, Persike, Keraman Cok, Herera, Rohail, Macek and Hyeyoun	Stress with parents and peers: How adolescents from six nations cope with relationship stress.	Peer related stress was reported more by female adolescents.
2012	Foret, Scult, Wilcher, Chudnofksy, Malloy, Hasheminejad and Park	Integrating a relaxation response-based curriculum into a public high school in Massachusetts.	Relaxation-response based curriculum reduced the levels of perceived stress and the anxiety of the students.
2012	Fried and Chapman	An investigation into the capacity of student motivation and emotion regulation strategies to predict engagement and resilience in the middle school classroom	Students who used goal-oriented motivation regulation strategies were more likely than others to be resilient.
2012	Pederson	Stress carry-over and college student health outcomes.	Women's sleep hours are negatively associated with school stress spillover and men's sleep hours are negatively associated with family stress spillover.
2012	Talib and Zia-Ur-Rehman	Academic performance and perceived stress among university students	Perceived stress was found on an important factor that needs university administration, faculty and parents focus on effective psychoanalysis service along with stress management programme that could be useful for achieving academic success.

Year	Author/s	Title of the Study	Major Findings
2012	Yusoff	Self-efficacy, perceived social support and psychological adjustment in international undergraduate students in a public higher education institution in Malaysia	Self-efficacy has significant relationship with psychological adjustment.
2011	Elias Ping and Abdullah	Stress and academic achievement among undergraduate students in University Putra, Malaysia	Most of students stress were from their academics and there exist negative relationship between stress level and academic achievement.
2011	Liu and Lu	Longitudinal analysis of Chinese high school student's stress in school and academic achievement	Academic stress negatively predicted academic achievement.
2011	Liu and Lu	The Chinese high school student's stress in the school and academic achievement	Stress is a risk factor in students academic development.
2011	Doron, Stephan Maiano, and LeScanff	Motivational predictors of coping with academic examination.	Identified regulation and mastery approach goals made a unique positive contribution to problem focused coping.
2011	Sadaghiani	The role of hardiness in decreasing the stressors and biological, cognitive and mental reactions	There was positive correlation between stress and biological, mental and cognitive syndromes and negative correlation between components of hardiness and biological, mental and cognitive syndrome

Year	Author/s	Title of the Study	Major Findings
2011	Hasel Addhoseini and Ganji	Hardiness training and perceived stress among college students	Model hardiness training improved hardiness and decreased perceived stress level.
2011	Parto and Besharat	The direct and indirect effects of self-efficacy and problem solving on mental health in adolescents: Assessing the role of coping strategies as mediating mechanisms.	Self efficacy and problem solving were powerful direct predictors of mental health
2011	Tan & Yates	Academic expectations as sources of stress in Asian students	Parents, teachers and self expectations are sources of academic stress.
2010	Meera and Noora	Effect of life style factors on academic stress among higher secondary school students of Kerala	Life style factors affected academic stress.
2010	Muola	A study of the relationship between academic achievement motivation and environment among standard eight pupils	Student motivation to do well in exam depends on home environment.
2010	Leung, Yeung and Wong	Academic stressors and anxiety in children: The role of parental support	Academic stress was a risk factor that heightened students anxiety levels and parental emotional support was a protective factor that contributed to better mental health.

Year	Author/s	Title of the Study	Major Findings
2010	Delahaij, Guillard and Dan	Hardiness and the response to stressful situations: Investigating mediating process.	Self-efficacy mediated the relationship between hardiness and appraisal and coping style mediated the relationship between hardiness and coping behaviour.
2010	Krypel and King	Stress, coping styles and optimism: Are they related to meaning of education in student's lives?	Optimist Less Likely See education as a source of stress or as an escape.
2010	Bakker, Ormel, Verhulst and Oldehinkel	Peer stressors and gender differences in adolescents' mental health	Peer stress is likely to be associated with different mental health problems in boys and girls.
2010	Leung and He	Resourcefulness: A protective factor buffer against the academic stress of school-aged children	Students resourcefulness moderated academic stress and parental emotional support and maternal informational support contributed significantly to students resourcefulness
2009	Hystad, Eid, Laberg, Johnsen and Bartone	Academic stress and health: Exploring the moderating role of personality hardiness	Hardness was negatively associated with academic stress and number of health complaints.
2009	Sing and Bussey	The development of a peer aggression coping self-efficacy scale for adolescents	Greater self-efficacy was found to be associated with less social anxiety, cognitive depression and externalizing symptoms.

Year	Author/s	Title of the Study	Major Findings
2009	Jerusalem and Hessling	Mental health promotion in schools by strengthening self-efficacy	Individualisation of task demands, performance feedback, transparency of teachers demands and evaluation criteria are beneficial for student's school self-efficacy which is positively connected with coping stress.
2009	Pang, Villacortai, Chin and Morrison	Achievement motivation in the social context: Implicit and explicit hope of success and fear of failure predict memory for the liking of successful and unsuccessful peers	Achievement motives affect interaction and reaction towards peer and provide evidence for differential validity of implicit and explicit motives.
2008	Huan, See, Ang and Har	The impact of adolescent concerns on their academic stress	For adolescent boys and girls personal concerns were positively associated with academic stress and for girls school related concerns were also predictive of academic stress.
2007	Hampel, Meier, Kummel	School-based stress management training for adolescents: Longitudinal results from an experimental study	The students who underwent stress management training programme showed less perceived stress and more adaptive coping.
2006	Ang and Huan	Relationship between academic stress and suicidal ideation: Testing for depression as a mediator using multiple regression	Depression was a partial mediator in reducing the relationship between academic stress and suicidal ideation.

Year	Author/s	Title of the Study	Major Findings
2006	Ooi, Ang, Fung, Wong and Cai	The impact of parent-child attachment on aggression, social stress and self-esteem.	Higher quality of parent-child attachment was associated with lower levels of parent-rated aggressing, lower level of social stress and higher levels of self esteem.
2006	Chong, Huan, Yeo and Ang	Asian adolescent's perception of parent, peer, and school support and psychological adjustment: The mediating role of dispositional optimism.	Positive supportive relationship with parents, peer, school and optimism influence the psychological well-being of adolescent.
2006	Huang, Yeo, Ang & Chong	The influence of dispositional optimism and gender on adolescents' perception of academic stress	Negative relationship exists between optimism and academic stress.
2005	McGeorge Samter and Gillihan	Academic stress, supportive communication and health	Informational support decreased academic stress and depression.
2004	Lepine, Lepine and Jackson	Challenge and hindrance stress: Relationship with exhaustion, motivation to learn and learning performance	Hindrance stress was negatively related to motivation to learn, challenge stress was positively related to motivation to learn and motivation to learn was positively related to learning performance.

Year	Author/s	Title of the Study	Major Findings
2002	Torsheim and Wold	School-related Stress, support and subjective health complaints among early adolescents: A multilevel approach	Shared school class contextual factors have stress moderating effect on adolescent health complaints.
2003	Beasley, Thompson and Davidson	Resilience in response to life stress: The effect of coping style and cognitive hardiness	Cognitive hardiness moderated the effects of emotional coping on adverse life events on psychological distress.
1999	Credit and Garcia	A study of relaxation techniques and coping skills with moderately to high stressed middle and high school students	Stress management program including role-play, problem solving, worksheets and stress log indicated that students internalized coping techniques for stress.
1990	Rajendran and Kaliappan	A factorial study of source of students academic stress	Academic stress is found to be the outcome of personal inadequacy, fear of failure, interpersonal difficulties and lack of study facilities.

Related Studies on Bibliotherapy

Year	Author/s	Title of the Study	Major Findings
2014	Eliasa and Iswanti	Bibliotherapy with the career topic to increase the students career motivation of guidance and counseling	Bibliotherapy within career topic could be developed to overcome the career problems, especially career motivation.
2014	Sharma, Sood, Prasad, Loehrer, Schroeder and Brent	Bibliotherapy to decrease stress and anxiety and decrease resilience and mindfulness: A pilot study.	Improvement in perceived stress, resilience, mindfulness anxiety and quality was observed after giving bibliotherapy.

Year	Author/s	Title of the Study	Major Findings
2013	Scogin, Fairchild, Yon, Welsh and Presnell	Cognitive bibliotherapy and memory training for older adults with depressive symptoms	Cognitive bibliotherapy is a treatment for depressive symptom.
2011	Carlbring, Maurin, Sjomark, Maurin, Westling, Ekselius, Cuijpers and Anderson	All at once or one at a time? A randomized controlled trial comparing two ways to deliver	Bibliotherapy was found effective for panic disorders.
2011	Muto, Hayes, and Jeffcoat	The effectiveness of acceptance and commitment therapy bibliotherapy for enhancing the psychological health of Japanese college students living abroad	Acceptance and Commitment Therapy (ACT) self help book improved mental health and psychological flexibility of Japanese International Students.
2011	Oshioste and Marie-Louse	The role of bibliotherapy in value system formation by undergraduates in the University of Ibadan, Nigeria.	Bibliotherapy has significant determining influence on value system formation of undergraduates.
2010	Betzalel and Shechtman	Bibliotherapy treatment for children with adjustment difficulties: A comparison of affective and cognitive bibliotherapy	Affective Bibliotherapy and cognitive bibliotherapy reduced social anxiety and affective bibliotherapy reduced adjustment symptoms and was found to be more effective.
2010	Harvey	Bibliotherapy use by welfare teams in secondary colleges.	Understood and attempted to utilize bibliotherapy.

Year	Author/s	Title of the Study	Major Findings
2010	Karacan and Guneri	The effect of self-esteem enrichment bibliocounseling program on the self-esteem of sixth grade students	Bibliocounseling was found to be effective in self-esteem enrichment
2008	Liu, Chen, Li, Wang, Mok and Huang	Exploring the efficacy of cognitive bibliotherapy and a potential mechanism of change in the treatment of depressive symptoms among the Chinese: A randomized controlled trial.	Bibliotherapy is a promising treatment for Chinese individual with depressive symptom.
2007	Shechtman	The contribution of bibliotherapy to the counseling of aggressive boys.	Integrative counselling and bibliotherapy revealed that it increased empathy and reduced aggression.
2004	Floyd, Scogin, Mckendree-Smith, Floyd and Rokke	Cognitive therapy for depression: A comparison of individual psychotherapy and bibliotherapy for depression older adults	Psychotherapy and Bibliotherapy are effective in treatment of depression.
2000	Shechtman	An innovative intervention for treatment of child and adolescent aggression: An outcome study	Short-term multidimensional program using bible and classifying process promoted behavioural adjustment and reduced aggression.
1999	Shechtman	Bibliotherapy: An indirect approach to treatment of childhood aggression	Bibliotherapy reduced aggressive behaviour

Year	Author/s	Title of the Study	Major Findings
1993	Long, Rickert and Aschraft	Bibliotherapy as an adjunct to stimulant medication in treatment of attention-deficit hyperactivity disorder	Bibliotherapy approach is an adjunct to stimulant medication in the treatment of ADHD.

Related Studies on Muscle Relaxation

Year	Author/s	Title of the Study	Major Findings
2013	Flora, Monir, Bitra and Shahnaz	Effect of relaxation training on working memory capacity and academic achievement in adolescents	Relaxation training increases work memory capacity and its components storage and processing and academic achievement.
2013	Regehr, Glancy and Pitts	Interventions to reduce stress in university students: A review and meta-analysis	Study revealed that cognitive, behavioural and mindfulness interventions were found to be effective in reducing stress of university students.
2013	Srilekha, Soumendra and Challopadyay	Effect of Muscle Relaxation Training as a function of improvement in attentiveness in children	Long term practice of Abbreviated Progressive Muscle Relaxation was effective in reducing anxiety level and in developing better attentive capacity in children.
2011	Ricks, Naquin, Vest, Hurtt and Cole	Examining the results of podcast relaxation techniques in higher education	Podcast relaxation was found to be effective in reducing stress and promoting relaxation.
2011	Dehghan-nayeri and Adib-Hajbaghery	Effects of progressive relaxation on anxiety and quality of life in female students: A non-randomized controlled trial	Relaxation exercise reduced anxiety and improved overall quality of life.

Year	Author/s	Title of the Study	Major Findings
2010	Larson, El-Ramahi, Conn, Estes and Ghibellini	Reading test anxiety among third grade students through the implementation of relaxation techniques	Relaxation had a significant effect in reducing text anxiety.
2010	Balarama and Nagendra	Immediate effect of two yoga based relaxation techniques on attention in children	Relaxation technique namely cyclic meditation and spine rest improved student's performance.
2008	Agee, Danoff-Burg and Grant	Comparing brief stress management courses in a community sample	Progressive muscle relaxation and mindfulness meditation reduced general psychological distress.
2008	Winterdyk, Ray, Lafave, Flessati, Haston, Dandeko and Murray	The evaluation of four mind/body intervention strategies to reduce perceived stress among college students.	Compare to other mind-body training methods nutritional education and relaxation response modalities produced greatest result in reducing students perceived stress.
1998	Bussone, Grazi, D'Amico, Leone, and Adrasile	Biofeedback-Assisted relaxation training for young adolescents with tension type headache: A controlled study	Biofeedback assisted relaxation was found to be an effective and durable treatment for juvenile tension type headache.
1995	Doan, Plante and Michael	Influence of aerobic exercise activity and relaxation training on coping with test taking anxiety.	Aerobic exercise and relaxation training were associated with reduction of general test talking anxiety.
1994	Kiselica, Baker, Thomas and Reedy	Effect of stress inoculation training on anxiety, stress and academic performance among adolescents	Progressive Muscle Relaxation, Cognitive restructuring and assertiveness training reduced trait anxiety and stress related symptoms.
1981	Kwako	Relaxation as therapy for hyper active children.	Relaxation therapy has a direct effect upon the hyper activity syndrome.

Conclusion

The investigator made a detailed scanning of the current and relevant related literature based on the variables: academic stress, bibliotherapy and progressive muscle relaxation. Review revealed a clear picture of the current status; different strategies involved; the method utilized; the population involved and the variables selected for those studies.

Considering the studies on Academic Stress most of the researchers made use of survey method in order to find out different areas of Academic Stress, how they predict their academic achievement, its effect on ambitious behaviour, psychological adaptation, positive coping, achievement motivation, school engagement, self-efficacy, optimism, teaching learning process, studies facilities, etc... The population studied involved college students, university students and generally high school and primary students. Most of the studies were carried out in foreign setting and only a few were conducted in India. The researchers used various stress management inventories to identify stress among students. Almost all studies revealed that there exists considerable academic stress among the studied population.

Bibliotherapy has considerable significance in various settings especially in classrooms. The investigators utilized experimental studies in order to find out the effectiveness of the therapy and the result showed that it enhance resilience, decrease stress and anxiety social problem solving skills; building society and nation oriented values, promoting treatment for depressive students, reduce aggression but in memory training it did not

produce any improvements. The students involved in the studies were varied from kindergarten to university students. The reviews on bibliotherapy helped the investigator to identify various elements for preparing the lesson frames and administering Bibliotherapy in Kerala classroom context.

The investigator made a detailed review on studies related to muscle relaxation from 1981 to 2013. Mainly experimental studies were carried out and found that it is effective for working memory capacity; reducing stress promoting relaxation, test anxiety, psychological distress, headache reduction, reduce anxiety to normal levels, trait anxiety and has a direct effect upon the hyperactivity syndrome. The population ranged from secondary to university students.

The reviewed studies helped the investigator to select the method, design, tools and population for the study. The investigator reviewed relevant studies and she could not find many studies in Indian setting especially from Kerala. A study of this kind has not taken place anywhere. So this study is a venture from the part of the investigator.

Methodology

- *First Phase- Survey*
 - *Variables of the Study*
 - *Design of the Study*
 - *Sample Selected for the Study*
 - *Tools Used for the Study*
 - *Description of Tools*
 - *Procedure of Data Collection*
 - *Statistical Techniques Adopted*
- *Second Phase- Experimentation*
 - *Variables of the Study*
 - *Design of the Study*
 - *Sample Selected for the Study*
 - *Tools Used for the Study*
 - *Description of Tools*
 - *Scoring and Consolidation*
 - *Statistical Techniques Adopted*

METHODOLOGY

The quality of the methods and methodologies adopted for the research ensures the quality and scientific status of any research process and product. The aim of any study is fulfilled through the appropriate methodology.

The present study examined the effectiveness of Bibliotherapy and Progressive Muscle Relaxation for reducing Academic Stress of secondary school students. Preparation of suitable tools, materials, collection of relevant data and statistical processing are required for hypothesis testing.

The study was conducted in two phases. The first phase of the study was a survey to find out the relevance for conducting the present study. The second phase consisted of the experimentation phase to find out the effectiveness of Bibliotherapy and Progressive Muscle Relaxation for reducing the Academic Stress of secondary school students.

First Phase- Survey

The first phase of the study was conducted under the following headings.

- Variables of the Study
- Design of the Study
- Sample Selected for the Study
- Tools Used for the Study
- Description of Tools
- Procedure of Data Collection
- Statistical Techniques Adopted

Variables of the Study

In the survey phase the views of teachers on Academic Stress Reduction Programme and views of students on Academic Stress Reduction Programme were taken as the variables.

Design of the Study

The investigator carried out a descriptive survey on teachers and students from randomly selected schools of Kozhikode district.

Sample for the Study

Sample consisted of 50 language teachers from randomly selected schools and 400 secondary school students from randomly selected schools of Kozhikode district.

Tools Used for the Study

1. Questionnaire on Views of Teachers on Academic Stress Reduction Programme (Meera & Praseeda, 2011).
2. Questionnaire on Views of Students on Academic Stress Reduction Programme (Meera & Praseeda, 2011)

Description of Tools

The investigator conducted a survey among secondary school students and high school teachers to understand whether there exists any need for stress reduction interventions in the schools. Questionnaire was used to find out the views of students and teachers on the need for a stress reduction intervention for secondary school students. Questionnaire consisted of student's version and Teacher's version. Each questionnaire consist of 15

items which is in 'Yes' or 'No' form. The questions were focused on the need for a stress reduction intervention in schools. The items were prepared by surveying the related literature and discussion with field experts. Both versions of questionnaire consisted of personal information as first part. The students version included items based on need for stress reduction whether they feel stress, is there any method in schools for reducing stress etc. In the teachers version items are based on the need for stress reduction, practical difficulties in using stress reduction interventions, present situation of children etc.

A draft questionnaire was prepared and administered on a small sample of 30 students and 10 teachers and necessary modifications were made for preparing the final questionnaire.

Example for teacher's version of questionnaire-

Eg:- Do you feel that stress can be reduced through different stress reduction activities?

Example for student's version of questionnaire-

Eg:- Do you feel that stress management programmes can be effectively given at schools?

Validity and reliability.

The content validity, face validity and predictive validity of questionnaires were ensured by the investigator. Reliability of the questionnaire was established using test-retest method and reliability co-efficient of teacher's and student's version of questionnaire are 0.67 and 0.69 respectively. Copies of questionnaires were given as Appendix I and II.

Procedure of Data Collection

The tools were administered to teachers and students and the responses were scored. The number of items scored 'Yes' was taken for analysis.

Statistical Analysis Adopted

Percentage analysis was used to analyse the data collected.

Second Phase- Experimentation

The second phase of the study was conducted under the following headings.

- Variables of the Study
- Design of the Study
- Sample Selected for the Study
- Tools Used for the Study
- Description of Tools
- Scoring and Consolidation
- Statistical Techniques Adopted

Variables of the Study

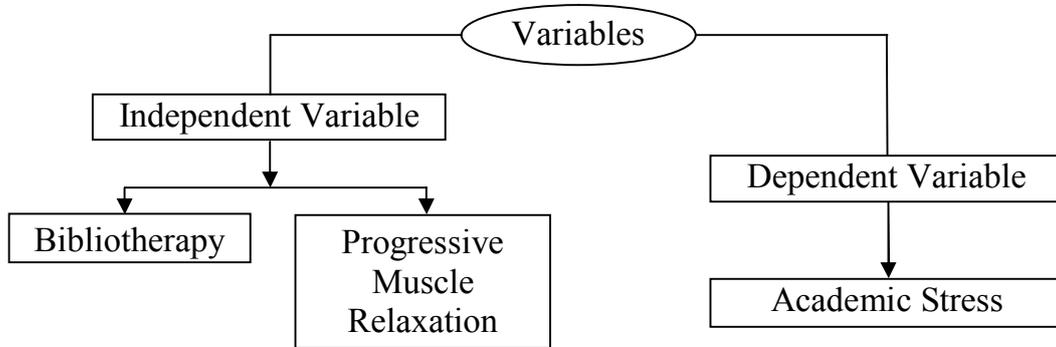
In the present study, two independent variables and one dependent variable were involved.

Independent variables.

- Bibliotherapy
- Progressive Muscle Relaxation

Dependent variable.

- Academic Stress



Design of the Study

The experimental phase was intended to find out the effectiveness of Bibliotherapy and Progressive Muscle Relaxation for reducing Academic Stress and to compare it with a control group. The design is illustrated below.

G ₁	O ₁	X ₁	O ₄
G ₂	O ₂	X ₂	O ₅
G ₃	O ₃	- -	O ₆

Where G₁ – Bibliotherapy Group

G₂ – Progressive Muscle Relaxation Group

G₃ – Control Group

O₁ – Pretest for Bibliotherapy Group

O₂ – Pretest for Progressive Muscle Relaxation Group

O₃ – Pretest for Control group

O₄ – Post test for Bibliotherapy Group

O₅ – Post test for Progressive Muscle Relaxation Group

O₆ – Post test for Control Group

X₁ – Bibliotherapy

X₂ – Progressive Muscle Relaxation

Pre-test post-test non-equivalent group design was employed. Bibliotherapy and Progressive Muscle Relaxation were given to two experimental groups and no such intervention was given to control group.

Sample Selected for the Study

For the experimental phase, the inconvenience in manipulating large sample made the investigator select sample from a school randomly selected from the list of schools selected for survey. The experimental groups and control group were selected from same school, because change in school environment may affect the Academic Stress of students. As intact classroom groups were taken random assignment of subject was not possible. Therefore three classes were randomly taken as Bibliotherapy Group, Progressive Muscle Relaxation Group (experimental groups) and Control Group. To ensure the similarity of control group with experimental group, the investigator tried to match the settings as far as possible. Only gender of students was taken as criterion for subsamples. Distribution of the sample was given in Table 4

Table 4

Distribution of Sample

Groups	Boys	Girls	Total
Bibliotherapy Group	15	15	30
Progressive Muscle Relaxation Group	15	15	30
Control	15	15	30

Tools Used for the Study

The following tools were used for the study.

1. Academic Stress Inventory (Meera & Praseeda, 2012)
2. Bibliotherapy Lesson Frames (Meera and Praseeda, 2012)
3. Bibliotherapy Lesson Frame Evaluation Proforma (Meera and Praseeda, 2012)
4. Progressive Muscle Relaxation Technique (Based on Jacobson Progressive Muscle Relaxation Technique).

Description of Tools

Academic Stress Inventory.

Academic Stress Inventory was prepared by the investigator with the help of supervising teacher for the present study. From the review of different tools for assessing Academic Stress, researcher found that those instruments were inadequate to go deep into the stressors of students concerning their academic field for the present study. So it was decided to develop an inventory especially useful to measure the Academic Stress for the purpose of present study. It was then decided to construct a tool for measuring Academic Stress based on Likert Scale format.

Planning and preparation of the tool.

Academic factors influencing the adjustment of students in academic area is considered for developing the academic stress inventory. Prior to the development of inventory, investigator met some secondary school students and had a free talk with them about the different factors that affected them in

their studies and life at school. As varieties of factors were given by the students, investigator analyzed them and grouped them regarding their nature. Most of the students mentioned about attitude of parents, and teachers, school environment, self confidence, friendship, teaching learning process and so on that create difficulties for them. From the review conducted investigator also identified certain factors adding to the academic stress of students.

Main factors that create academic stress for the students as identified by the investigator includes,

1. Personal stressors
2. School stressors
3. Family stressors
4. Peer stressors

The subcomponents of these major factors include

- Personal stressors
 - Lack of self efficacy
 - Lack of personality hardiness
 - Lack of achievement motivation
 - Lack of optimism
- Family stressors
 - Lack of parental support
 - Lack of interaction between parents and children
 - Lack of parental involvement in studies
 - Lack of study facilities at home

- School stressors
 - Lack of good teachers behaviour
 - Lack of student friendly teaching learning process
 - Lack of proper physical environment at school
 - Undesired school policies
- Peer stressors
 - Peer stress as such is taken as a component and different aspects of peer relations are included in the inventory which almost cover the areas that add to the academic distress of the students.

Personal stressors.

Lack of self-efficacy.

General self-efficacy is one's competence to cope with a broad range of stressful or challenging demands (Luszczynska, Scholz & Schwarzer, 2005). The self efficacy approach highlights way in which individuals perceive their capacities rather than the recording of actual behaviour. It focuses on beliefs that an individual holds about his/her or capacity to deal effectively with a particular situational demand. Self efficacy is the hallmark of people who judge themselves as able to handle situations that would otherwise be intimidating or overwhelming. Such people believe they have an ability to control anxiety and exercise control over potential threat. Developing self-efficacy or belief in one's own abilities to deal with stress is of considerable value.

Lack of personality hardiness.

Hardiness is a personality style associated with superior resistance to stress. Persons with hardiness have a sense of personal commitment to self,

work, family and other stabilizing values. They feel that they have control over their lives and their work. Such persons have a tendency to see life as a series of challenges rather than as a series of threats or problems, Coon (2004).

Lack of achievement motivation.

Motivational research has proposed that reaching personal goals is an important prediction of subjective well being (Martin and Tesser, 1996). When the personal goal orientation are congruent with motive disposition, they are associated with high emotional well being and vice versa. Students who are mastery-oriented are interested in self-improvement and tend to compare their current level of their achievement to their own prior achievement. Studies shows that motivation not only influence the effectiveness of learning, but that being intrinsically motivated is also associated with better well being and an increased amount of satisfaction (Ryan and Deci, 2005).

Lack of optimism.

Optimism is characterized by positive expectations of the future and has been linked to the process of coping with stress. Optimism has a profound impact on one's expectancies and therefore can serve as a useful predictor of behaviour. It is found that optimism serves as a moderator between stress and psychological well being and also has a direct impact on psychological adjustment (Krypel & King, 2010).

Family stressors.

Lack of parental support.

Lack of parental support in the studies of children affects the children and causes stress for them which leads to Academic Stress. According to Gonzales-Pienda (2002) stated that parental support criteria were developed to according to six dimensions namely, Parents expectations about their children's achievement, Parents expectations about their children's capacity to achieve important goals, Parents behaviours that reveal interest in their children's school work, Parents degree of satisfaction or dissatisfaction with their children's level of school achievement, Parents level and type of help provided when their children do homework and Parents reinforcement behaviour of their children's achievement. So lack of such parental support may affect the psychological well being of students.

Lack of interaction with parents and children.

Regarding the interaction or communication between parents and children it is striking that even limited pleasant interaction can provide a basis for development of positive self regard and helps in development of vulnerability of resilience.

Lack of parental involvement in studies.

Parental involvement takes many forms including good parenting in the home, including the provision of a secure and stable environment intellectual stimulation, parent child discussion, good models of constructive social and educational values and high aspiration relating to personal

fulfillment and good citizenship; contact with schools to share information; participation in school events; participated in the work of the school and participation in school governance. The most important finding is that parental involvement in the form of ‘at-home good parenting’ has a significant positive effect on children’s achievement and adjustment even after all other factors shaping attainment have been taken out of the equation (Desforger & Abouchaar, 2003).

Lack of study facilities at home.

Philips (2008) suggested that young people are more aggressive due to disorderly homes, catastrophic breakdown of parenting, emotional choices and absence of love and care in their disorderly homes increasingly result in aggression as their instinctive response to the slightest setback. Students do not have appropriate role models to support them. The disintegration of nuclear and extended families has led to the disappearance of formally effective support mechanism (as cited in Dave 2009). Moreover attitude of parents, and priority they give to other things such as TV, Radio and other entertainments, also adds to the home situations which induce stress in children.

Stress creating factors at school.

Lack of good teacher behaviour.

Personality, character, attitudes and observable actions are all factors that determine the effectiveness of teacher- student relationships. Students usually try to live up with a teacher’s expectations. If a teacher expects the worst of his students, they seldom disappoint him. On the other hand if he

believes in them and show confidence in their ability to become good citizens students usually justify that faith (Alcorn, Kinder & Schunert, 1970).

Lack of student friendly teaching learning process.

The formal teaching learning program sometimes fails to meet the needs of many students who represent such diversity in interest abilities and backgrounds. Where there is no immediate relief from the dissatisfaction of students with the curriculum the teacher will need to exercise the utmost imagination and ingenuity to create interest in students in the works to be done. Not only curriculum but the methods used by teachers are also important. Monotonous routines and inappropriate instructional procedures lead to behaviour problems (Alcorn, Kinder & Schunert, 1970).

Lack of proper physical environment at school.

The importance of a healthy, beautiful and refreshing environment which soothes the eyes and refreshes the soul and where the intellectual forces of teachers and pupils function at their best is apparent when we realize that the students spend a good deal of their time in school premises (Aggarwal, 1972). Dingy, crowded and unattractive maintenance may lead to confusion and disorder. Maintenance of proper temperature, ventilation and lighting in the classroom are important for good physical and mental health of students.

Undesirable school policies.

Over disciplinary actions contribute to truancy, defiance and a tense classroom atmosphere. At the same time, well behaved children and adolescents who are given leeway in making their own decision at school

experience strong self-efficacy and this supports academic success (Deci & Ryan, 2000).

Peer relations as stressors.

Relationships are of vital importance to teenagers life. The esteem of friends and support gained from a stable friendship group is central to most young people's feelings of happiness and well being at a time when they are acutely aware of changing body image and establishing their identity in terms of personal opinions and beliefs. In their desire to be accepted as a part of an 'in' group, young people can be vulnerable to peer stress (Harries, 2006).

Item writing.

Based on the models of academic stress inventories discussion with experts and interview with students, investigator prepared the items in Malayalam for the convenience of secondary school students. The items were then given to the experts in the field for evaluation. According to their suggestions required changes were made on the items to improve their clarity and worthiness. The investigator prepared 70 items regarding various aspects of 4 major stressors identified. All the items were further scrutinized by experts.

Illustrative items from the draft inventory are the following.

Stress creating personal factors.

Lack of self efficacy.

Eg: Inability to carry out the duties assigned to me properly.

Lack of personality hardiness.

Eg: Experiencing difficulties.

Lack of achievement motivation.

Eg: Not studying the daily lessons properly.

Lack of optimism.

Eg: Lack of belief that things will happen in a good way.

Stress creating family factors.

Lack of parental support.

Eg: Unnecessary scolding and punishments of parents.

Lack of interaction between parents and children.

Eg: Lack of freedom to share my personal matters with parents.

Lack of parental involvement.

Eg: Parents are not enquiring about my difficulties in studies.

Lack of study facilities at home.

Eg: Lack of proper place at home for my studies.

Stress creating school factors.

Lack of proper physical environment of school.

Eg: Insufficient ventilation and lighting in the classroom.

Lack of good teacher behaviour.

Eg: Ridiculing of students by teachers.

Lack of student friendly teaching learning process.

Eg: Teachers are not revising difficult portions.

Undesirable school policies.

Eg: Teachers are not controlling misbehaviour in school.

Peer relationships.

Eg: Friends are avoiding me.

Mode of Responding and Scoring

The inventory was administered on secondary school students. Students were asked to read each item and have to decide how far each situation is stressful to them. Responses were made in a five point scale as very severely, severely, moderately, feebly, not at all. As the items were prepared to measure how much they are stressed all the items are given in such a way to categorize their intensity of stress. So items are not categorized as positive or negative items. The scoring pattern of the tool is as following.

Very Severely	Severely	Moderately	Feebly	Not at all
5	4	3	2	1

The total score was taken as the stress level of each subject. For a particular item (stressor) the subject may be having a maximum of 5 score or minimum of 1. The draft inventory is given in Malayalam and English as Appendix III and V respectively.

Item analysis for standardization.

The inventory in the final form was prepared by selecting statements on the basis of item analysis for which draft inventory was administered on a

sample of 370 secondary school students of Kozhikode and Malappuram districts. As it is a tool based on Likert format, discriminating power was calculated for selecting the items.

The procedure suggested by Edward (1957) was used for item analysis. The response sheet of 370 students were arranged in rank order of the obtained score. The top 27% of students and bottom 27% of students were taken as high and low group respectively. For calculating the discriminating power t-value for each item was calculated using the formula

$$t = \frac{\bar{X}_H - \bar{X}_L}{\sqrt{\frac{\sum (X_H - \bar{X}_H)^2 + \sum (X_L - \bar{X}_L)^2}{N(N-1)}}$$

\bar{X}_H = Arithmetic mean of the given item for high group

\bar{X}_L = Arithmetic mean of the given item for low group

X_H = Score of high group

X_L = Score of low group

n = number of subject in the group

The value of 't' is a measure of extent to which a given statement differentiates between the high and low groups. The item for which 't' value is greater than or equal to 1.75 was regarded as an item, which possess internal consistency (Edward, 1957). Out of 70 items only 52 were selected for including in the final test. The 't' value of all the 70 items were calculated and items having 't' value 5.25 and above only were selected for the final tool. The details of item analysis is given in Table 5.

Table 5

Details of Item Analysis of Academic Stress Inventory

Item No.	t-value	Item selected	Item No.	t-value	Item selected
1	6.32	Selected	36	1.55	Rejected
2	3.24	Rejected	37	9.89	Selected
3	14.43	Selected	38	7.09	Selected
4	6.06	Selected	39	7.68	Selected
5	9.93	Selected	40	3.26	Rejected
6	5.53	Selected	41	7.25	Selected
7	2.25	Rejected	42	8.52	Accepted
8	12.49	Selected	43	8.15	Selected
9	6.22	Selected	44	9.47	Selected
10	15.02	Selected	45	3.15	Rejected
11	2.15	Rejected	46	6.95	Selected
12	5.79	Selected	47	6.77	Selected
13	9.63	Selected	48	10.01	Selected
14	7.57	Selected	49	3.76	Rejected
15	9.46	Selected	50	7.48	Selected
16	6.28	Selected	51	6.02	Selected
17	0.79	Rejected	52	3.97	Rejected
18	11.38	Selected	53	7.12	Selected
19	9.14	Selected	54	5.94	Selected
20	9.73	Selected	55	9.74	Selected
21	2.80	Rejected	56	4.11	Rejected
22	11.85	Selected	57	5.59	Selected
23	8.80	Selected	58	6.01	Selected
24	7.09	Selected	59	6.69	Selected
25	12.32	Selected	60	2.33	Rejected
26	1.56	Rejected	61	7.06	Selected
27	9.27	Selected	62	15.39	Selected
28	9.49	Selected	63	3.81	Rejected
29	2.03	Rejected	64	6.72	Selected
30	8.24	Selected	65	3.86	Rejected
31	8.18	Selected	66	8.52	Selected
32	10.42	Selected	67	6.25	Selected
33	3.65	Rejected	68	2.80	Rejected
34	6.47	Selected	69	5.40	Selected
35	6.00	Selected	70	8.77	Selected

The distribution of item in final inventory is given in Table 6.

Table 6

Distribution of Items in the Final form of Academic Stress Inventory

Sl. No.	Components	Selected Items	Total No. of Items
1. Personal	Self-efficacy	4,9,14,19,24	5
	Hardiness	30,34,38	3
	Achievement Motivation	54,58,67	3
	Optimism	42,46,50	3
2. Familial	Parental support	5,10,15,20	4
	Interaction between parents and children	25,31,35,39	4
	Study facilities at home	43,47,51,55	4
	Parental involvement in studies	27,59,64,70	4
3. School	Teachers Behaviour	22,32,37,62	4
	Teaching learning process	41,44,48,53	4
	Physical Environment of School	1,6,12,16	4
	School policies	57,61,66,69	4
4. Peer Relations		3,8,13,18,23,28	6

Validity.

Content validity, face validity and criterion validity were established for the Academic Stress Inventory.

Content validity.

Content validity was established by evaluating the relevance of the test items individually and as a whole. Each item should represent the aspects

which was measured and as a whole the items should constitute a representative sample of the measured variable. For establishing content validity the researcher conducted informal discussion and interview with secondary school students. Review of related literature and experts in the field also contributed for establishing content validity. So it is assumed reasonably that the inventory has content validity.

Face validity.

In order to ensure face validity the statements in the inventory were prepared with least ambiguous way to assess the stress of secondary school students. It was also assessed by the experts in the field of psychology and education.

Criterion related validity.

The criterion validity of inventory was established using Academic Stress Scale developed by Taragar & Yadav (2009) as external criterion. Both the tools were administered on a sample of 40 students. Correlation coefficient through Pearson's Product Moment Correlation method was found out using the responses collected. The obtained co-efficient of correlation was 0.87.

Reliability.

The test-retest method was used to establish reliability. The test was administered on 40 students and after two weeks same test was again administered on the same subjects. The response obtained were subjected to Pearson Product Moment Correlation method and the correlation coefficient obtained was 0.81.

The final tool in Malayalam and English version along with response sheets are given in the Appendix IV and VI respectively.

Bibliotherapy Lesson Frame

From ancient times itself it has been said that stories have purgative power over the emotions of human beings. So considering the case of school students it is known fact that students are under various emotional problems that lead to various stress. Investigator also found out from a survey conducted that students are in need of some interventions to reduce their distress in academic area. As a language teacher, investigator herself felt the purgative effect and influence of different literary works. So the investigator thought about helping the students in reducing their academic stress through stories. As language teachers have so many opportunities to keep in touch with literature they can select suitable stories for their children and utilize sometimes for the well being of their students. But some sort of planning and execution is inevitable for the successful interaction of these stories as an intervention for the children to get their stress reduced. The investigator reviewed many literature and found different models of Bibliotherapy plans for using bibliotherapy in classroom context. From the different ways and methods and lesson plans and lesson frames from western literature investigator prepared a lesson frame that can be made use of by the teachers.

The most difficult task in the preparation of these lesson frames was the selection of stories and works suitable for the children. While selecting the stories some of the major things to be kept in mind. They are:

- The story should contain problem felt by the children.
- It should be according to the age level of child.
- It should be an interesting story.
- It should be a story presentable by the teacher.
- Teacher should be able to identify the outcomes that are possible from a story.
- Teacher should be able to plan different activities in the lesson frame using the story.

The teacher has to make an assessment about the stress and problems of the whole class or an individual student and have to select a story and develop a bibliotherapy lesson frame for helping the students. Another important aspect is how the teacher presents the story before the students. Teacher should give the therapy in such a way that students should be attentive and should be able to identify them with the characters in the story and should be able to internalize it.

Different stories were analyzed for the purpose of preparing a lesson frame and these stories that go along with the components of Academic Stress were selected. Stories were selected using the internet facility and other sources available. After selecting many stories, again it was analyzed and only 12 stories out of many were selected. Eleven stories were selected from the book '101 Healing Stories for Kids and Teens: Using Metaphors in Therapy'. One story was taken from course book of 10th standard. Stories selected were adapted in order to make it suitable for the cultural context and to satisfy the purpose intended.

Preparation of lesson frame.

Here the lesson frame is an organized collection of different stories which can support a procedure or process.

- First of all the investigator went through different stories and selected some stories which contained some of the problems related to Academic Stress of secondary school students.
- A close reading of the stories to identify the points and problems that should be emphasized in that particular story.
- Listing out the problems dealt in the story.
- Listing out the outcomes that can be offered through that story.
- Detailed reading of the story to identify the points that should be emphasized and discussed.
- Adapting the story if required.
- Preparing questions to help better comprehension and discussion.
- Planning how to present the story impressively with correct voice modulation and emotional requirement.
- Planning different activities based on the stories to enhance better understanding and thinking.
- Evaluating the activities to check whether identification and internalization takes place.
- Giving a follow up assignment to help the students reduce their stress in other similar situations in their future life and also to help their friends.

Practicing in the class.

- Casual talk between teacher and students and discussed previous days experiences.
- Teacher discussed one of the problems mentioned in the stories and asked the students about their experience.
- Teacher presented the story related to that particular problem.
- Teacher distributed copies of story to the children for their better understanding.
- Comprehensive questions based on stories were asked in order to help children understand the story in a better way and to had discussion on the topic.
- Teacher then clarified the question and doubts regarding the problems in the story with suggestions from the students.
- Teacher then related the problem in the story with similar problems if required.
- Teacher then moved on to the activities in the lesson frame for better identification of students with the characters.
- Teacher moved towards all students and interacts with them in between to collect information from them and to help them. Teacher identified a student with severe problem and suggested further therapies.
- Care should be taken that students never feel that teacher was always trying to find out a problem with them as all the students may not be feeling that particular problem at that particular time.
- Follow up activities such as assignments were given.

It should be kept in mind that teacher and students should take their own time to complete the whole process though there is time schedule. But care should be taken not to extend it for weeks. Each and every day teacher should not tell them new stories for that will be boring and will not yield the required effect. One story per week is enough for the students. The main problems and outcomes offered in the stories were given in Table 7.

Table 7

Main Problems and Outcomes Offered in the Stories

Story	Problems Addressed	Stressors	Outcomes Offered
1. Let Joe Do it	<ol style="list-style-type: none"> 1. Being put down 2. Not feeling valued 3. Doubting one self 4. Engaging in avoidance behavior 	Personal	<ul style="list-style-type: none"> • Developing self esteem • Learning to enjoy what one do • Positive self evaluation
2. Facing fears: A Teen Story	<ul style="list-style-type: none"> • Do not have power to achieve goal • Fear of what one do not know • Thinking worst of the situation • Relectant to test reality 	Personal	<ul style="list-style-type: none"> • Developing power to achieve goal • Developing willingness to experiment • Developing positive thought pattern • Avoiding false beliefs through reality testing • Learning to control thoughts

Table 7 contd...

Story	Problems Addressed	Stressors	Outcomes Offered
3. Overcoming Adversity: A Teen Story	<ul style="list-style-type: none"> • Facing tough times • Overcoming difficulties • Seeming hopelessness 	Personal	<ul style="list-style-type: none"> • Developing hardiness • Knowing attitudes can determine feelings • Knowing that not events, but how we handle the event determines the result.
4. Day to come	<ul style="list-style-type: none"> • Lack of hopefulness • Loneliness • Despair • Unwillingness to accept what cannot be changed 	Home & personal	<ul style="list-style-type: none"> • Working toward goals • Being hopeful and having optimistic thoughts. • Looking to change what can change • Accepting what cannot be changed.
5. Negotiating A solution	<ul style="list-style-type: none"> • Failure to see parent's perspective 	Home & Peer	<ul style="list-style-type: none"> • Helping to have good communication with parents. • Helping to find acceptable compromises. • Building strategies

Table 7 contd...

Story	Problems Addressed	Stressors	Outcomes Offered
6. New Friends	<ul style="list-style-type: none"> • Lack of discriminating power • Loss of old friendships • Lack of social skills • Undesirable friendship 	Peer	<ul style="list-style-type: none"> • Assessing new and old friends. • Taking interest in others. • Developing social skills • Decision making • Overcoming problems with undesirable friendships.
7. Nailing Down Anger	<ul style="list-style-type: none"> • Feeling of anger towards peer • Uncontrollable behaviours. • Feelings of powerlumes to change. • Unaware of impact of actions 	Home and Peer	<ul style="list-style-type: none"> • Anger management • Accepting consequences of behaviour • Accepting suggestions from parents • Learning about impact of actions • Creating positive alternative.
8. Finding exceptions to problems	<ul style="list-style-type: none"> • Issues with peers negative thinking • Focusing only on problems • Not seeing exceptions 	Peer	<ul style="list-style-type: none"> • Looking at positives • Seeking solutions • Finding the exception • Develop global thinking
9. Learning to discriminate	<ul style="list-style-type: none"> • Not knowing when a behaviour is appropriate or not • Confusing about double standards. 	Home	<ul style="list-style-type: none"> • Making choice about appropriate behaviour • Learning to discriminate • Ownership of behaviour • Considering needs of other and oneself.

Story	Problems Addressed	Stressors	Outcomes Offered
10. Facing a Moral Dilemma: A kid story	<ul style="list-style-type: none"> • Moral dilemma • Lack of responsibility • Telling lies • Lack of good communication with parents. • Lack of knowledge about cause and effect 	Peer & Parents	<ul style="list-style-type: none"> • Exploring personal minds standard and responsibility. • Learning to face consequences. • Learning to make considered judgement
11. Learning About Rules	<ul style="list-style-type: none"> • Neglecting rules • Being disgusted with rules and regulation • Not knowing the values of restricted freedom. 	School	<ul style="list-style-type: none"> • Explaining values of rules • Observing benefits of rules • Learning the need for school policies.
12. Tending to the Neglected	<ul style="list-style-type: none"> • Feeling neglected/uncared. • Limited choice • Boredom 	Peer & Home	<ul style="list-style-type: none"> • Learning to change what you can • Doing constructive useful things • Creating beauty giving others pleasure. • Learning to make a difference • Considering others.

Validation of Bibliotherapy Lesson Frame

Bibliotherapy Lesson Frame was evaluated in each phase of its development. After Bibliotherapy Lesson Frame was finalized it was evaluated using an evaluation proforma. The proforma was developed by

taking into account the following features of the lesson frame, Attractiveness, Appropriateness, Relevance, Applicability and Flexibility.

Attractiveness : It refers to the Attractiveness of the structure of lesson frames, appearance and format.

Appropriateness : It refers to the appropriateness according to age, knowledge level of students.

Relevance : Appropriateness of content of the lesson frames in terms of objectives, needs and purpose.

Applicability : It refers to the extent of students' involvement in the process and activities.

Flexibility : It refers to the elasticity of the content of the lesson frames.

The investigator prepared 20 items based on the above features. On consultation with experts in the field and supervising teacher, some items were modified and some were rejected. Hence the final form of tool consisted of 17 items. The number of items under each component is given in Table 8.

Table 8

List of Items in Various Components of Lesson Frame Evaluation Tool

Sl. No.	Component	Sl. No. of Items	No. of Item
1.	Attractiveness	7, 8, 9	3
2.	Appropriateness	1, 6, 10, 13	4
3.	Relevance	2, 3, 14, 15	4
4.	Applicability	4, 9, 16, 17	4
5.	Flexibility	5, 12	2

Administration of lesson frame evaluation tool.

The investigator consulted a total of 15 experts including, Professors, Associate Professors, and Assistant Professors of various universities and colleges, clinical psychologists, higher secondary school teachers and school teachers. The Bibliotherapy Lesson frames and evaluation proforma were given and adequate time was given for filling up the proforma. The responses were collected and analyzed. The panel of experts were given as Appendix IX.

Scoring and Analysis of Bibliotherapy Lesson Frame Evaluation Proforma

The respondents were asked to rate each statement in the tool on a five point scale as Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree. The frequency of different categories of responses for each statement was found and analyzed using chi-square. Test of Significance of each statement in the Proforma using Chi-square test is given in Table 9.

Table 9

Test of Significance of Each Statement in the Proforma using Chi-square Test

Sl. No.	Statements	χ^2 value
1.	Stories are suitable for the secondary school students	24.08
2.	Stories include the stressors mentioned	19.83
3.	Stories are capable of bringing out the outcomes offered	24.08
4.	The activities and stories are student friendly	19.83
5.	The whole process in lesson frames are sample	24.08
6.	The stories enjoyable and interesting	24.08
7.	Good visual clarity and design	14.83
8.	The lesson frames are appealing	14.83
9.	Lesson frame are simple in appearance	24.08
10.	The activities are interesting and appropriate	24.08
11.	The lesson frame can be easily transacted in classroom	19.83
12.	The time limit of the lesson frame are appropriate	19.83
13.	The lesson frames, are suitable for the problem felt by the students	12.16
14.	Students stress can be reduced using these stories	19.83
15.	Student will be interested in hearing these stories	24.08
16.	Students who are reluctant to participate in stress reducing physical exercises can benefit from this.	19.83
17.	Teacher can easily apply this in classroom	14.83

The calculated χ^2 value of all statements excluding statements no. 13 of the evaluation tool is significant at 0.01 level. Statement 13 is significant at 0.05 level. Hence it can be interpreted that the bibliotherapy lesson frames satisfied the given criteria. A copy of Bibliotherapy Lesson Frame and its Evaluation Proforma was given as Appendix VII and VIII respectively.

Progressive Relaxation Technique

It has been discovered by Jacobson (1934) that systematically tensing and releasing dozens of muscle groups and by learning to attend to and discriminate between the resulting sensations of tension and relaxation, a person can almost completely eliminate muscle contraction and experience a feeling of deep relaxation. Relaxation training is helpful for students to handle their tensions and stress. Successful training ensures relaxation of unwanted stress and tensions.

Procedure.

A quiet, attractive, spacious atmosphere is required for relaxation training. The environment selected was a smart classroom which can be easily modified for the purpose. The room was sufficiently lighted, with doors and windows closed to avoid sounds from outside. Curtain was used to eliminate sights from outside.

Desks were properly arranged, so that the investigator could give the Progressive Muscle Relaxation at a time for 15 students. The clothing of the students was also considered because they should be comfortable in their dress which should not be very tight or inconvenient. Glasses, watches, shoes and contact lenses were removed prior to relaxation training. The most important objective is providing maximum physical and psychological comfort.

The students were then given a brief account of what is going to be done in that Progressive Muscle Relaxation Training Programme. The students became aware of the rationale behind this Progressive Muscle Relaxation Training. They were given the sequential muscle tensioning and relaxing.

Instructions were given to the students in pleasant audible voice in a way to help all the students hear and understand the instructions. The main procedure is as follows.

The tensing of muscle starts with foot and systematically move up and ends with forehead.

At first the students were asked to take a deep breath through their nose, to hold it for a few seconds and relax. This was done for 4 to 5 times and then they were asked to concentrate on this breath taking. Then they were advised to pay attention to their whole body. Then attending to two more deep breath they were advised to start with their right foot.

- Foot- curl their toes downward so that the foot experience a tension. Hold it for a few seconds... then release it slowly...
- Calf muscles- pull their toes up towards them so that they feel their calf muscle tightened and experience a tension. Now they hold it for a few seconds... then release it slowly so that they can experience the relaxation.
- Then the thigh muscles are squeezed to create a tension and after holding it for a few seconds it is released to feel the relaxation.

These steps were repeated with the left side also.

- Folding finger to make a fist so that tension is felt on the hands and after holding it for a few seconds slowly released to feel the relaxation.
- Then holding the fist forearms are drawn upward towards shoulder to tighten the entire hand muscles. Then after holding it for a few seconds it is released slowly to feel the relaxation.

This same procedure is repeated with the left side also

- Then the buttocks were made to tense by pulling it together. After holding it for a few seconds it was slowly released to feel the relaxation.
- Suck the stomach in, to feel tensed and after holding it for a few seconds released it slowly.
- Tighten the chest by taking a deep breath, holding it for a few seconds and released it slowly.
- Raised the shoulders towards the ears to experience the tension. Held it for a few seconds and released it slowly.
- Bend the head backward and looked up the ceiling to experience tension on neck. Hold it for a few seconds and release it slowly.
- Opened the mouth wide enough to produce tension. After holding it for a few seconds released it slowly.
- Tightly shut the eye lids to experience tension on eyes. After holding it for a few seconds released it slowly.
- Raised the eyebrows as for a possible to feel tension on forehead. After holding it for a few seconds released it slowly.

For doing all these, instructions were given to the students so that they were able to complete the whole process in a sequential flow.

After the process students were asked about their experience. Students were made to share their difficulties and doubts. So that it could be cleared for further training. The whole process took 15-20 minutes. After three days practice students were asked to practice it at home. Training was given continuously for five days then it was given on alternative days.

Progressive Muscle Relaxation Procedure



Statistical Techniques Adopted for the Study

Basic descriptive statistics.

Descriptive Statistics Including Mean, Median, Mode, Standard Deviation, Skewness and Kurtosis corresponding to each variable for Total samples were calculated. The analysis was done mainly to know the nature of distribution of the variable.

Estimation of percentage.

Percentage is a part of whole expressed in hundred. percentage of sample who prefer to have stress intervention at school was converted into percentage.

Comparison of means.

Test of significance of difference between the mean scores of two experimental groups and control group were calculated to compare the mean pretest, mean post-test scores and mean gain scores between experimental and comparison groups. For large sample.

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S_1^2}{N_1} + \frac{S_2^2}{N_2}}}$$

Where, \bar{X}_1 = Mean of I group

\bar{X}_2 = Mean of II group

N_1 = Number of cases in group I

N_2 = Number of cases in group II

S_1^2 = Number of cases in group I

S_2^2 = Number of cases in group II

For small sample

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{(N_1 - 1)S_1^2 + (N_2 - 2)S_2^2}{N_1 + N_2 - 2}}}$$

Where, \bar{X}_1 = Mean of group I

\bar{X}_2 = Mean of group II

S_1 = Variance of group I

S_2 = Variance of group II

N_1 = No. of cases in group I

N_2 = No. of cases in group II (Best & Khan, 2006)

Analysis of Variance.

Analysis of variance make it possible to determine whether various mean differ significantly with a single test. Here ANOVA is used to test whether the higher secondary school students different in their Academic Stress.

The calculation of F- involves finding the mean of the deviation from the mean square. Thus between group variance is more commonly referred to as mean square between (MS_b) and within group variance is more commonly referred as mean square within (MS_w).

Thus for computing F the formula is $F = \frac{MS_b}{MS_w}$

Where MS_b is mean squared between

MS_w is mean squared within

Scheffé Test of Multiple comparison (Ferguson, 1976) was done to compare the relevant category of independent variable in relation to the mean scores of Academic Stress.

ANCOVA.

Single factor ANCOVA is used to study the relative effectiveness of Bibliotherapy and Progressive Muscle Relaxation on Academic Stress after controlling pretest scores as covariate. The experiment was conducted using intact classroom. So the initial status difference has to be removed and for this the investigator employed ANCOVA with the data in order to statistically equate the pre-experimental status of the groups in terms of the selected dependent variables. To carry out ANCOVA procedure the major assumption suggested by Ferguson (1976) was checked.

Bonferroni's Test of Post-Hoc Comparison was conducted to check whether significant difference exists between the adjusted mean scores after employing ANCOVA.

Effect Size Cohen's d.

The degree to which the phenomenon is present in the population is represented by Effect Size. It describes the magnitude of the difference between two groups

$$\text{Cohen's } d = \frac{\bar{X}_1 - \bar{X}_2}{SD_p} \text{ where } SD \text{ pooled} = \frac{SD_{\text{grp1}}^2 + SD_{\text{grp2}}^2}{2}$$

Whether the experimental groups outperformed the control group is calculated using Cohens' d. Cohen (1988) proposed rules of thumb for interpreting effect size:

Small effect size is 0.20

Medium effect size is 0.50

Large effect size is 0.80

Result and interpretation of the analysis conducted is given in Chapter IV.

Analysis

- *Analysis of Data from Phase One*
 - *Percentage Analysis*
- *Analysis of Data from Phase Two*
 - *Preliminary Analysis*
 - *Major Analysis*

ANALYSIS

The main thrust of the present study is to determine the effectiveness of Bibliotherapy and Relaxation Exercise on Academic Stress of secondary school students. The investigator analyzed the collected data to examine effectiveness using the statistical techniques such as Test of significance of difference between means, and single factor ANCOVA treating pretest scores as covariate.

In the first phase of the study a survey was conducted among secondary school teachers and secondary school students to find out the percentage of students and teachers who prefer the need for stress reduction intervention in schools. Percentage analysis was the statistical technique used to analyze the collected data.

In addition to this, analysis was done to find out the difference between the means scores of experimental and control groups when Bibliotherapy and Progress Muscle Relaxation were administered.

In the present study analysis of data includes

- ▶ Analysis of Data from Phase One
 - Percentage Analysis
- ▶ Analysis of Data from Phase Two
 - Preliminary Analysis
 - Major Analysis

Major Analysis includes

- Analysis of Variance
- Mean Difference Analysis
- Analysis of Covariance

Analysis of Data from First Phase of the Study– Survey

First phase of the study included a survey conducted among secondary school students and secondary school teachers. Percentage Analysis was used to analyze the collected data.

Statement-Wise Percentage Calculation

Table 10

Percentage Analysis of Data to Find out the Views of Teachers on Academic Stress Reduction Programme

No.	Statement	% of Yes Responses
1	Do you feel that students have stress?	80
2	Is there any activity at school to reduce student's stress?	8
3	Do you feel that academic stress of students should be reduced?	96
4	Do you wish to have stress management programmes in your school?	96
5	Do you like to give stress management activities for students?	100
6	Do you feel that stress can be reduced through different stress reduction activities?	100
7	Do you know any stress management programmes or activities?	30
8	Do you feel that stress management programmes can be effectively given at schools?	96
9	Do you feel that all students should be given stress management activities?	65
10	Do you feel that only students having stress should be identified and given such stress reducing programmes?	40
11	Do you tell stories to your students?	100
12	Do you feel that stress can be reduced through proper stories?	100
13	Is it necessary to appoint special trainers to reduce stress among students?	48
14	Do you feel that teachers can reduce stress among students?	88
15	Do you feel that students are interested in hearing stories?	92

Discussion.

Teachers views on having stress reduction programmes when converted into percentage showed that majority of the teachers felt that students have stress. The response of teachers revealed that there is no activities in school to reduce the stress of students. Majority of the teachers wished to have stress reduction programmes in the schools. Almost all the teachers felt that stress can be reduced through different stress reduction activities and are willing to give stress management programmes for students.

Most of the teachers do not know any stress reduction programmes. Teachers are confident that stress reduction programmes can be effectively given in schools and most of the teachers responded that all the students should be given stress management activities. Almost all teachers tell stories to their students and are confident that proper stories can reduce stress. Most of the students felt that there is no need for special trainers to give stress reduction programmes as teachers can reduce stress among students. Most of the teachers felt that students are interested in hearing stories.

The analysis and result of data to find out the views of students on Academic Stress Reduction Programme is given in Table 11.

Table 11

Percentage Analysis of Data to Find out the Views of Students on Academic Stress Reduction Programme

No.	Statement	Percentage
1	Do you feel that you have stress?	82
2	Is there any activities in schools to reduce your stress?	40
3	Do you feel that stress of students must be reduced?	92
4	Do you wish to have stress management programmes at school?	95
5	Do you like to do stress management activities?	97
6	Do you believe that stress can be reduced through different stress reduction activities?	95
7	Do you know any stress management programmes or activities?	20
8	Do you feel that stress management programmes can be effectively given at schools?	65
9	Do you feel that all students should be included in stress management programmes?	75
10	Do you feel that only students having stress should be identified and given such stress reducing activities?	20
11	Do your teachers tell stories in your class?	10
12	Do you feel that stress can be reduced through proper stories?	74
13	Is it necessary to appoint special trainers to reduce student's stress?	61
14	Do you believe that teachers can reduce student's stress?	87
15	Are you interested in hearing stories?	99

Discussion.

Students' views on having stress reduction programmes were converted into percentage. It showed that most of the students felt stress. Response of students revealed that there is no activities in school to reduce

their stress. Majority of the students wanted to get their stress reduced and to have stress reduction programmes at school. Most of the students' response revealed their belief that, stress can be reduced through different stress reduction activities.

Most of the students do not know any stress management programmes. Majority of the students believed that Stress Management programmes can be effectively given in schools. Majority of student's response showed that they wish to have stress reduction programmes for all of them and not prefer giving such programmes only to students who were identified to have stress. Students response revealed that teachers are not telling stories to them. Most of the students believed that proper stories can reduce their stress.

Majority of students felt the need for special trainers to reduce their stress. Most of the students believed that their teachers can reduce their stress and almost all of them are interested in hearing stories.

Conclusion Derived from Analysis of Phase I

From the analysis of data obtained from the preliminary survey it can be concluded that almost all the teachers felt that students have stress and want to get it reduced from the schools. Students want stress reduction programme at schools to reduce their stress. Students are interested to hear stories and so the investigator decided to prepare intervention based on stories for one of the experimental group and another stress reducing intervention Progressive Muscle Relaxation exercise (PMR) for other experimental group.

Analysis of Data from Phase 2- Experimentation

The second phase of the study included experimentation. The samples were selected as Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group. Academic Stress Inventory was administered before and after experimentation for these three groups. The data thus obtained was subjected to preliminary analysis and major analysis.

Preliminary Analysis

The pretest scores and posttest scores of Academic Stress were subjected to statistical analysis for further statistical procedure.

Preliminary analysis of pretest scores.

The scores were tabulated and then the mean, medium, mode, standard deviation, skewness and kurtosis were calculated for total sample and subsample based on gender. The details are given in Table 12, 13 and 14.

Table 12

Indices for the Pretest Scores of the Dependent Variable for Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group (Total sample)

Groups	N	Mean	Median	Mode	S.D.	Skewness	Kurtosis
Bibliotherapy Group	30	169.47	115.50	150	40.14	0.48	-0.49
Progressive Muscle Relaxation Group	30	170.43	161.00	190	38.56	0.29	-0.76
Control Group	30	17.70	162.50	180	38.70	0.43	-0.65

Table 13

Indices of Pretest Scores of the Dependent Variable for Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group (Subsample Boys)

Groups	N	Mean	Median	Mode	S.D.	Skewness	Kurtosis
Bibliotherapy Group	15	180.53	180.00	150	35.06	0.52	-0.05
Progressive Muscle Relaxation Group	15	179.47	188.00	190	32.53	0.10	-0.36
Control Group	15	180.73	180.00	155	34.10	0.41	-0.47

Table 14

Indices of Pretest Scores of the Dependent Variable for Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group (Subsample Girls)

Groups	N	Mean	Median	Mode	S.D.	Skewness	Kurtosis
Bibliotherapy Group	15	158.40	153.00	105	43.02	0.88	0.00
Progressive Muscle Relaxation Group	15	161.40	148.00	105	42.97	0.74	-0.44
Control Group	15	160.67	148.00	148	41.51	0.86	-0.11

The P.P. Plot of the pretest scores of the academic stress for Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group for total sample and subsample boys and girls are presented in figure 2 to 10. These figures show that the variable follows properties of normal curve.

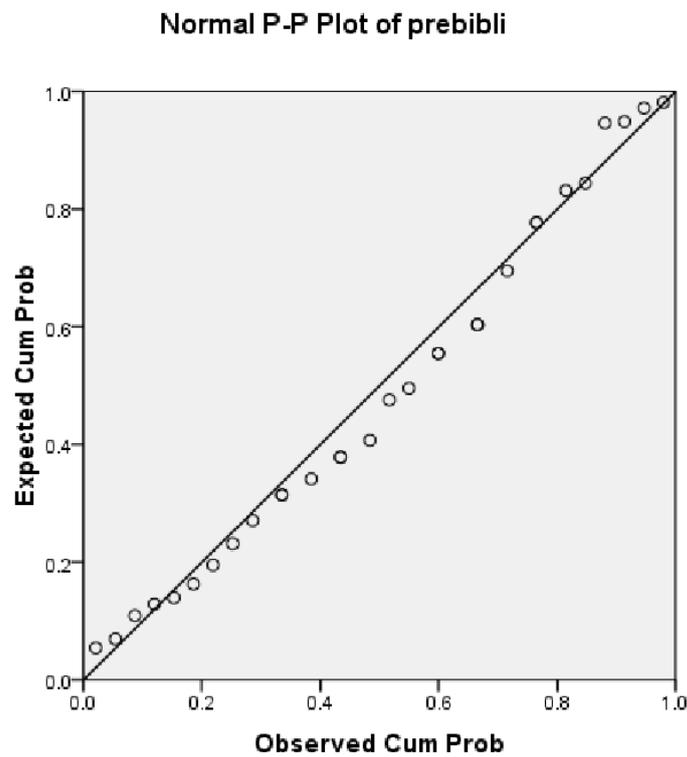


Figure 2. P.P. Plot of the pretest scores of the Bibliotherapy Group for total sample.

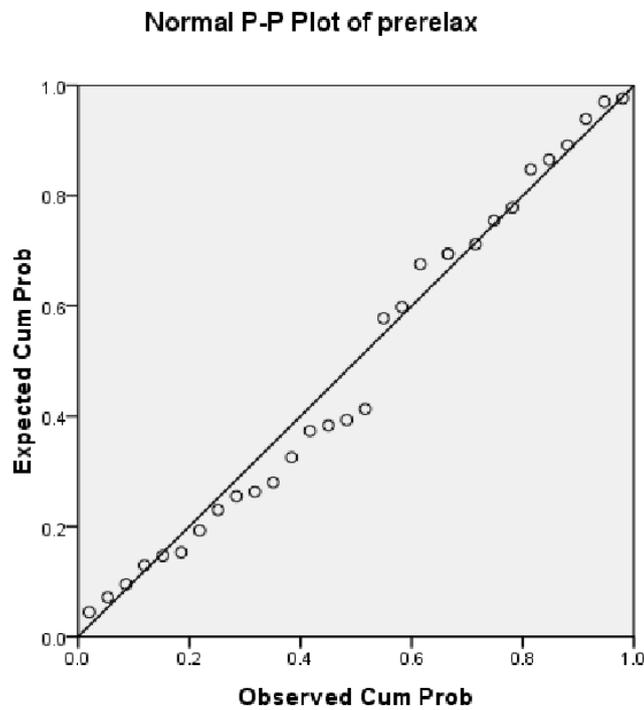


Figure 3. P.P. Plot of the pretest scores of the Progressive Muscle Relaxation Group for total sample.

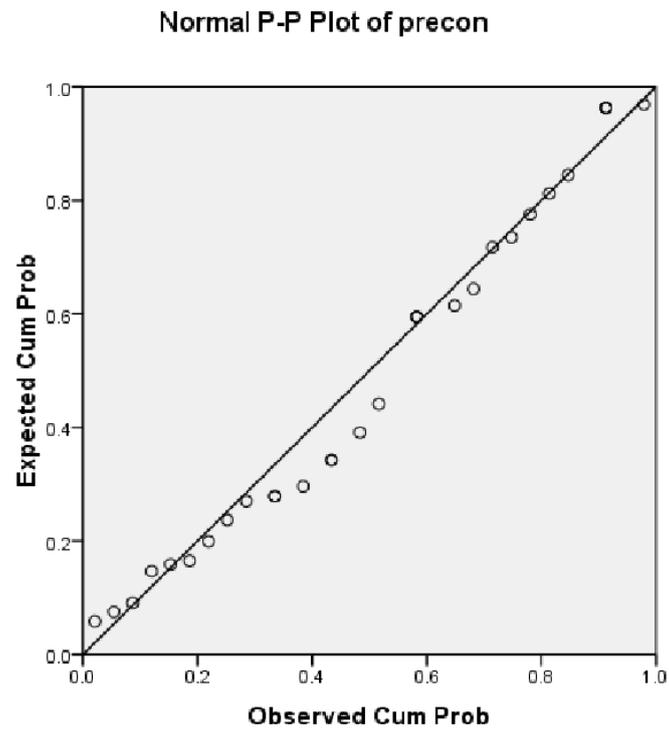


Figure 4. P.P. Plot of the pretest scores of the Control Group for total sample.

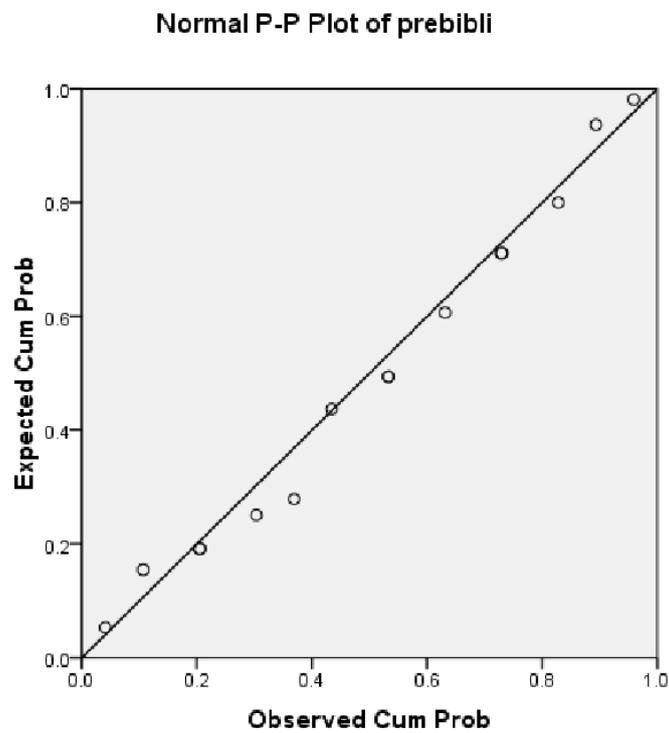


Figure 5. P.P. Plot of the pretest scores of the Bibliotherapy Group for subsample boys

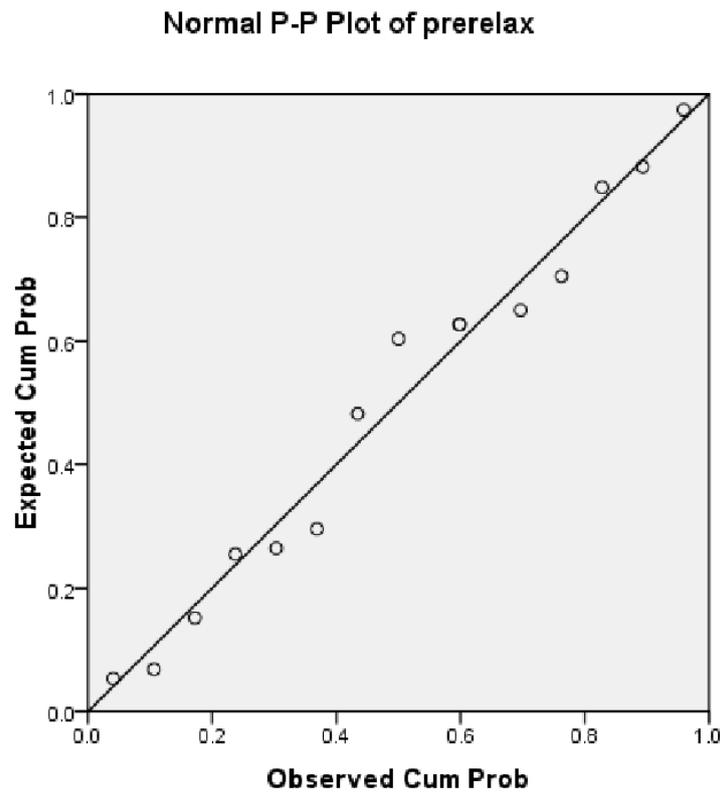


Figure 6. P.P. Plot of the pretest scores of the Progressive Muscle Relaxation Group for subsample boys

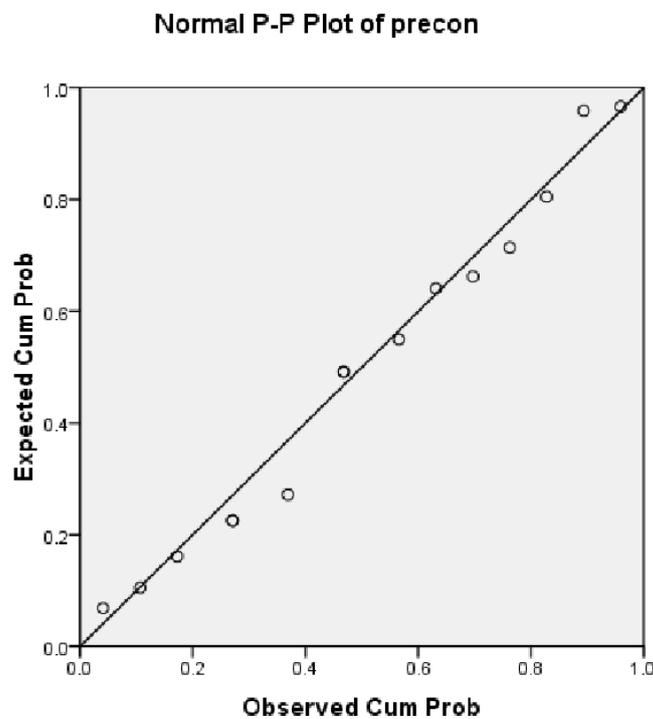


Figure 7. P.P. Plot of the pretest scores of the Control Group for subsample boys

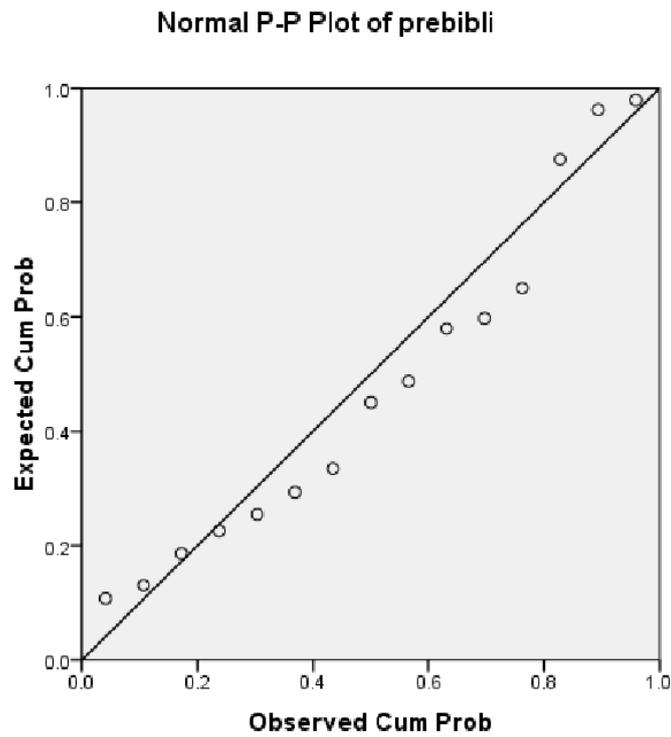


Figure 8. P.P. Plot of the pretest scores of the Bibliotherapy Group for subsample girls

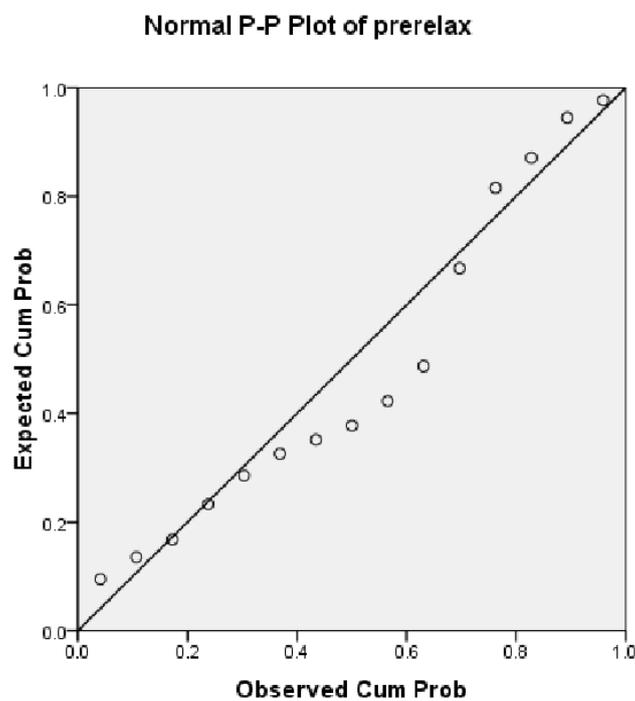


Figure 9. P.P. Plot of the pretest scores of the Progressive Muscle Relaxation Group for subsample girls

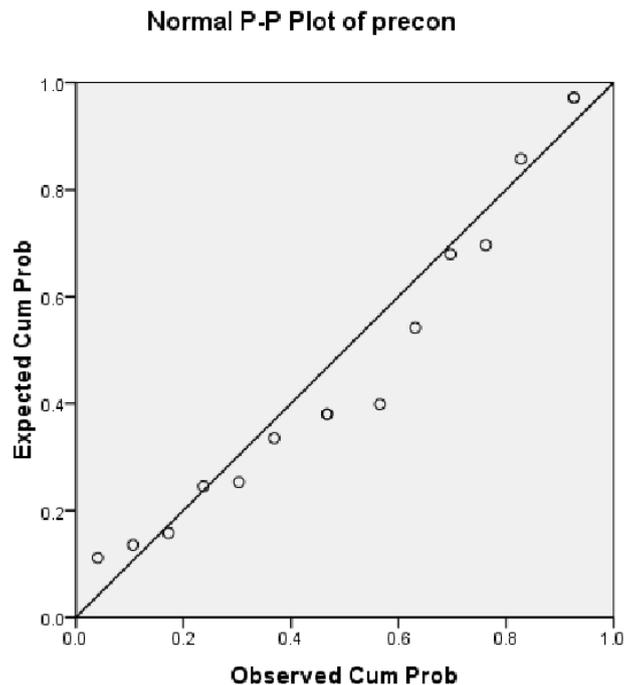


Figure 10. P.P. Plot of the pretest scores of the Control Group for subsample girls

Discussion.

The tables 12 to 14 clearly show that the arithmetic mean, median and mode of the scores of Academic Stress of two Experimental Groups and the Control Group are almost the same for total sample and subsample based on gender. The mean score of Academic Stress was higher than the scale average 156 for the two Experimental Group and subsample based on gender.

This implies that the students are with High Academic Stress. The standard deviation of academic stress scale for two Experimental Group, and Control Group for total sample and subsamples boys and girls indicates that scores are somewhat dispersed from the central value. The values of skewness and kurtosis of Academic Stress Scores for Bibliotherapy Group, Progressive

Muscle Relaxation Group and Control Group for total sample and subsamples indicated that distributions are approximately normal. Thus by analyzing the values of measures of central tendency and dispersion of scores of Academic Stress for experiment group I, Progressive Muscle Relaxation Group and Control Group for total sample and subsamples, it can be inferred that the level of Academic Stress was high for secondary school students before the treatment.

Preliminary Analysis of Posttest Scores

Posttest scores of Academic Stress of Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group for total sample and subsample boys and girls were tabulated and then the mean, median, mode, standard deviation, skewness and kurtosis were calculated. The details are given in Table 15, 16 and 17.

Table 15

Indices Posttest Scores of the Variable for Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group (Total sample)

Groups	N	Mean	Median	Mode	S.D.	Skewness	Kurtosis
Bibliotherapy Group	30	96.40	90.00	90	20.83	1.77	3.95
Progressive Muscle Relaxation Group	30	123.13	115.50	89	33.15	1.01	0.14
Control Group	30	169.80	162.50	150	39.56	0.51	0.52

Table 16

Indices of Posttest Scores of the Variable for Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group (Subsample Boys)

Groups	N	Mean	Median	Mode	S.D.	Skewness	Kurtosis
Bibliotherapy Group	15	103.67	100.00	90	25.80	1.28	1.38
Progressive Muscle Relaxation Group	15	142.33	134.00	89	35.41	0.28	1.19
Control Group	15	180.27	180.00	150	35.27	0.46	0.40

Table 17

Indices of Posttest Scores of Dependent Variable for Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group (Subsample Girls)

Groups	N	Mean	Median	Mode	S.D.	Skewness	Kurtosis
Bibliotherapy Group	15	89.13	90.00	90.00	10.98	0.07	-1.33
Progressive Muscle Relaxation Group	15	103.93	100.00	82.00	15.27	0.38	-1.00
Control Group	15	159.33	149.00	110	41.99	0.92	0.17

The P.P. Plot of the posttest scores of the academic stress for Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group for total sample and subsample boys and girls are presented in figure 11 to 19. These figures show that the variable follows properties of normal curve.

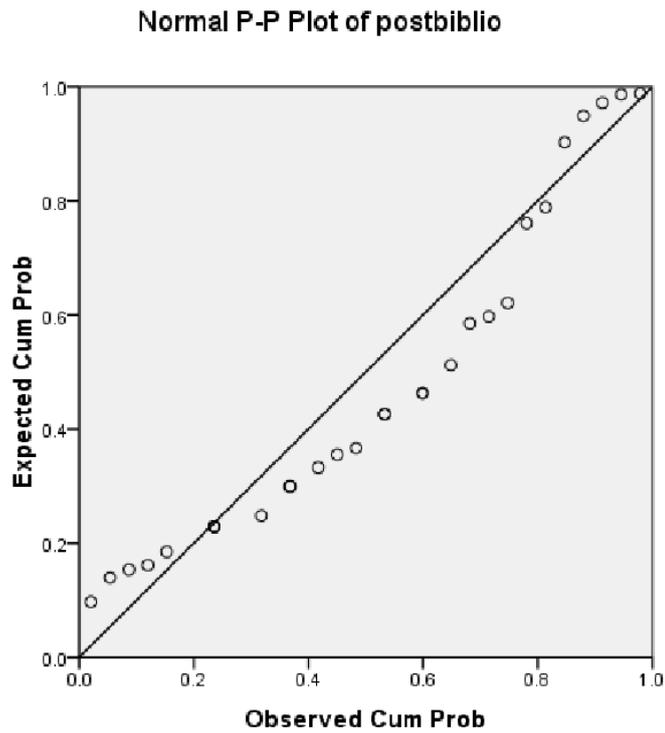


Figure 11. P.P. Plot of the posttest scores of the Bibliotherapy Group for total sample.

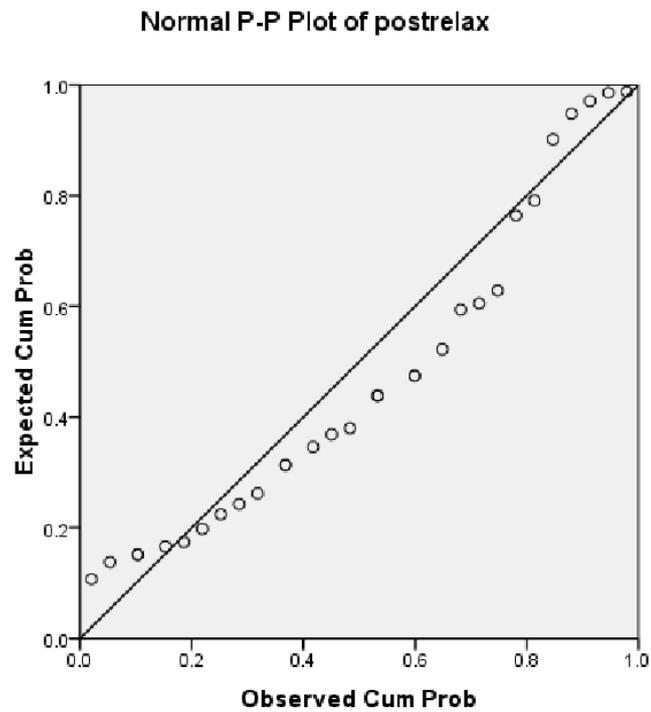


Figure 12. P.P. Plot of the posttest scores of the Progressive Muscle Relaxation Group for total sample.

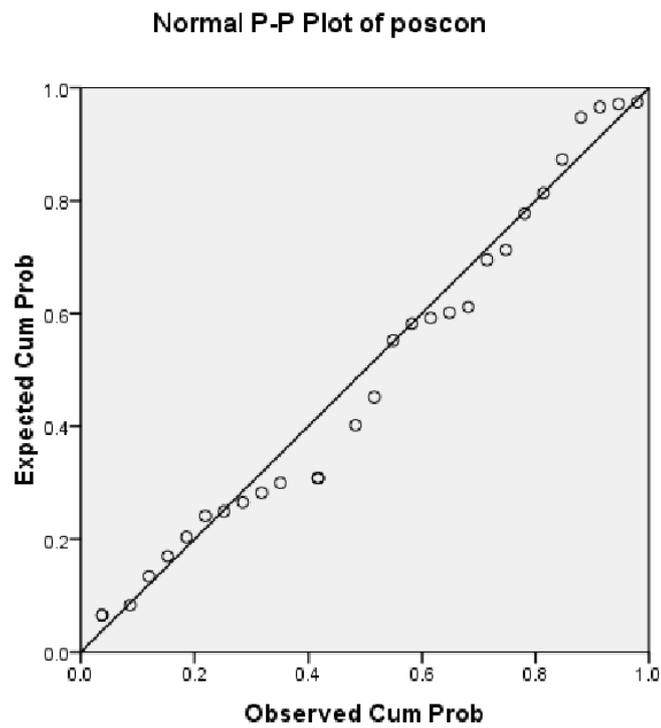


Figure 13. P.P. Plot of the posttest scores of the Control Group for total sample.

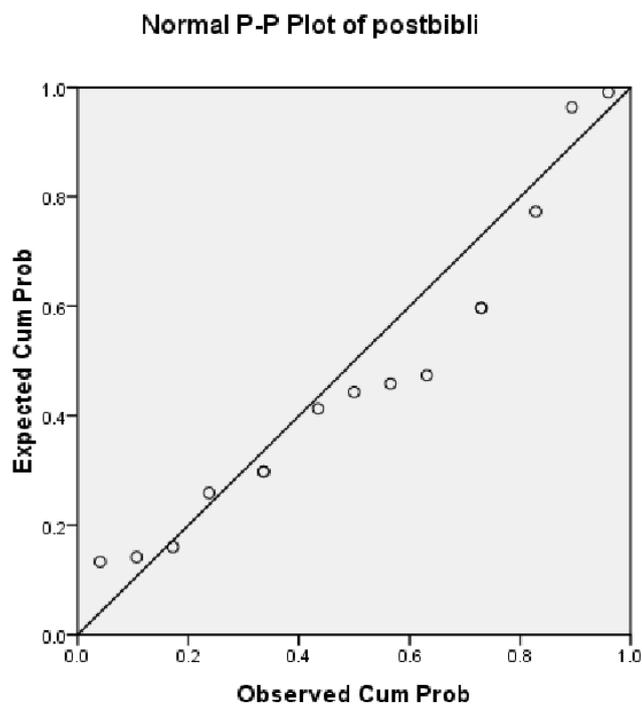


Figure 14. P.P. Plot of the posttest scores of the Bibliotherapy Group for subsample boys

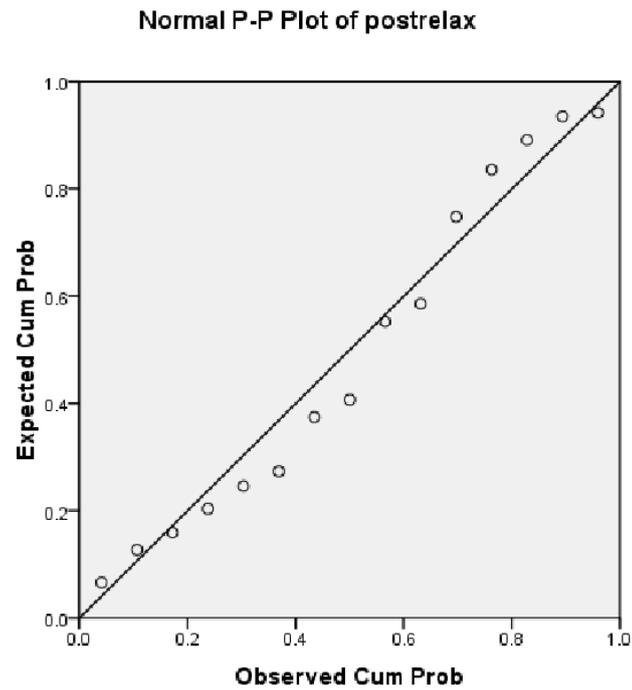


Figure 15. P.P. Plot of the posttest scores of the Progressive Muscle Relaxation Group for subsample boys

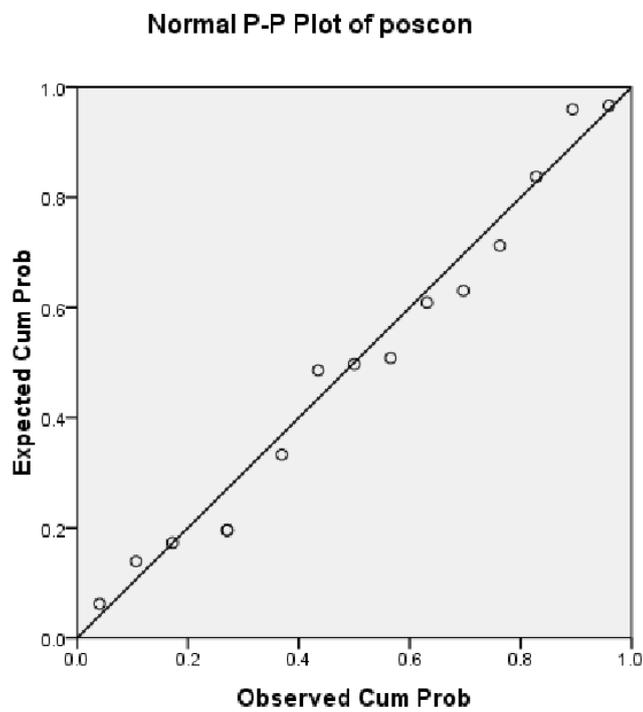


Figure 16. P.P. Plot of the posttest scores of the Control Group for subsample boys

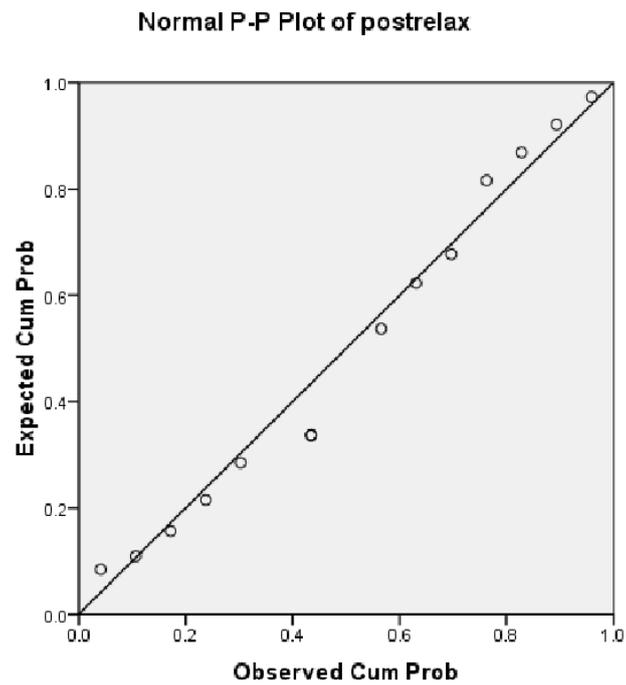


Figure 17. P.P. Plot of the posttest scores of the Bibliotherapy Group for subsample girls

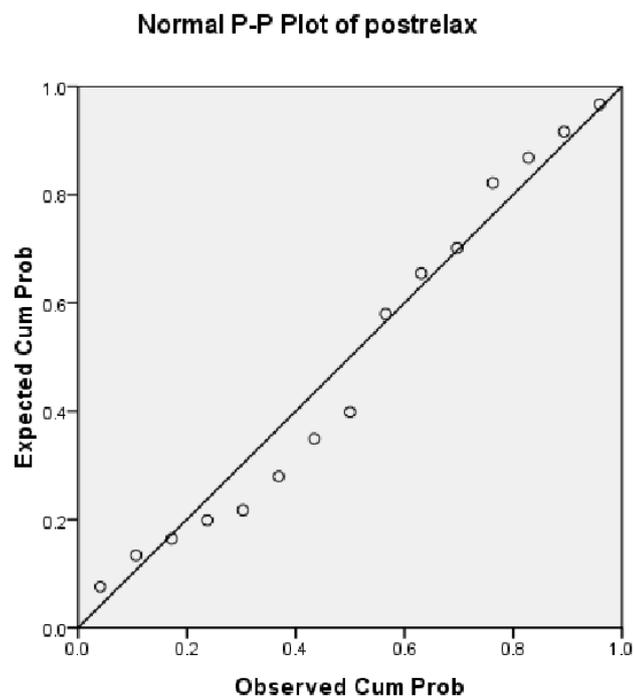


Figure 18. P.P. Plot of the posttest scores of the Progressive Muscle Relaxation Group for subsample girls

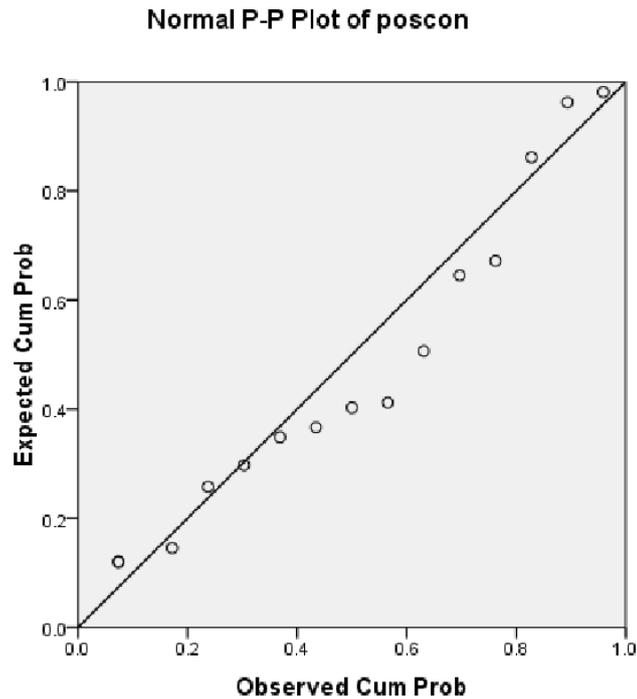


Figure 19. P.P. Plot of the posttest scores of the Control Group for subsample girls

Discussion.

The tables 15 to 17 clearly show that the arithmetic mean, mean, median and mode of the scores of Academic stress of the Experimental Groups are not having much difference. The mean scores of Academic Stress of the Experimental Groups are below the scale average 156, for the total sample and subsamples. This implies that the level of Academic Stress of secondary school students reduced after the intervention. The standard deviation of Academic Stress scores for Bibliotherapy Group indicates that scores are somewhat dispersed from the centered value. The values of skewness and kurtosis of the distributions of Academic Stress of both Experimental Groups for total sample and subsamples indicate that all distributions are approximately normal. Thus by analyzing the values of

measures of central tendency and dispersion of the scores of Academic stress of Bibliotherapy Group and Progressive Muscle Relaxation Group, for total sample and subsamples, it can be inferred that the level of Academic Stress of the students after giving Bibliotherapy and Relaxation Exercise has lowered to a very low level.

Tables 15 to 17 clearly show that the arithmetic mean, median and mode of the Academic Stress scores of the Control Group are not having much difference. The mean score of Academic Stress of the comparison group are above the scale Average 156 for total sample and subsamples. This implies that the level of Academic Stress of students has not changed considerably. The standard deviation of Academic Stress indicates that scores are somewhat dispersed from central value. The values of skewness and kurtosis of the distribution of Academic Stress for Total sample and subsamples indicates that all distributions are approximately normal. Thus by analyzing the values of measures of central tendency for total sample and subsamples, it can be inferred that the level of Academic Stress for Total sample and subsamples of Control Group has not changed considerably.

Major Analysis

In the present study mean difference analysis was conducted to compare the mean pretest scores and posttest scores of two Experimental Groups and Control Group. Difference in mean gain scores between two Experimental Groups and Control Groups on Academic Stress were also investigated. To test the effectiveness of the intervention the mean pretest and mean posttest scores of Bibliotherapy Group, Progressive Muscle Relaxation

Group and Control Group for Total sample and subsample boys and girls were investigated. The 't' value using paired t test was calculated and tested for significance.

Pre-experimental status of experimental groups and control group.

Inorder to compare the mean pretest scores of Academic Stress of secondary school students of Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group for Total sample and subsamples, the significance of difference between mean values of these groups was found out by calculating the F-ratio using Analysis of Variance (ANOVA). The details are given in Tables 18 to 20.

Table 18

Summary of ANOVA of Academic Stress Scores for Total Sample.

Source of Variance	Sum of Squares	df	Mean Squares	F
Between groups	25.27	2	12.63	
Within groups	133275.13	87	1531.90	0.008
Total	133300.41	89		

Table 18 shows Analysis of Variance conducted to compare the pretest mean academic stress scores of students in the three different groups viz., Bibliotherapy Group, Progressive Muscle Relaxation Group and Control group for total sample. There was no significant difference in the scores of Academic Stress, $F(2, 87) = 0.008$, $P > 0.05$. These results suggested that experimental and control groups were not significantly different in their Academic Stress before giving the interventions.

Table 19

Summary of ANOVA of Academic Stress Scores of Boys

Source of Variance	Sum of Squares	df	Mean Squares	F
Between groups	13.91	2	6.96	
Within groups	48252.40	42	11148.87	0.006
Total	48266.31	44		

Table 19 shows that Analysis of Variance conducted to compare the pretest mean academic stress scores of students in the three different groups viz., Bibliotherapy Group, Progressive Muscle Relaxation Group and Control group for subsample boys. There was no significant difference in the scores of Academic Stress, $F(2, 42) = 0.006$, $P > 0.05$. These results suggested that experimental and control groups for boys were not significantly different in their Academic Stress before giving the interventions.

Table 20

Summary of ANOVA of Academic Stress Scores of Girls

Source of Variance	Sum of Squares	df	Mean Squares	F
Between groups	73.38	2	36.69	
Within groups	75880.53	42	1806.68	0.020
Total	75953.91	44		

Table 20 shows that Analysis of Variance conducted to compare the pretest mean academic stress scores of students in the three different groups viz., Bibliotherapy Group, Progressive Muscle Relaxation Group and Control

group for subsample girls. There was no significant difference in the scores of Academic Stress, $F(2, 42) = 0.020$, $P > 0.05$. These results suggested that experimental and control groups for girls were not significantly different in their Academic Stress before giving the interventions.

Discussion.

Result of the ANOVA performed to estimate the significance of difference between mean pretest scores of Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group showed that there was no significant difference between the pretest scores of the three groups in the Academic Stress. This reveals that the three groups are almost equal in their Academic Stress.

Comparison of mean posttest scores of Academic Stress of Experimental and Control Group.

Details of the F-ratio calculated using ANOVA for the three groups for total sample and subsample was given in Tables 20 to 24.

Table 21

Summary of ANOVA of Academic Stress Scores of Secondary School Students for Total Sample

Source of Variance	Sum of Squares	df	Mean Squares	F
Between groups	82800.09	2	41400.04	
Within groups	89847.47	87	1032.73	40.088**
Total	172647.56	89		

** $P < .01$

Table 21 shows Analysis of Variance conducted to compare the posttest mean scores of Academic Stress of Students in the three different groups for total sample. There was significant difference in the scores of Academic Stress, $F(2, 87) = 40.088, P < 0.01$. The result suggested that experimental and control group significantly differ in their Academic Stress after giving the intervention.

In order to know which groups differ in their mean posttest score of Academic Stress, the data was further analyzed with the help of Scheffe's test of post hoc comparison and the result is given in Table 22.

Table 22

Summary of Scheffe's Test of Post-hoc Comparison with Matrix of Ordered Means of Academic Stress for Total sample

Group	Mean Score	Bibliotherapy Group	Progressive Muscle Relaxation Group	Control Group
		96.40	123.13	169.80
Bibliotherapy Group	96.40	0.00	26.73**	73.40**
Progressive Muscle Relaxation Group	123.13	26.73*	0.00	46.67**
Control Group	169.80	73.40**	46.67**	0.00

* $P < .05$

** $P < .01$

Table 22 shows that the difference between mean posttest scores of Bibliotherapy Group and Progressive Muscle Relaxation Group is 26.73 where $F = 10.38, P < 0.01$. The difference between mean scores of Bibliotherapy Group and Control Group is 73.40 where $F = 78.32, P < 0.01$. The difference between Progressive Muscle Relaxation Group and Control Group was 46.67 where $F = 31.69, P < 0.01$. From the result it can be concluded that the

difference between Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group is highly significant for the Total sample.

Details of the F ratio calculated using ANOVA for the three groups for subsample Boys was given Table 23

Table 23

Summary of ANOVA of Academic Stress Scores of Secondary School Students for Boys

Source	Sum of Square	df	Mean square	F
Between group	44008.04	2	22004.02	20.87**
Within group	44281.60	42	1054.32	
Total	88289.64	44		

** P<.01

Table 23 shows Analysis of Variance conducted to compare the posttest mean scores of Academic Stress of Students in the three different groups for subsample Boys. There was significant difference in the scores of Academic Stress, $F(2,42)=20.87$, $P<0.01$. The result suggested that experimental and control group for subsample boys significantly differ in their Academic Stress after giving the intervention.

In order to know which groups differ in their mean posttest score of Academic Stress, the data was further analyzed with the help of Scheffe's test of post hoc comparison and the result is given in Table 24.

Table 24

Summary of Scheffe's Test of Post-hoc Comparison with Matrix of Ordered Means of Academic Stress for Subsample Boys

Group	Mean score	Bibliotherapy Group	Progressive Muscle Relaxation Group	Control Group
		103.67	142.33	180.27
Bibliotherapy Group	103.67	0.00	38.67**	76.60**
Progressive Muscle Relaxation Group	142.33	38.67**	0.00	37.93**
Control Group	180.27	76.60**	37.93**	0.00

** P<.01

Table 24 shows that the difference between mean scores of Bibliotherapy Group and Progressive Muscle Relaxation Group is 38.67 where $F = 21.72$, $P < .01$. The difference between mean scores of Bibliotherapy Group and Control Group is 76.60 where $F = 85.38$, $P < .01$. The difference between mean scores of Progressive Muscle Relaxation Group and Control Group is 37.93 where $F = 21.07$, $P < .01$. From the result it can be concluded that the difference between Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group is highly significant for subsample Boys.

Details of F ratio calculated using ANOVA for the three groups for subsample Girls was given in Table 25.

Table 25

Summary of ANOVA of Academic Stress Scores of Girls.

Source	Sum of Square	df	Mean square	F
Between group	41081.20	2	20540.60	29.110**
Within group	29636.00	42	705.62	
Total	70717.20	44		

** P<.01

Table 25 shows Analysis of Variance conducted to compare the posttest mean scores of Academic Stress of Students in the three different groups for subsample Girls. There was significant difference in the scores of Academic Stress, $F(2, 42) = 29.110$, $P < 0.01$. The result suggested that experimental and control group for subsample Girls significantly differ in their Academic Stress after giving the intervention.

In order to know which groups differ in their mean posttest score of Academic Stress, the data was further analyzed with the help of Scheffe's test of post hoc comparison and the result is given in Table 26.

Table 26

Summary of Scheffe's Test of Post Hoc Comparison with matrix of ordered means of Academic Stress for Girls.

Group	Mean score	Bibliotherapy Group	Progressive Muscle Relaxation Group	Control Group
		89.13	103.93	159.93
Bibliotherapy Group	89.13	0.00	14.80*	70.20**
Progressive Muscle Relaxation Group	103.93	14.80*	0.00	55.40**
Control Group	159.93	70.20**	55.40**	0.00

* P<.05

** P<.01

Table 26 shows that the difference between mean scores of Bibliotherapy Group and Progressive Muscle Relaxation Group is 14.80 where $F = 3.20$, $P < 0.05$. The difference between mean scores of Bibliotherapy Group and Control Group is 70.20 where $F = 71.74$, $P < 0.01$. The difference between mean scores of Progressive Muscle Relaxation Group and Control Group is 55.40 where $F = 44.62$, $P < 0.01$. From the result it can be concluded that the difference between Bibliotherapy Group and Control Group and Progressive Muscle Relaxation Group and Control Group are more significant than Bibliotherapy Group and Progressive Muscle Relaxation Group for subsample girls.

Discussion of Results

Result of ANOVA performed to estimate difference between posttest scores of Bibliotherapy Group and Control Group after intervention showed that all the three groups differ significantly in the mean posttest score of Academic Stress for total sample and subsample Boys and Girls. Scheffe's test of Post hoc comparison showed that the difference was the result of difference in the mean scores of all the three groups. That is the Experimental Group given Bibliotherapy, Experimental Group given Progressive Muscle Relaxation and Control group given no intervention differed significantly in their posttest mean scores.

Group wise comparison of mean pretest scores of Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group for total sample and subsamples.

To study whether the Experimental Groups (Bibliotherapy Group and Progressive Muscle Relaxation Group), Bibliotherapy Group and Control

Group and Progressive Muscle Relaxation Group and Control Group differ significantly in their mean pretest scores of Academic Stress for Total sample when test of significance of difference between two independent groups was applied. The means and standard deviation of the pretest scores of Academic Stress of the three groups for total sample and subsample were subjected to mean difference analysis.

Result of the test of significance of difference between mean pretest scores is given in Table 27.

Table 27

Test of Significance of Difference between Mean Pretest Scores of Academic Stress of Different Groups for Total Sample

Group	N	Mean	SD	t
Bibliotherapy Group	30	169.47	40.14	0.10
Progressive Muscle Relaxation Group	30	170.43	38.56	
Bibliotherapy Group	30	169.47	40.14	0.12
Control Group	30	170.70	38.70	
Progressive Muscle Relaxation Group	30	170.43	38.56	0.03
Control Group	30	170.70	38.70	

Table 27 shows the result of t-test conducted to compare the Academic Stress mean scores between experimental groups and control group prior to the administration of Bibliotherapy and Progressive Muscle Relaxation Exercise for total sample. There was no significant difference in the mean pretest scores of Academic Stress of Bibliotherapy Group (M= 169.47, SD = 40.14) and Progressive Muscle Relaxation Group (M=170.43, SD = 38.56);

$t(58) = 0.10, P > .05$. These results suggested that the Bibliotherapy Group and Progressive Muscle Relaxation Group were not significantly different in their Academic Stress before giving the intervention. Result is presented in Figure 20.

The result is presented in Figure 20.

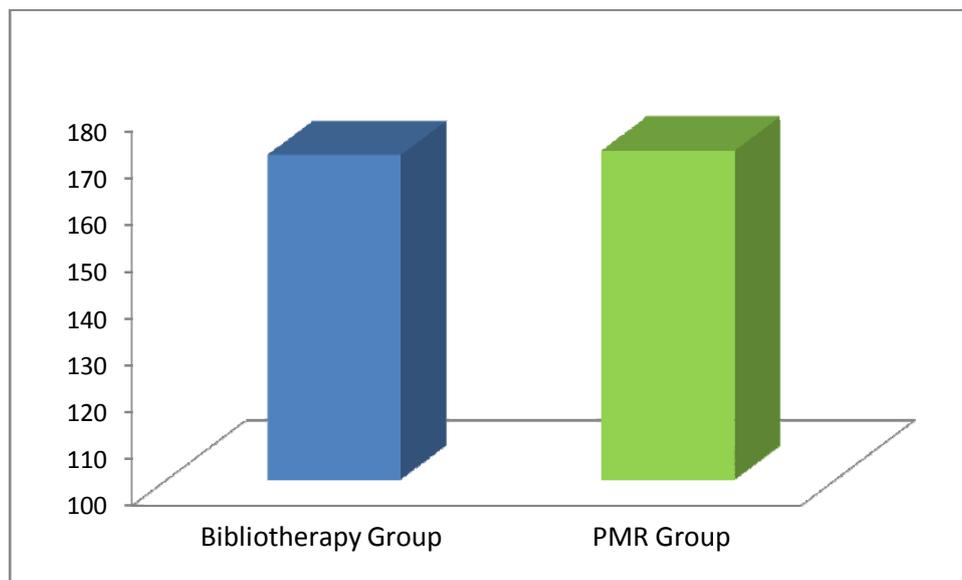


Figure 20. Pretest mean scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation (PMR) Group for total sample.

The graphical representation of mean pretest scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group shows that these two groups are similar to certain extent. The graphical observation confirms the result of mean difference analysis.

Table 27 shows the result of t-test conducted to compare the Academic Stress mean scores between Bibliotherapy Group and Control Group prior to the administration of Bibliotherapy for total sample. There was no significant difference in the mean pretest scores of Academic Stress of Bibliotherapy

Group (M= 169.47, SD = 40.14) and Control Group (M=170.70, SD = 38.70); $t(58) = 0.12, P > .05$. This means that the pre-experimental status of subjects in Bibliotherapy Group and Control Group are not significantly different in their Academic Stress before giving the intervention. Result is presented in Figure 21.

The result is presented in figure 21.

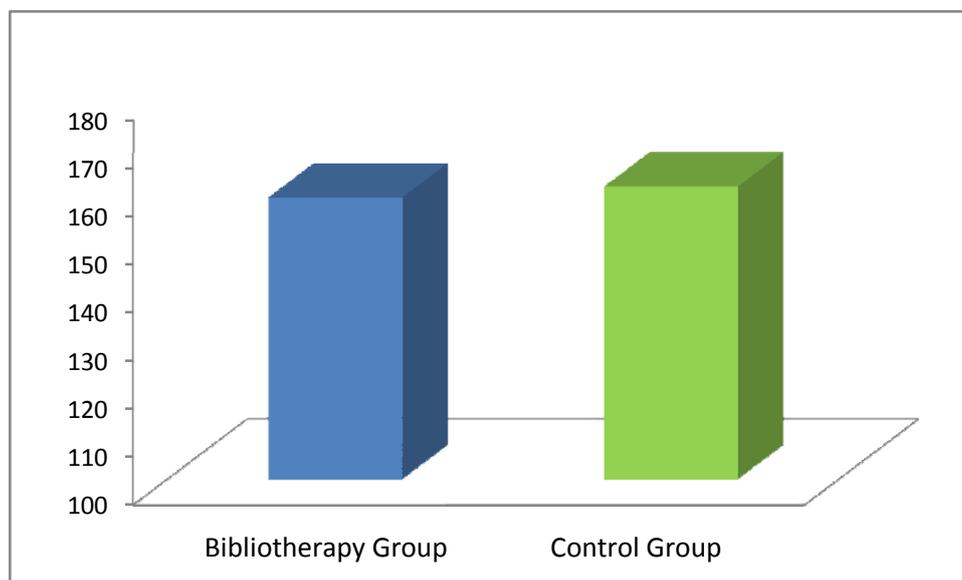


Figure 21. Pretest Mean Scores of Academic Stress of Bibliotherapy Group and Control Group for total sample.

The graphical representation of mean pretest scores of Academic Stress of Bibliotherapy Group and Control Group shows that these two groups are similar to certain extent. The graphical observation confirms the result of mean difference analysis

Table 27 shows the t-test conducted to compare the Academic Stress mean scores between Progressive Muscle Relaxation Group and Control Group prior to the administration of Progressive Muscle Relaxation Exercise

for total sample. There was no significant difference in the mean pretest scores of Academic Stress of Progressive Muscle Relaxation Group ($M= 170.43$, $SD = 38.56$) and Control Group ($M=170.70$, $SD = 38.70$); $t(58) = 0.03$, $P>.05$. This means that the pre-experimental status of subjects in Progressive Muscle Relaxation Group and Control Group are not significantly different in their Academic Stress before giving the intervention.

The result is presented in the figure 22.

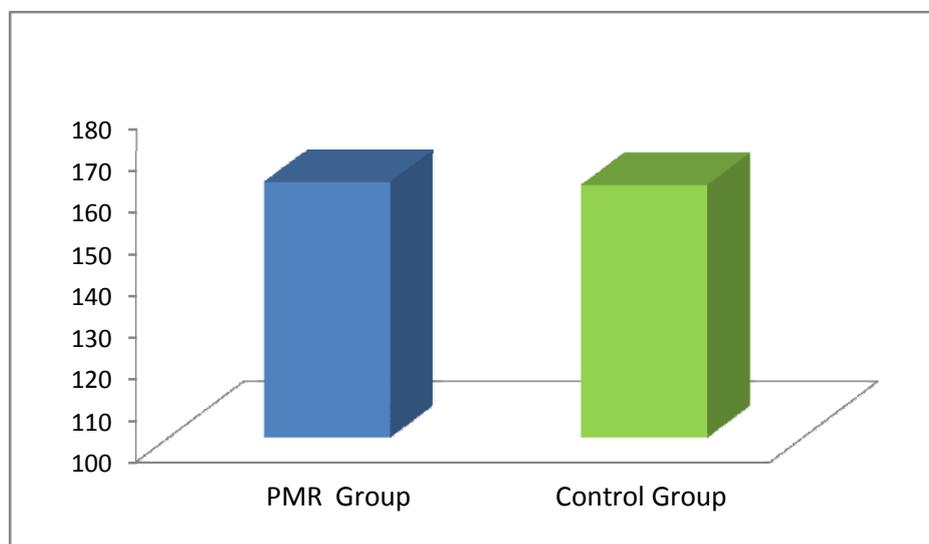


Figure 22. Pretest means scores of Academic Stress of Progressive Muscle Relaxation (PMR) Group and Control Group for total sample.

The graphical representation of mean pretest scores of Academic Stress of Progressive Muscle Relaxation Group and Control Group shows that these two groups are similar to certain extent. The graphical observation confirms the result of mean difference analysis.

Data and Results of the t-test for subsample Boys are given in Table 28.

Table 28

Test of Significance of difference in Mean Pretest Scores of Academic Stress for Subsample Boys

Group	N	Mean	SD	t
Bibliotherapy Group	15	180.53	35.00	0.86
Progressive Muscle Relaxation Group	15	179.47	32.53	
Bibliotherapy Group	15	180.53	35.00	0.02
Control Group	15	180.73	34.10	
Progressive Muscle Relaxation Group	15	179.47	32.53	0.10
Control Group	15	180.73	34.10	

Table 28 shows that the results of t-test conducted to compare the Academic Stress mean scores between Bibliotherapy and Progressive Muscle Relaxation Group prior to the administration of Bibliotherapy and Progressive Muscle Relaxation Exercise for subsample Boys. There was no significant difference in the mean pretest scores of Academic Stress of Bibliotherapy Group (M= 180.53, SD =35) and Progressive Muscle Relaxation Group (M=179.47, SD = 32.53); $t(28) = 0.86, P > .05$. These results suggested that the Bibliotherapy Group and Progressive Muscle Relaxation Group were not significantly different in their Academic Stress before giving the intervention.

The result is presented in Figure 23.

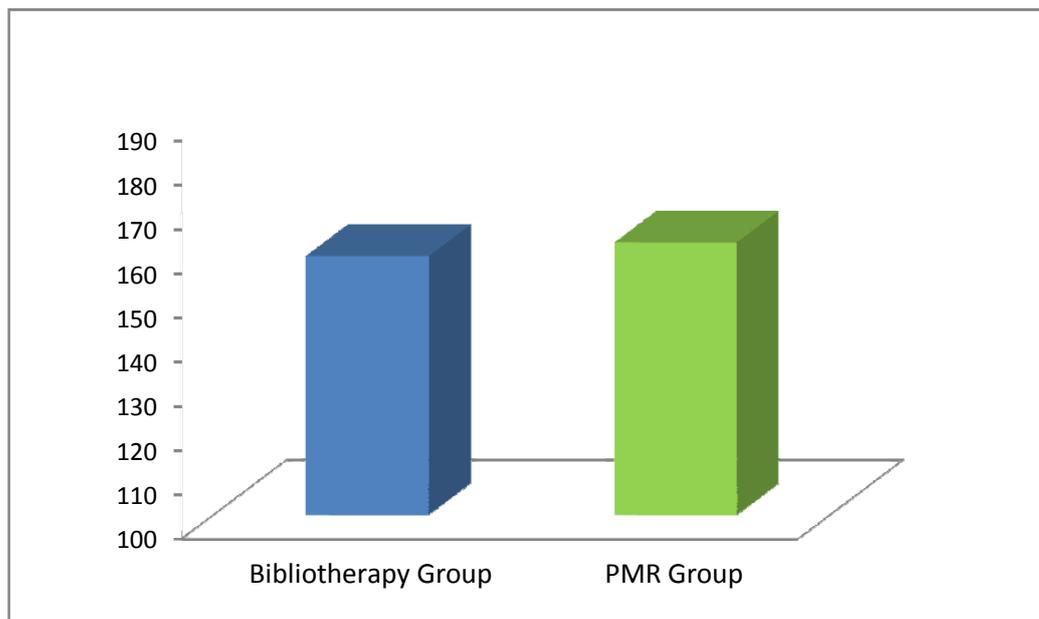


Figure 23. Pretest mean scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation (PMR) Group for subsample Boys.

The graphical representation of mean pretest scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group shows that these two groups are similar to certain extent. The graphical observation confirms the result of mean difference analysis.

Table 28 shows that the results of t-test conducted to compare the Academic Stress mean scores between Bibliotherapy Group and Control Group prior to the administration of Bibliotherapy for subsample Boys. There was no significant difference in the mean pretest scores of Academic Stress of Bibliotherapy Group ($M= 180.53$, $SD = 35$) and Control Group ($M=180.73$, $SD=34.1$); $t(28) = 0.02$, $P>.05$. These results suggested that the Bibliotherapy Group and Control Group were not significantly different in their Academic Stress before giving the intervention.

The result is presented in Figure 24.

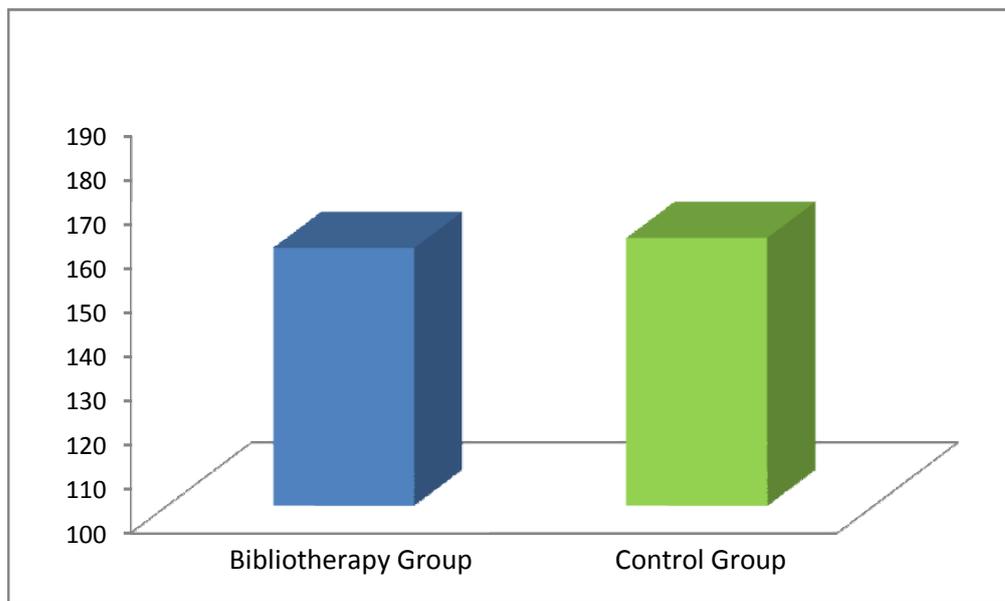


Figure 24. Pretest Mean Scores of Academic Stress of Bibliotherapy Group and Control Group for subsample boys.

The graphical representation of mean pretest scores of Academic Stress of Bibliotherapy Group and Control Group shows that these two groups are similar to certain extent. The graphical observation confirms the result of mean difference analysis.

Table 28 shows that the result of t-test conducted to compare the Academic Stress mean scores between Progressive Muscle Relaxation Group and Control Group prior to the administration of Progressive Muscle Relaxation Exercise for subsample Boys. There was no significant difference in the mean pretest scores of Academic Stress of Progressive Muscle Relaxation Group ($M=179.47$, $SD = 32.53$) and Control Group ($M=180.73$, $SD = 34.1$); $t(28) = 0.10$, $P>.05$. These results suggested that the Progressive Muscle Relaxation Group and Control Group were not significantly different in their Academic Stress before giving the intervention.

The result is presented in the Figure 25

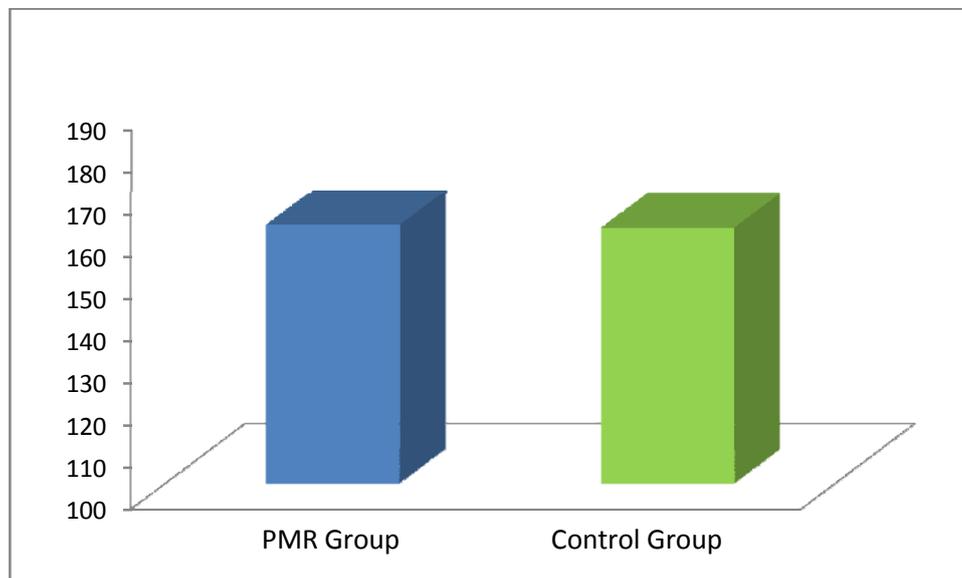


Figure 25. Pretest scores of Academic Stress of Progressive Muscle Relaxation (PMR) Group and Control Group for subsample Boys

The graphical representation of Mean pretest scores of Academic Stress of Progressive Muscle Relaxation Group and Control Group shows that these two groups are similar to certain extent. The graphical observation confirms the result of mean difference analysis.

Group wise comparison of mean pretest scores of Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group for subsample Girls.

Data and results of the t-test for subsample Girls is given in Table 29.

Table 29

Test of Significance of Difference in Mean Pretest Scores of Academic Stress between Different Groups for Subsample Girls

Group	N	Mean	SD	t
Bibliotherapy Group	15	158.40	43.02	0.19
Progressive Muscle Relaxation Group	15	161.40	42.97	
Bibliotherapy Group	15	158.40	43.02	0.15
Control Group	15	160.67	41.51	
Progressive Muscle Relaxation Group	15	161.40	42.97	0.05
Control Group	15	160.67	41.51	

Table 29 shows the results of t-test conducted to compare the Academic Stress mean scores between Bibliotherapy Group and Progressive Muscle Relaxation Group prior to the administration of Bibliotherapy and Progressive Muscle Relaxation Exercise for subsample Girls. There was no significant difference in the mean pretest scores of Academic Stress of Bibliotherapy Group (M= 158.40, SD = 43.02) and Progressive Muscle Relaxation Group (M=161.40, SD = 42.97); $t(28) = 0.19, P > .05$. These results suggested that the Bibliotherapy Group and Progressive Muscle Relaxation Group were not significantly different in their Academic Stress before giving the intervention.

The result is presented in the Figure 26.

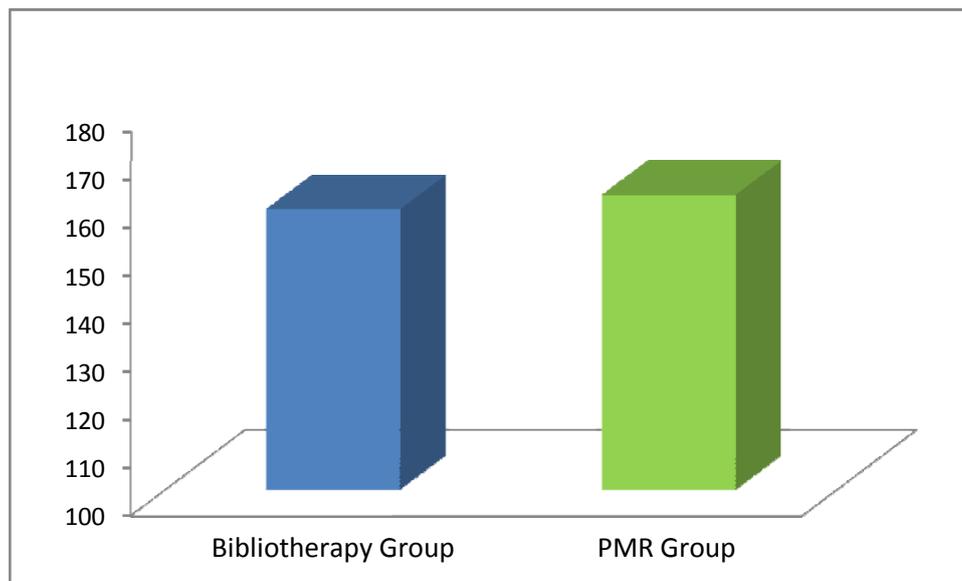


Figure 26. Pretest scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation (PMR) Group for subsample Girls.

The graphical representation of Mean Pretest Scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group shows that these two groups are similar to certain extent. The graphical observation confirms the result of mean difference analysis.

Table 29 shows the results of t-test conducted to compare the Academic Stress mean scores between Bibliotherapy Group and Control Group prior to the administration of Bibliotherapy for subsample Girls. There was no significant difference in the mean pretest scores of Academic Stress of Bibliotherapy Group ($M=158.40$, $SD = 43.02$) and Control Group ($M=160.67$, $SD=41.51$); $t(28)=0.15$, $P>.05$. These results suggested that the Bibliotherapy Group and Control Group were not significantly different in their Academic Stress before giving the intervention.

The result is presented in the Figure 27.

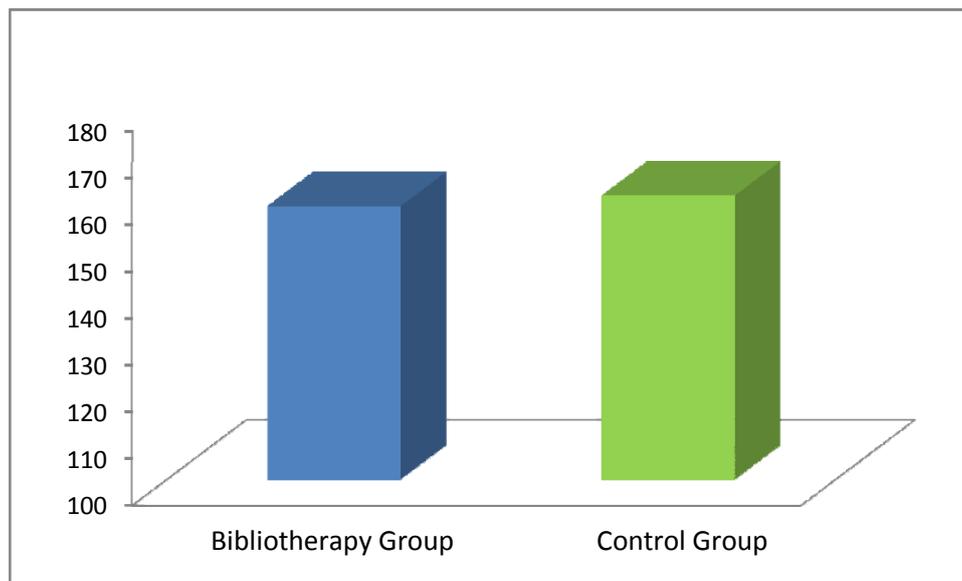


Figure 27. Pretest Scores of Academic Stress of Bibliotherapy Group and Control Group for subsample Girls.

The graphical representation of Mean Pretest scores of Academic Stress of Bibliotherapy Group and Control Group shows that these two groups are similar to certain extent. The graphical observation confirms the result of mean difference analysis.

Table 29 shows the results of t-test conducted to compare the Academic Stress mean scores between Progressive Muscle Relaxation Group and Control Group prior to the administration of Progressive Muscle Relaxation Exercise for subsample Girls. There was no significant difference in the mean pretest scores of Academic Stress of Progressive Muscle Relaxation Group ($M=161.40$, $SD = 42.97$) and Control Group ($M=160.67$, $SD = 41.51$); $t(28)=0.05$, $P>.05$. These results suggested that the Progressive Muscle Relaxation Group and Control Group were not significantly different in their Academic Stress before giving the intervention.

The result is presented in Figure 28

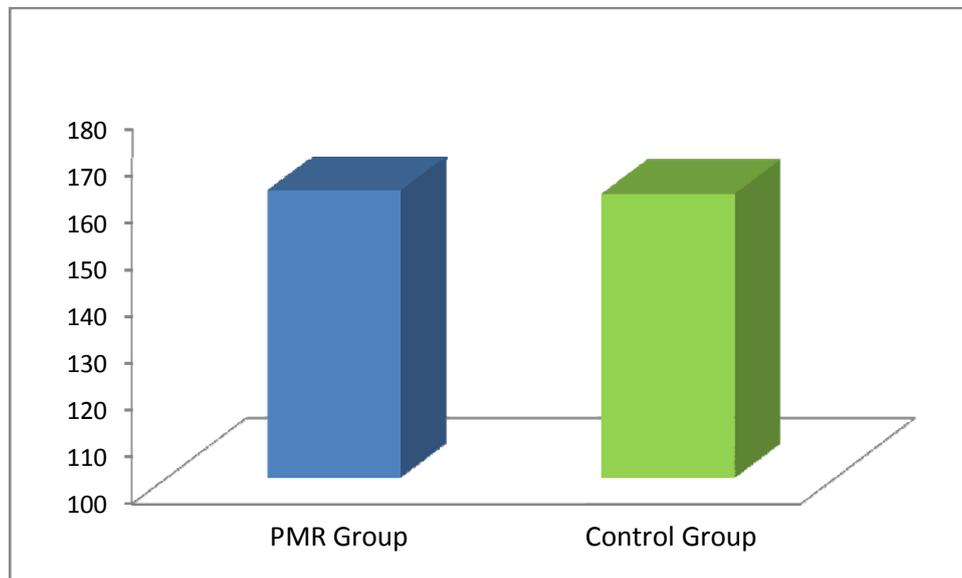


Figure 28. Pretest scores of Academic Stress of Progressive Muscle Relaxation (PMR) Group and Control Group for subsample girls.

The graphical representation of Mean Pretest scores of Academic Stress of Progressive Muscle Relaxation Group and Control Group shows that these two groups are similar. The graphical observation confirms the result of mean difference analysis.

Discussion

The result of test of significance of means conducted for group wise comparison of Bibliotherapy Group, Progressive Muscle Relaxation Group and Control group shows that all the groups do not differ in their mean pretest scores when compared group wise for total sample and subsample. There exists no significant difference in mean pretest scores of Experimental Group given Bibliotherapy, and Experimental Group given Progressive Muscle Relaxation for total sample and subsample. There exist no significant difference in the mean pretest scores of Experimental Group given Bibliotherapy and Control Group given no intervention and also there exist no

significant difference in mean pretest scores of Experimental Group given Progressive Muscle Relaxation and Control Group given no intervention for total sample and subsamples.

Testing the effectiveness of Bibliotherapy and Progressive Muscle Relaxation Exercise on Academic Stress of selected sample.

The comparison of mean scores between pretest and posttest scores of Academic Stress of secondary school students in the Bibliotherapy Group for the Total sample and subsample Boys and Girls were found out. The 't' value using paired t test was calculated and tested for significance.

Comparison of mean pretest and posttest scores of Academic Stress of Bibliotherapy Group for total sample.

The effectiveness of Bibliotherapy in the Academic Stress of students in the Bibliotherapy Group was found out by computing the 't' value using paired t test. It was then tested for significance. The consolidated results of the test of significance of difference between mean pretest and mean posttest scores of Academic stress of the Total sample in Bibliotherapy Group is given in Table 30.

Table 30

Test of Significance of Difference between Mean Pretest and Mean Posttest Scores of Academic Stress in Bibliotherapy Group for Total Sample

Variable	N	Pretest		Posttest		t
		M ₁	SD ₁	M ₂	SD ₂	
Bibliotherapy	30	169.47	40.14	96.40	20.83	13.50**

** P<.01

Table 30 provides the comparison of mean scores of Academic Stress between the pretest and posttest scores of Bibliotherapy Group for the Total sample. The mean pretest scores ($M=169.47$, $SD=40.14$) is significantly greater than the mean posttest scores ($M=96.40$, $SD=20.83$); $t(29) = 13.50$, $P < 0.01$. Hence it is clear that there is significant difference between mean pretest and mean posttest score on Academic Stress of students in Bibliotherapy Group. The posttest mean score is significantly lower than the pretest mean score. This clearly proves that Bibliotherapy is highly effective in reducing the Academic Stress of secondary school students. The results are represented graphically in Figure 29.

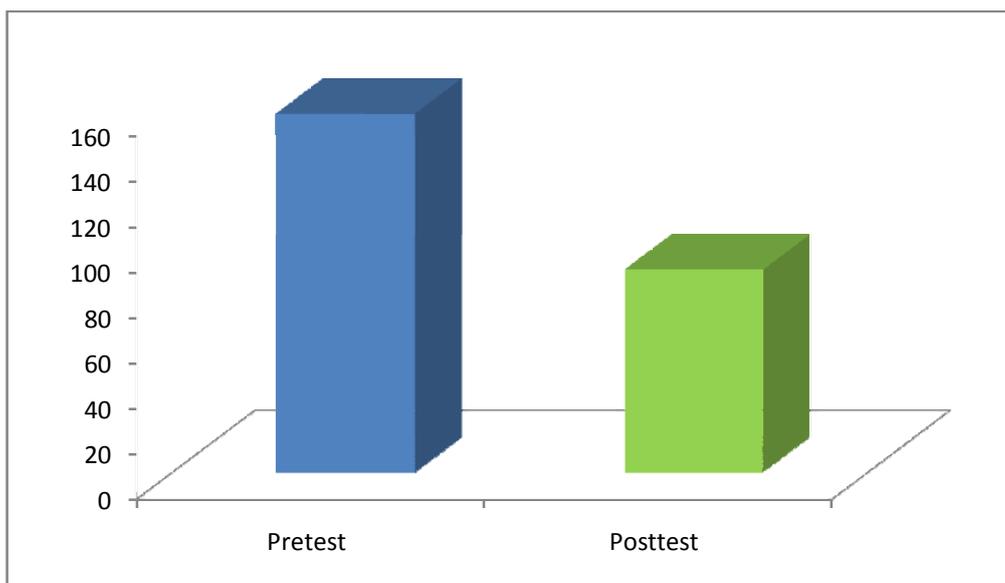


Figure 29. Comparison of mean pretest and mean posttest scores of Academic Stress of Bibliotherapy Group for total sample

The graphical representation of Mean Pretest and Posttest scores of Academic Stress of Bibliotherapy Group for total sample shows that the performance of students in the two tests are dissimilar. Posttest mean scores is lower than pretest mean score of Experimental Group for academic stress. The graphical observation confirms the result of Mean Difference Analysis.

Comparison of mean pretest and posttest scores of Academic Stress of Bibliotherapy group for boys.

To study the effectiveness of Bibliotherapy on the Academic Stress of students in the Bibliotherapy Group for subsample boys paired 't' test was used.

The consolidated results of the test of significance of difference between mean pretest and posttest scores of Academic Stress of Bibliotherapy Group for Boys is given in Table 31.

Table 31

Test of Significance of Difference between Mean Pretest and Mean Posttest Scores of Academic Stress of Boys.

Variable	N	Bibliotherapy Group				t
		Pretest		Posttest		
		M ₁	SD ₁	M ₂	SD ₂	
Bibliotherapy	15	180.53	35.00	103.67	25.80	12.32**

** P<.01

Table 31 provides the comparison of mean scores of Academic Stress between the pretest and posttest scores of Bibliotherapy Group for subsample boys. The mean pretest scores (M=180.53, SD=35) is significantly greater than the mean posttest scores (M=103.67, SD=25.80); $t(14) = 12.32, P < 0.01$. Hence it is clear that there is significant difference between mean pretest and mean posttest scores of Academic Stress of students in Bibliotherapy Group. The posttest score is significantly lower than the pretest mean scores. This

clearly proves that Bibliotherapy is highly effective in reducing the Academic Stress of secondary school students. The results are represented graphically in Figure 30.

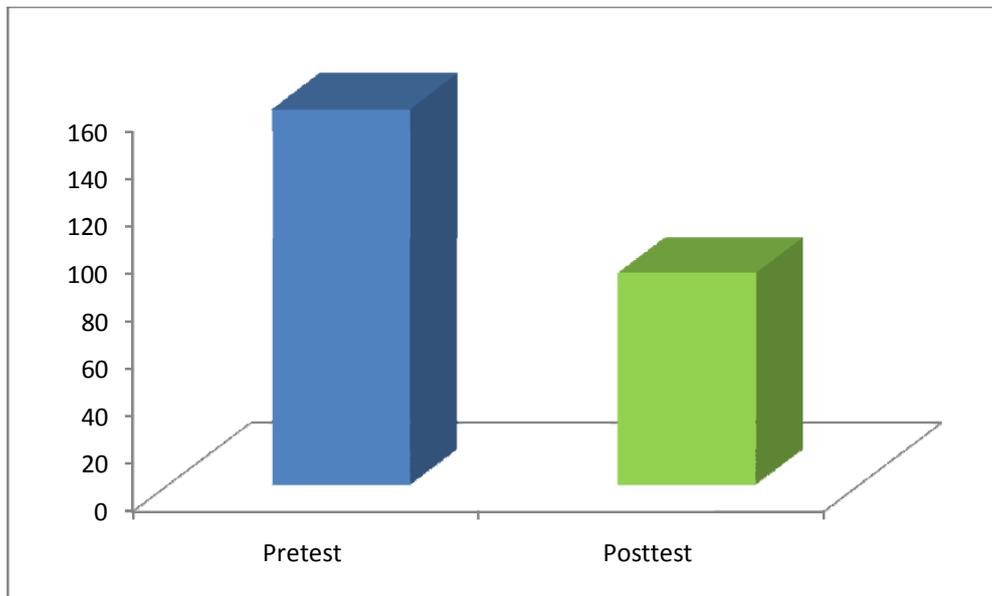


Figure 30. Comparison of Mean Pretest and Mean Posttest Scores of Academic Stress of Bibliotherapy Group for Subsample Boys.

The graphical representation of mean pretest and posttest scores of Academic Stress of Bibliotherapy Group for subsample boys shows that the performance of students are dissimilar. The posttest mean score is less than pretest mean score of Bibliotherapy Group for Academic Stress. The Graphical observation confirms the results of Mean Difference Analysis.

Comparison of mean pretest and posttest scores of Academic Stress of Bibliotherapy Group for subsample girls.

The effectiveness of Bibliotherapy in the Academic Stress of students in the Bibliotherapy Group was found out by computing the 't' value using paired 't' test. It was then tested for significance.

The consolidated results of the test of significance of difference between mean pretest and posttest scores of Academic Stress of Experimental Group for subsample Girls is given in Table 32.

Table 32

Result of Test of Significance of Difference between Mean Pretest and Mean Posttest Scores of Academic Stress of Bibliotherapy Group for Girls.

Variable	N	Pretest		Posttest		t
		M ₁	SD ₁	M ₂	SD ₂	
Bibliotherapy	15	158.40	43.02	89.13	10.980	7.73**

** P<.01

Table 32 provides the comparison of mean scores of Academic Stress between the pretest and posttest scores of Bibliotherapy Group for subsample girls. The mean pretest scores (M=158.40, SD=43.02) is significantly greater than the mean posttest scores (M=89.13, SD=10.98); $t(14) = 7.73, P < 0.01$. Hence it is clear that there is significant difference between mean pretest and mean posttest scores of Academic Stress of students in Bibliotherapy Group. The posttest mean score is significantly lower than the pretest mean score. This clearly proves that Bibliotherapy is highly effective in reducing the Academic Stress of secondary school students. The results are represented graphically in Figure 31.

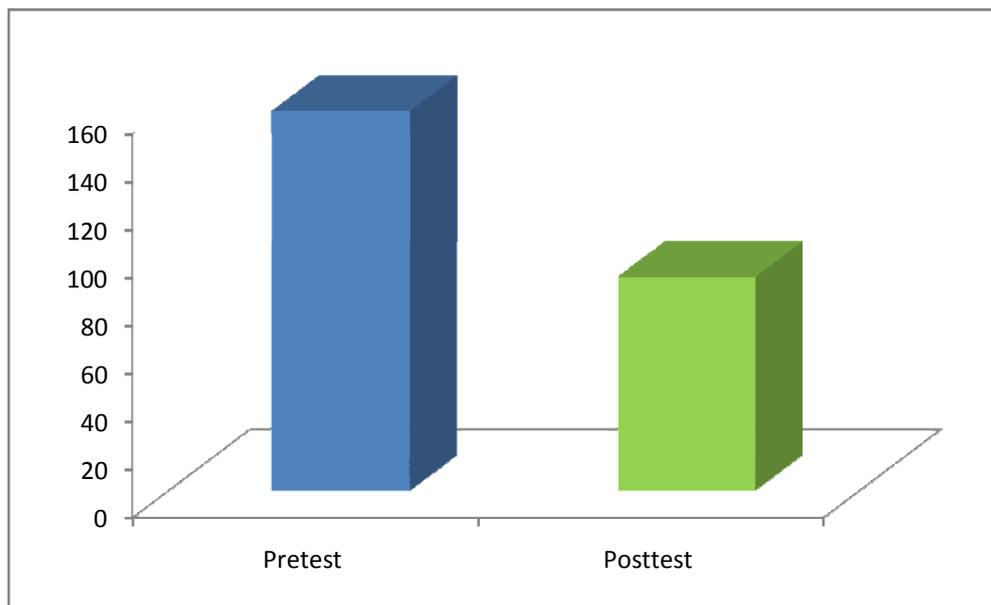


Figure 31. Comparison of mean pretest and mean posttest scores of Academic Stress of Bibliotherapy Group for subsample girls.

The graphical representation of mean pretest and posttest scores of Academic Stress of Bibliotherapy Group for subsample Girls shows that the performance of students are dissimilar. Posttest mean score is less than pretest mean scores of Bibliotherapy Group for Academic Stress. The graphical observation confirms the results of Mean Difference Analysis.

Discussion

Results of test of significance of difference between mean pretest and post scores of Bibliotherapy for total sample and subsample showed that there exist significant difference in the mean pretest and posttest scores. The mean posttest scores were significantly lower than the mean pretest scores of experimental group given Bibliotherapy for total sample and subsample. This reveals that Bibliotherapy is effective in reducing the Academic Stress of students.

Comparison of Mean Pretest and Posttest Scores of Academic Stress of Progressive Muscle Relaxation Group for Total sample

The effectiveness of Relaxation Exercise in the Academic Stress of students in the Progressive Muscle Relaxation Group was found out by computing 't' value using paired 't' test. It was then tested for significance.

The consolidated result of the test of significance of difference between mean pretest and posttest scores of Academic Stress of Progressive Muscle Relaxation Group for total sample is given in Table 33.

Table 33

Test of Significance of Difference between Mean Pretest and Mean Posttest Scores of Academic Stress of Progressive Muscle Relaxation Group for Total Sample

Variable	N	Pretest		Posttest		t
		M ₁	SD ₁	M ₂	SD ₂	
Progressive Muscle Relaxation	30	170.43	38.56	123.13	33.15	7.12**

** P<.01

Table 33 provides the comparison of mean scores of Academic Stress between the pretest and posttest scores of Progressive Muscle Relaxation Group for the Total sample. The mean pretest scores (M=170.43, SD=38.56) is significantly greater than the mean posttest scores (M=123.13, SD=33.15); $t(29) = 7.12$, $P < 0.01$. Hence it is clear that there is significant difference between mean pretest and mean posttest score on Academic Stress of students in Progressive Muscle Relaxation Group. The mean posttest score is significantly lower than the mean pretest score. This clearly proves that

Progressive Muscle Relaxation exercise is effective in reducing the Academic Stress of secondary school students. The results are represented graphically in Figure 32.

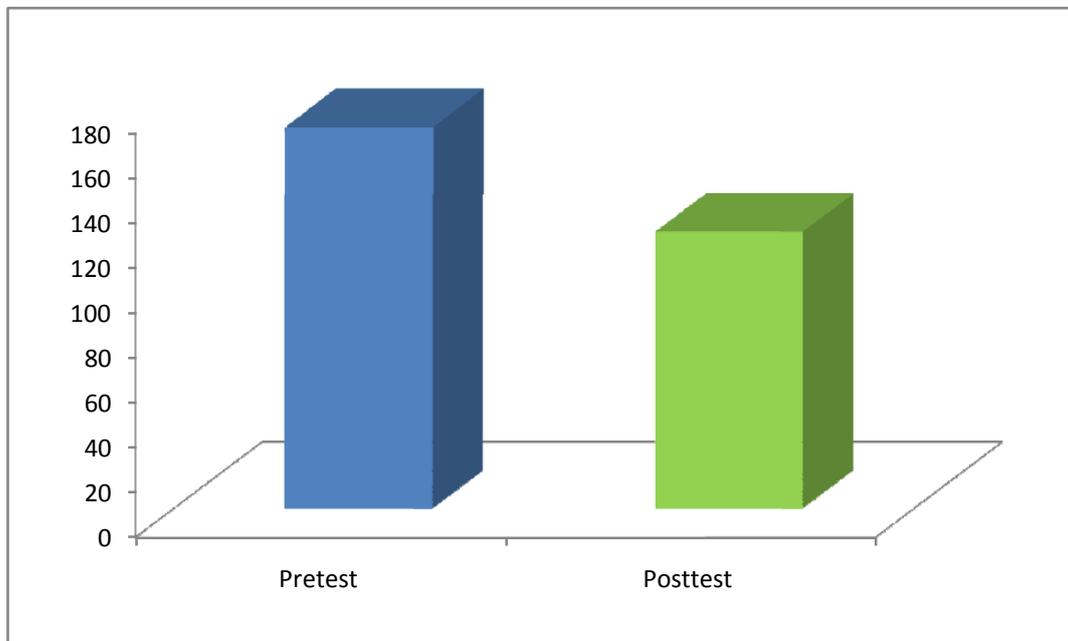


Figure 32. Comparison of mean pretest and posttest scores of Academic stress of Progressive Muscle Relaxation Group for total sample

The Graphical representation of Mean pretest and mean posttest scores of Academic Stress of Progressive Muscle Relaxation (PMR) Group for Total sample shows that the performance in the two tests are dissimilar. Mean posttest score is lower than mean pretest score of Progressive Muscle Relaxation Group for Academic Stress. The graphical observation confirms the results of Mean Difference Analysis.

Comparison of mean pretest and posttest scores of Academic Stress of Progressive Muscle Relaxation Group for subsample boys.

The effectiveness of progressive muscle relaxation in reducing the Academic Stress of Students in Progressive Muscle Relaxation Group was

found out by computing the 't' value using paired 't' test. It was then tested for significance.

The consolidated result of the test of the significance of difference between mean pretest and posttest scores of Academic Stress of Progressive Muscle Relaxation Group for subsample Boys is given in Table 34.

Table 34

Test of Significance of Difference between Mean Pretest and Mean Posttest Scores of Academic Stress of Progressive Muscle Relaxation Group for Subsample Boys.

Variable	N	Pretest		Posttest		t
		M ₁	SD ₁	M ₂	SD ₂	
Progressive Muscle Relaxation	15	179.47	32.33	142.33	34.41	5.05**

** = P<0.01

Table 34 provides the comparison of mean scores of Academic Stress between the mean pretest and posttest scores of Progressive Muscle Relaxation Group for subsample boys. The mean pretest scores (M=179.47, SD=32.33) is significantly greater than the mean posttest scores (M=142.33, SD=34.41); $t(14) = 5.05$, $P < 0.01$. Hence it is clear that there is significant difference between mean pretest and mean posttest scores of Academic Stress of students in Progressive Muscle Relaxation Group for subsample boys. The mean posttest score is significantly lower than the mean pretest score. This clearly proves that Progressive Muscle Relaxation exercise is effective in reducing the Academic Stress for subsample boys. The results are represented graphically in Figure 33.

The result is presented graphically in Figure 33.

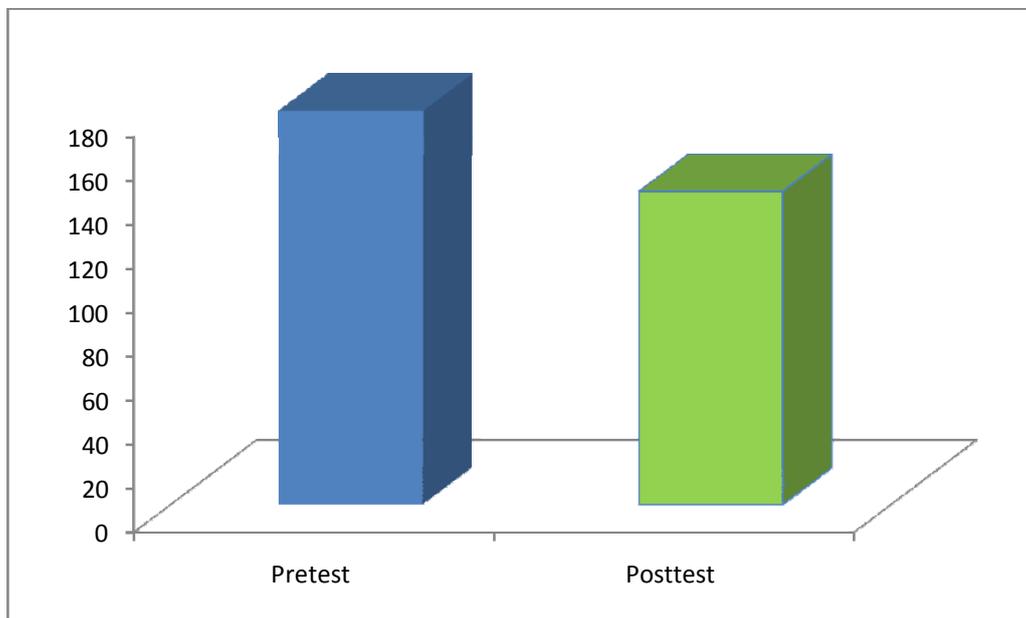


Figure 33. Comparison of mean pretest and mean posttest scores of Academic Stress of Progressive Muscle Relaxation Group for Subsample Boys

The graphical representation of mean pretest and mean posttest scores of Academic Stress of Progressive Muscle Relaxation Group for Subsample Boys shows that the performance of students in the two tests are dissimilar. Posttest mean score is lower than pretest mean score of Progressive Muscle Relaxation Group for Academic Stress. The graphical observation confirms the result of mean difference analysis.

Comparison of mean pretest and posttest scores of Academic Stress of Progressive Muscle Relaxation Group for subsample girls.

The effectiveness of Progressive Muscle Relaxation in reducing the Academic Stress of students in the Progressive Muscle Relaxation Group was found out by computing the 't' value using paired 't' test. It was then tested for significance.

The consolidated results of the test of significance of difference between mean pretest and mean posttest scores of Academic Stress of the subsample Girls in the Progressive Muscle Relaxation Group is given in Table 35.

Table 35

Test of Significance of Difference between Mean Pretest and Mean Posttest Scores of Academic Stress of Progressive Muscle Relaxation Group for Subsample Girls.

Variable	N	Pretest		Posttest		t
		M ₁	SD ₁	M ₂	SD ₂	
Progressive Muscle Relaxation	15	161.40	42.97	103.93	15.27	5.39**

** = P<0.01

Table 35 provides the comparison of mean scores of Academic Stress between the pretest and posttest scores of Progressive Muscle Relaxation Group for subsample Girls. The mean pretest score (M=161.40, SD=42.97) is significantly greater than the mean posttest score (M=103.93, SD=15.27); $t(14) = 5.39, P < 0.01$. Hence it is clear that there is significant difference between mean pretest and mean posttest scores of Academic Stress of students in Progressive Muscle Relaxation Group for subsample Girls. The mean posttest score is significantly lower than the pretest mean score. This clearly proves that Progressive Muscle Relaxation Exercise is effective in reducing the Academic Stress for subsample Girls.

The result is presented graphically in Figure 34.

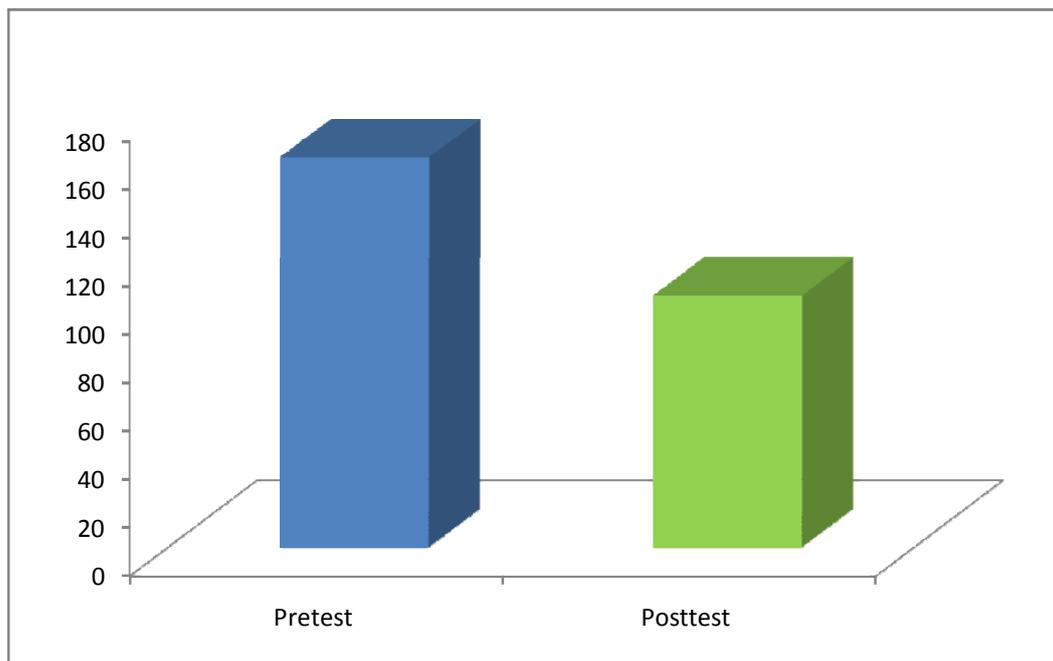


Figure 34. Comparison of mean pretest scores and mean posttest scores of Academic Stress of Progressive Muscle Relaxation Group for subsample Girls.

The graphical representation of mean pretest and mean posttest scores of Academic Stress of Progressive Muscle Relaxation Group for subsample Girls shows that the performance of students in the two tests are dissimilar. Posttest mean score is lower than pretest mean score of Bibliotherapy Group for Academic Stress. The Graphical Observation confirms the mean difference analysis.

Discussion

Result of test of significance of difference between mean pretest and posttest scores of Progressive Muscle Relaxation for total sample and subsample showed that there exist significant difference in the mean pretest and posttest scores. The mean posttest scores were significantly lower than the mean pretest scores of Academic Stress of experimental group given

Progressive Muscle Relaxation for total sample and subsample. This reveals that Progressive Muscle Relaxation is effective in reducing the Academic Stress of students.

Comparison of mean pretest and mean posttest scores of Academic Stress of secondary school students in the Control Group for total sample and subsamples.

The mean pretest and mean posttest scores of Academic Stress of secondary school students in the Control Group was found out by computing the 't' value using paired 't' test. It was then tested for significance.

The consolidated results of the test of significance of difference between mean pretest and mean posttest scores of Academic Stress of the Control Group for Total sample and Subsample Boys and Girls are given in Table 36.

Table 36

Test of Significance of Difference between Mean Pretest and Posttest Scores of Academic Stress of Control Group for Total Sample and Subsample

Variable	N	Pretest		Posttest		t
		M ₁	SD ₁	M ₂	SD ₂	
Total sample	30	170.70	38.70	169.80	39.56	1.12
Subsample Boys	15	180.73	34.10	180.27	35.27	0.397
Subsample Girls	15	160.67	41.51	159.33	41.99	1.17

Table 36 provides the comparison of mean scores of Academic Stress between the pretest and posttest scores of the Control Group for total sample

and subsamples Boys and Girls. The mean pretest scores ($M= 170.70$, $SD= 38.70$) and mean posttest scores ($M=169.80$, $SD = 39.56$) for the total sample; $t(29) = 1.12$, $P<0.05$ shows that there is no significant difference in the mean pretest and posttest scores of control group for Total sample. Similarly for subsample boys mean pretest score ($M=180.73$, $SD=34.10$) and mean posttest score ($M=180.27$, $SD = 35.27$); $t(14)=0.40$, $P>0.05$ shows that there is no significant difference in the mean pretest and posttest scores of control group for subsample boys. For subsample girls, the mean pretest scores ($M=160.67$, $SD=41.51$) and mean posttest scores ($M=159.33$, $SD=41.99$); $t(14) = 1.17$, $P>0.05$ shows that there is no significant difference in the mean pretest and post scores of control group for subsample girls.

The results are presented graphically in Figures 35 to 37.

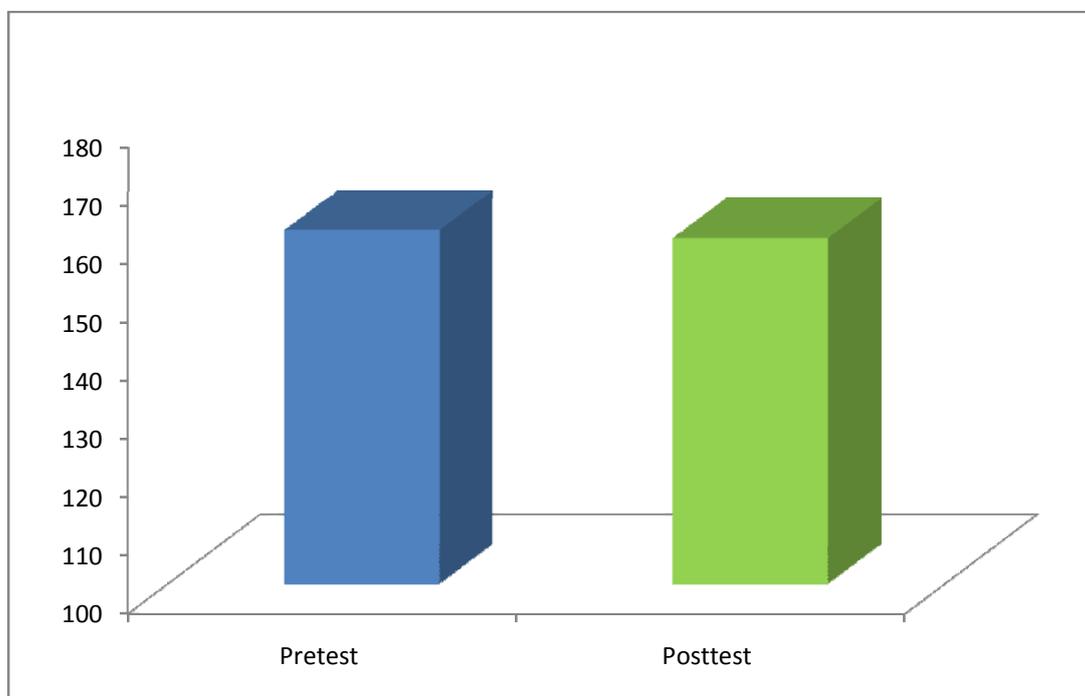


Figure 35. Comparison of mean pretest and mean posttest scores of Academic Stress of Control Group for total sample

The graphical representation of mean pretest and mean posttest scores of Academic Stress of Control Group for Total sample shows that the performance of students in the two tests are almost similar. Posttest mean score is almost similar to pretest mean score of Control Group for Academic Stress. The graphical observation confirms the result of Mean Difference Analysis.

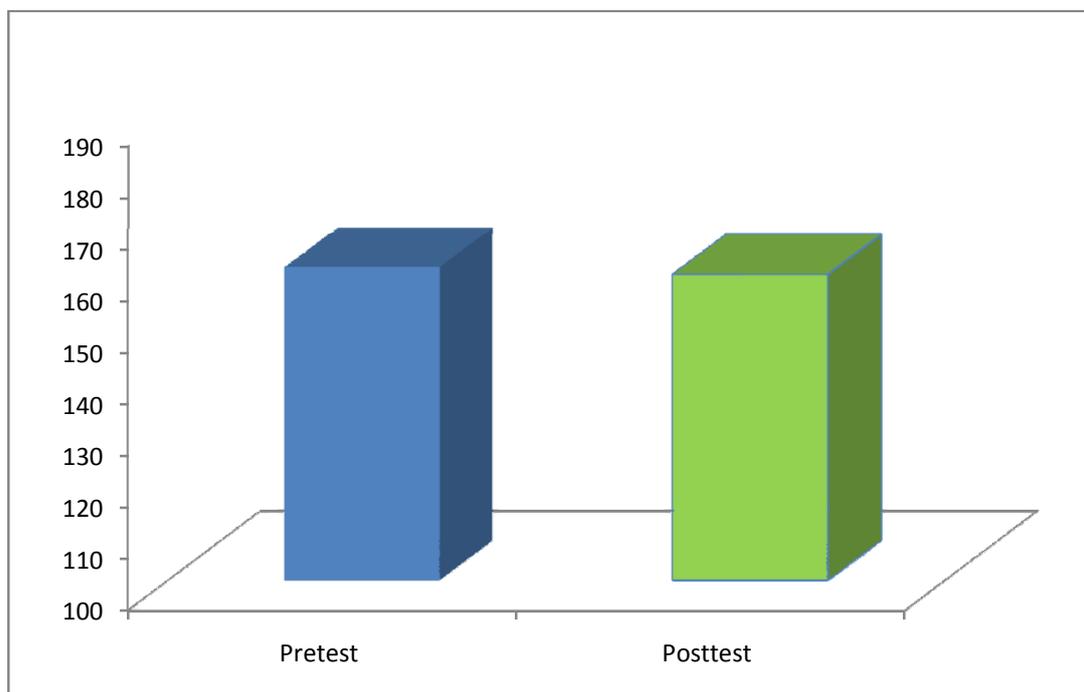


Figure 36. Comparison of mean pretest and mean posttest scores of Academic Stress of Control Group for subsample boys

The graphical representation of mean pretest and mean posttest scores of Academic Stress of Control Group for subsample Boys shows that the performance of students are almost similar. Posttest mean score is almost similar to pretest mean score of Control Group for Academic Stress. The graphical observation confirms the result of mean difference analysis.

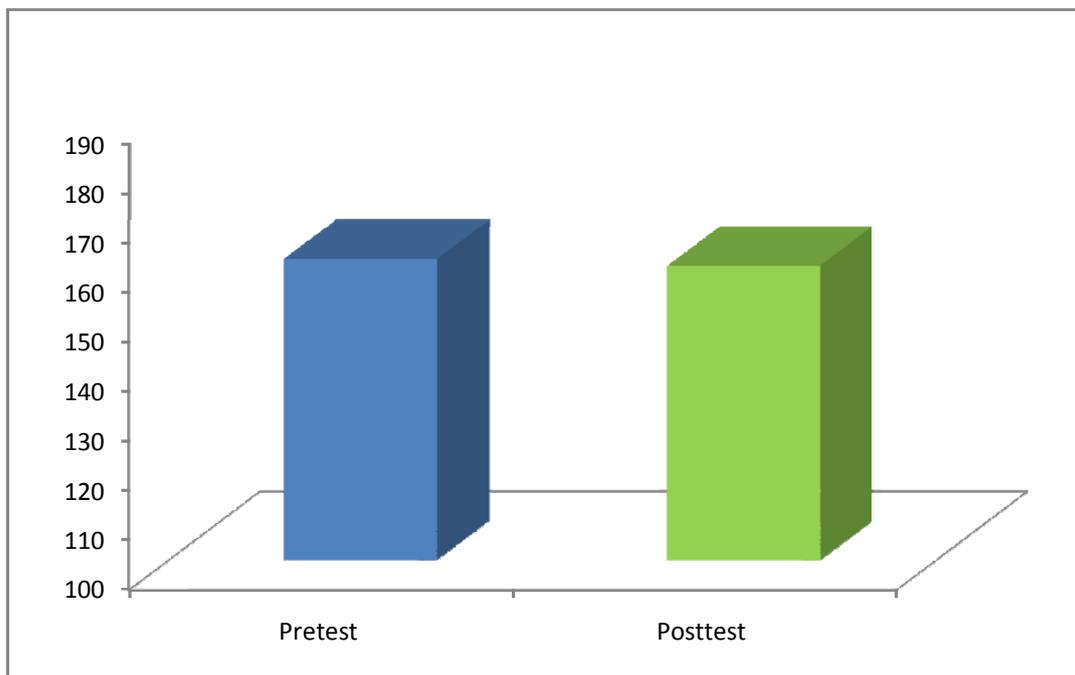


Figure 37. Comparison of mean pretest and mean posttest scores of Academic Stress of Control Group for subsample girls.

The graphical representation of mean pretest and mean posttest scores of Academic Stress of Control Group for subsample girls shows that the performance of students in the two tests are almost similar. Posttest mean score is almost similar to pretest mean score of Control Group for Academic Stress. The graphical observation confirms the result of mean difference analysis.

Discussion.

Result of the test of significance of difference between mean pretest and posttest scores of control group showed that there is no significant difference in the mean pretest and posttest scores of Academic Stress for total sample and subsamples. This reveals that there is no significant difference in the mean pretest and post scores of Academic Stress of control group.

Comparison of the effectiveness of Bibliotherapy and Progressive Muscle Relaxation.

This part of the analysis was done to compare the effectiveness of these two methods in reducing the Academic Stress.

Comparison of means of posttest scores of Academic Stress between Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group for total sample and subsample Boys and Girls was done.

The mean posttest scores of Academic Stress for the Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group for total sample and subsample Boys and Girls were found out and compared for significance of the mean difference using test of significance of difference between means of independent samples. The details of analysis are given in the following sections.

Comparison of mean posttest scores of Bibliotherapy Group and Progressive Muscle Relaxation Group for Academic stress for total sample.

The means and standard deviations of the posttest scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group for Total sample were subjected to mean difference analysis. It was then tested for significance.

The consolidated results of the test of significance of difference in mean posttest scores of Academic Stress between Bibliotherapy Group and Progressive Muscle Relaxation Group are given in Table 37.

Table 37

Test of Significance of Difference between Mean Posttest Scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group for Total Sample

Variable	Bibliotherapy Group			Progressive Muscle Relaxation Group			t
	N ₁	M ₁	SD ₁	N ₂	M ₂	SD ₂	
Academic Stress	30	96.40	33.15	30	123.13	35.41	3.74**

**=P<0.01

Table 37 shows the result of t-test conducted to compare the Academic Stress mean scores between experimental groups and control group after the administration of Bibliotherapy and Progressive Muscle Relaxation Exercise for total sample. There was significant difference in the mean posttest scores of Academic Stress of Bibliotherapy Group (M = 96.40, SD = 33.15) and Progressive Muscle Relaxation Group (M=123.13, SD= 35.41); $t(58) = 3.74$, $P < 0.01$. These results suggested that the Bibliotherapy Group and Progressive Muscle Relaxation Group were significantly different in their Academic Stress after giving the intervention.

The result is presented graphically in Figure 38.

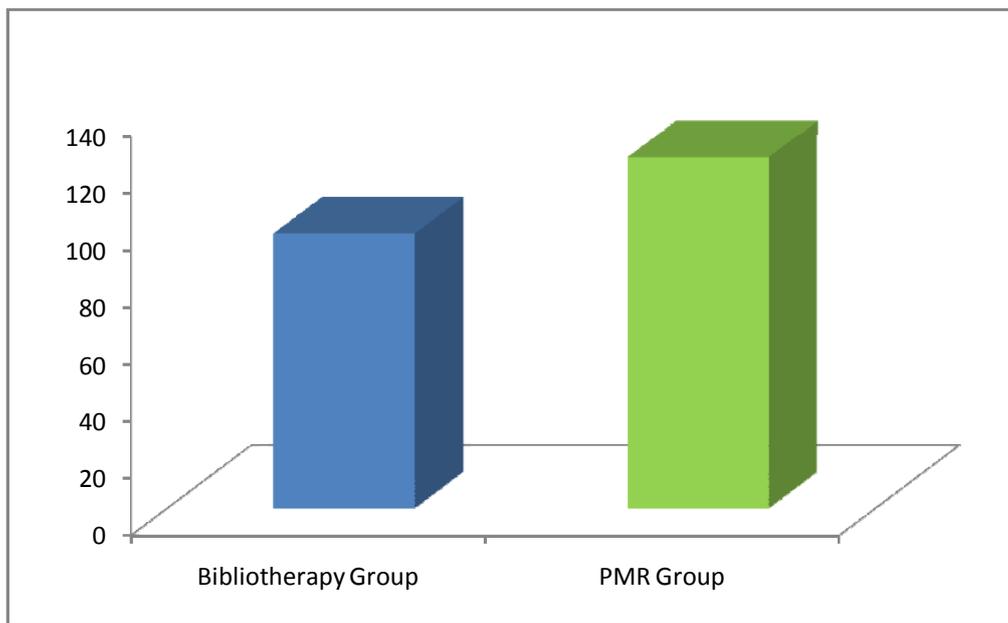


Figure 38. Posttest mean scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation (PMR) Group for total sample.

The graphical representation of Mean Posttest Scores of Academic Stress for Total sample of Bibliotherapy Group and Progressive Muscle Relaxation Group shows that the performance of students in two groups is dissimilar. Performance of Bibliotherapy Group is better than that of Progressive Muscle Relaxation Group. The graphical observation confirms the results of mean difference analysis.

Comparison of posttest scores of Bibliotherapy Group and Progressive Muscle Relaxation Group of Academic Stress for subsample boys

The Means and Standard Deviations of the posttest scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group for subsample Boys were subjected to mean difference analysis. It was then tested for significance.

The consolidated results of the test of significance of difference between mean posttest scores of Academic Stress of the Bibliotherapy Group and Progressive Muscle Relaxation Group are given in Table 38.

Table 38

Test of Significance of Difference between Mean Posttest Scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group for Subsample Boys

Variable	Bibliotherapy Group			Progressive Muscle Relaxation Group			t
	N ₁	M ₁	SD ₁	N ₂	M ₂	SD ₂	
Academic Stress	15	103.67	25.80	15	142.33	35.41	3.42**

**= P<0.01

Table 38 shows the results of t-test conducted to compare the Academic Stress mean scores between Experimental groups after the administration of Bibliotherapy and Progressive Muscle Relaxation Exercise for subsample Boys. There was significant difference in the mean posttest scores of Academic Stress of Bibliotherapy Group (M= 103.67, SD = 25.80) and Progressive Muscle Relaxation Group (M=142.33, SD = 35.41); $t(28) = 3.42$, $P < 0.01$. These results suggested that the Bibliotherapy Group and Progressive Muscle Relaxation Group were significantly different in their Academic Stress after giving the intervention.

The result is presented graphically in Figure 39.

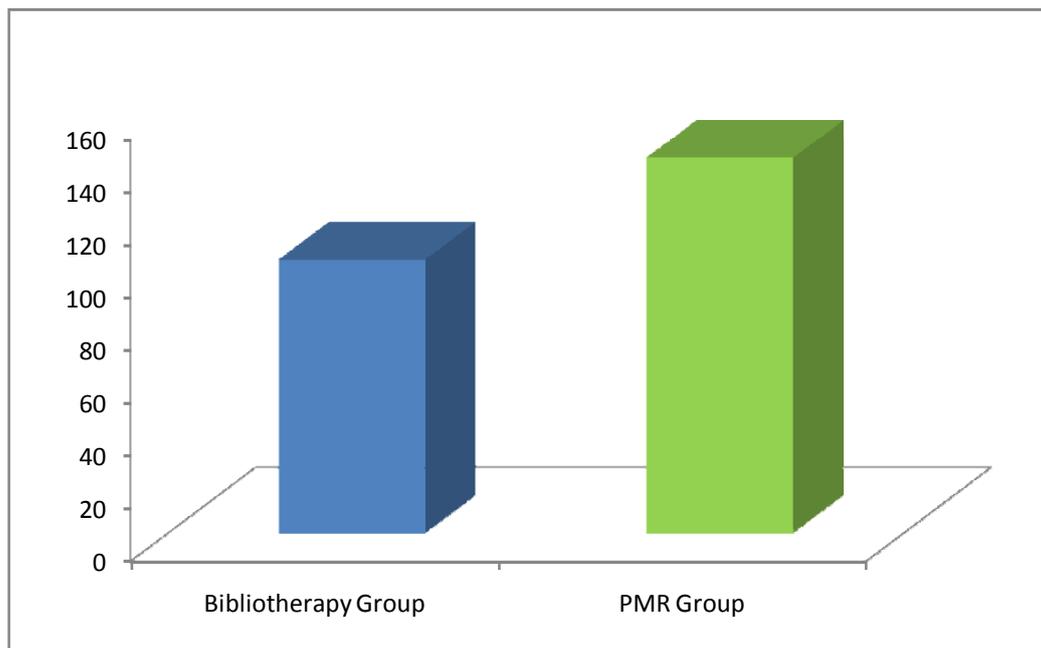


Figure 39. Posttest mean scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation (PMR) Group for subsample Boys.

The graphical representation of Mean Posttest scores of Academic Stress for subsample Boys of Bibliotherapy Group and Progressive Muscle Relaxation Group shows that the performance of students in two groups is dissimilar. Performance of Bibliotherapy Group is better than that of Progressive Muscle Relaxation Group. The graphical observation confirms the results of mean difference analysis.

Comparison of posttest scores of Bibliotherapy Group and Progressive Muscle Relaxation Group of Academic Stress for subsample girls.

The means and standard deviation of the posttest scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group for subsample girls were subjected to mean difference analysis. It was then tested for significance.

The consolidated results of the test of significance of difference between mean posttest scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group are given in Table 39.

Table 39

Test of Significance of Difference between Mean Posttest Scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group for Subsample Girls

Variable	Bibliotherapy Group			Progressive Muscle Relaxation Group			t
	N ₁	M ₁	SD ₁	N ₂	M ₂	SD ₂	
Academic Stress	15	89.13	10.98	15	103.93	15.27	3.05**

**= P<0.01

Table 39 shows the result of t-test conducted to compare the Academic Stress mean scores between experimental groups after the administration of Bibliotherapy and Progressive Muscle Relaxation Exercise for subsample Girls. There was significant difference in the mean posttest scores of Academic Stress of Bibliotherapy Group (M= 89.13, SD = 10.98) and Progressive Muscle Relaxation Group (M=103.93, SD = 15.27); $t(28) = 3.05$, $P < 0.01$. These results suggested that the Bibliotherapy Group and Progressive Muscle Relaxation Group were significantly different in their Academic Stress after giving the intervention.

The result is presented graphically in Figure 40.

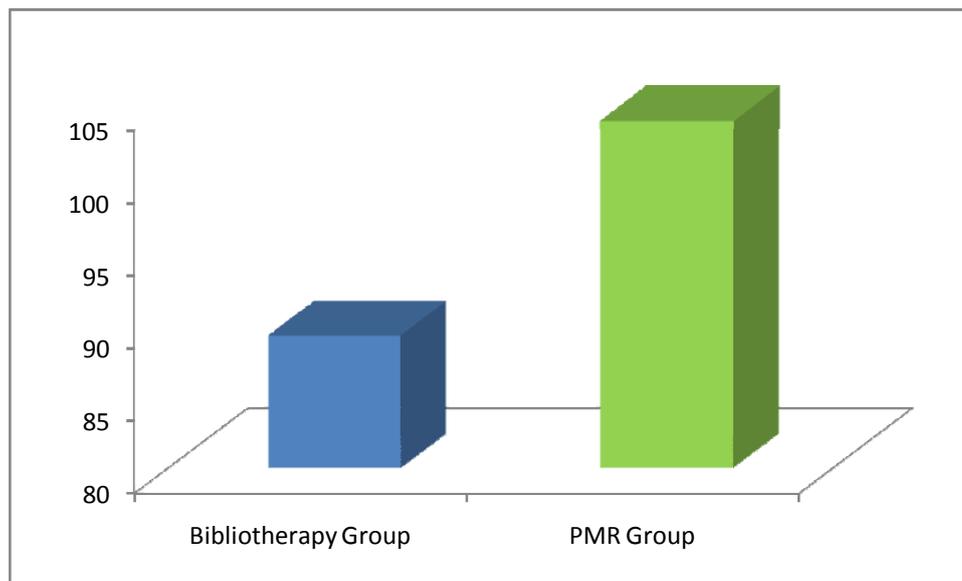


Figure 40. Posttest mean scores of academic stress of Bibliotherapy Group and Progressive Muscle Relaxation (PMR) Group for subsample girls

The graphical representation of mean posttest scores of Academic Stress for subsample Girls of Bibliotherapy Group and Progressive Muscle Relaxation Group shows that the performance of students in two groups is dissimilar. Performance of Bibliotherapy Group is better than that of Progressive Muscle Relaxation Group. The graphical observation confirms the results of Mean Difference Analysis.

Discussion.

Results of significance of mean posttest scores of Bibliotherapy Group and Progressive Muscle Relaxation Group for total sample and subsamples showed that there exists significant difference in the mean posttest scores of Academic Stress. The mean posttest scores of Experimental Group given Bibliotherapy is more effective than Progressive Muscle Relaxation in reducing the Academic Stress of the given total sample and subsamples.

Comparison of posttest scores of Bibliotherapy Group and Control Group of Academic Stress for total sample.

The means and standard deviations of the posttest scores of Academic Stress of Bibliotherapy Group and Control Group for Total sample were subjected to mean difference analysis. It was then tested for significance.

The consolidated results of the test of significance of difference between mean posttest scores of Academic Stress of the Bibliotherapy Group and Control Group are given in Table 40.

Table 40

Test of Significance of Difference between Mean Posttest Scores of Academic Stress of Bibliotherapy group and Control Group for Total sample

Variable	Bibliotherapy Group			Control Group			t
	N ₁	M ₁	SD ₁	N ₂	M ₂	SD ₂	
Academic Stress	30	96.40	20.83	30	169.80	39.56	8.99**

**=P<0.01

Table 40 shows the result of t-test conducted to compare the Academic Stress mean scores between Experimental Group and Control group after the administration of Bibliotherapy for total sample. There was significant difference in the mean posttest scores of Academic Stress of Bibliotherapy Group (M= 96.40, SD = 20.83) and Control Group (M=169.80, SD = 39.56); $t(58) = 8.99$, $P < 0.01$. These results suggested that the Bibliotherapy Group and Control Group were significantly different in their Academic Stress after giving the intervention.

The result is presented graphically in Figure 41.

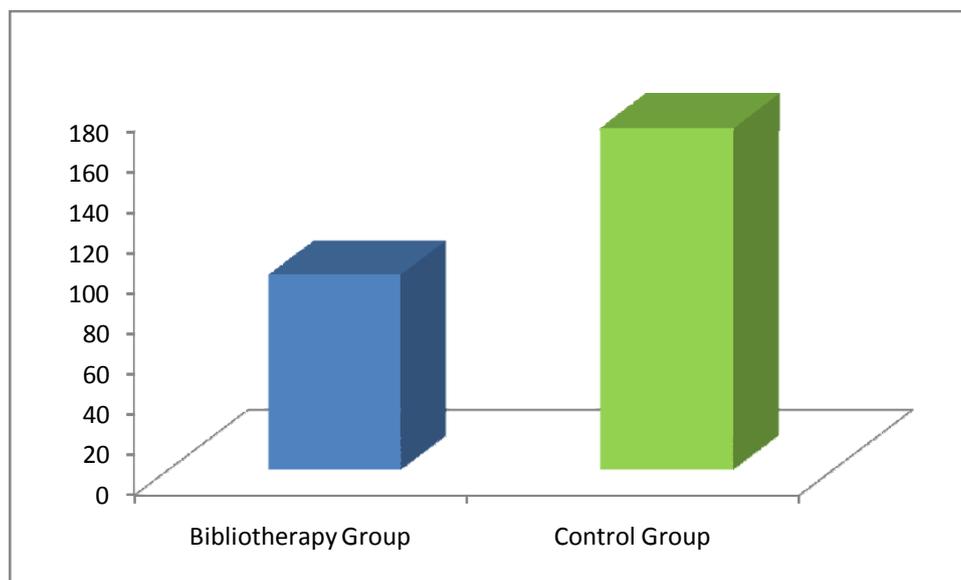


Figure 41. Posttest mean scores of Academic Stress of Bibliotherapy Group and Control Group for Total sample.

The graphical representation of Mean posttest scores of Academic Stress for Bibliotherapy Group and Control Group shows that the performance of students in two groups is dissimilar. Performance of Bibliotherapy Group is better than that of Control Group. The graphical observation confirms the results of mean difference analysis.

Comparison of posttest scores of Bibliotherapy Group and Control Group of Academic Stress for subsample boys.

The means and standard deviations of the posttest scores of Academic Stress of Bibliotherapy Group and Control Group for subsample Boys were subjected to mean difference analysis. It was then tested for significance. The consolidated results of the test of significance of difference between mean posttest scores of Academic Stress of the Bibliotherapy Group and Control Group are given in Table 41.

Table 41

Test of Significance of Difference between Mean Posttest Scores of Academic Stress of Experimental Group and Control Group for Subsample Boys

Variable	Bibliotherapy Group			Control Group			t
	N ₁	M ₁	SD ₁	N ₂	M ₂	SD ₂	
Academic Stress	15	103.67	25.80	15	180.27	35.27	6.79**

**=P<0.01

Table 41 shows the result of t-test conducted to compare the Academic Stress mean scores between Experimental Group and Control group after the administration of Bibliotherapy for Subsample Boys. There was significant difference in the mean posttest scores of Academic Stress of Bibliotherapy Group (M=103.67, SD= 25.80) and Control Group (M=180.27, SD = 35.27); $t(28) = 6.79$, $P < 0.01$. These results suggested that the Bibliotherapy Group and Control Group were significantly different in their Academic Stress after giving the intervention.

The result is presented graphically in Figure 42.

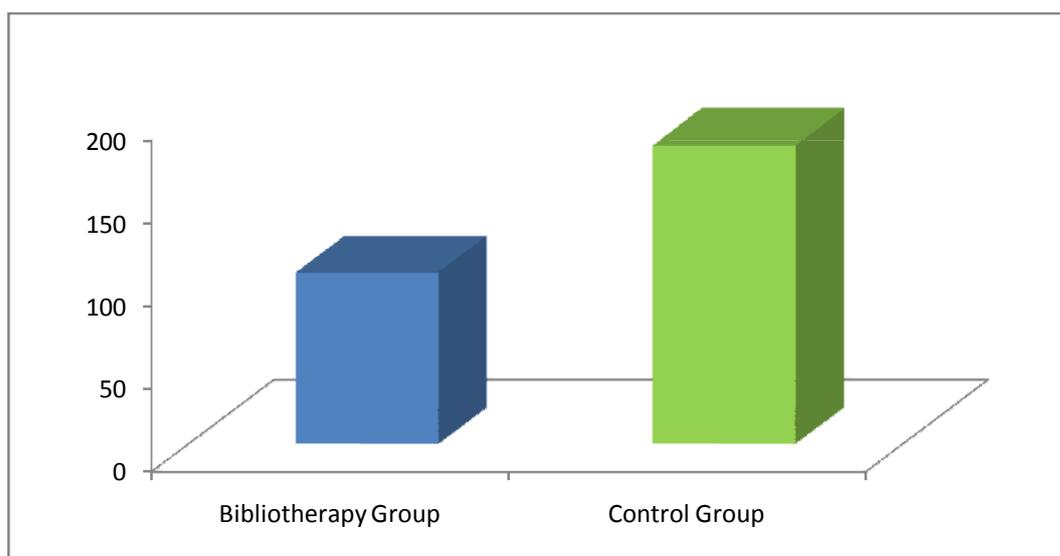


Figure 42. Posttest mean scores of Academic Stress of Bibliotherapy Group and Control Group for subsample Boys

The graphical representation of mean posttest scores of Academic Stress for subsample Boys of Bibliotherapy Group and Control Group shows that the performance of students in two groups is dissimilar. Performance of Bibliotherapy Group is better than that of Control Group. The graphical observation confirms the results of mean difference analysis.

Comparison of posttest scores of Bibliotherapy Group and Control Group on Academic Stress for subsample girls.

The means and standard deviations of the posttest scores of Academic Stress of Bibliotherapy Group and Control Group for subsample Girls were subjected to mean difference analysis. It was then tested for significance.

The consolidated results of the test of significance of difference between mean posttest scores of Academic Stress of the Bibliotherapy Group and Control Groups are given in Table 42.

Table 42

Test of Significance of Difference between Mean Posttest Scores of Academic Stress of Experimental Group and Control Group for subsample Girls

Variable	Bibliotherapy Group			Control Group			t
	N ₁	M ₁	SD ₁	N ₂	M ₂	SD ₂	
Academic Stress	15	89.13	10.98	15	159.33	41.99	6.26**

**=P<0.01

Table 42 shows the result t-test conducted to compare the Academic Stress mean scores between Experimental Group and Control group after the administration of Bibliotherapy for Subsample Girls. There was significant

difference in the mean posttest scores of Academic Stress of Bibliotherapy Group ($M= 89.13$, $SD = 10.98$) and Control Group ($M=159.33$, $SD = 41.99$); $t(28) = 6.26$, $P<0.01$. These results suggested that the Bibliotherapy Group and Control Group were significantly different in their Academic Stress after giving the intervention.

The result is presented graphically in Figure 43.

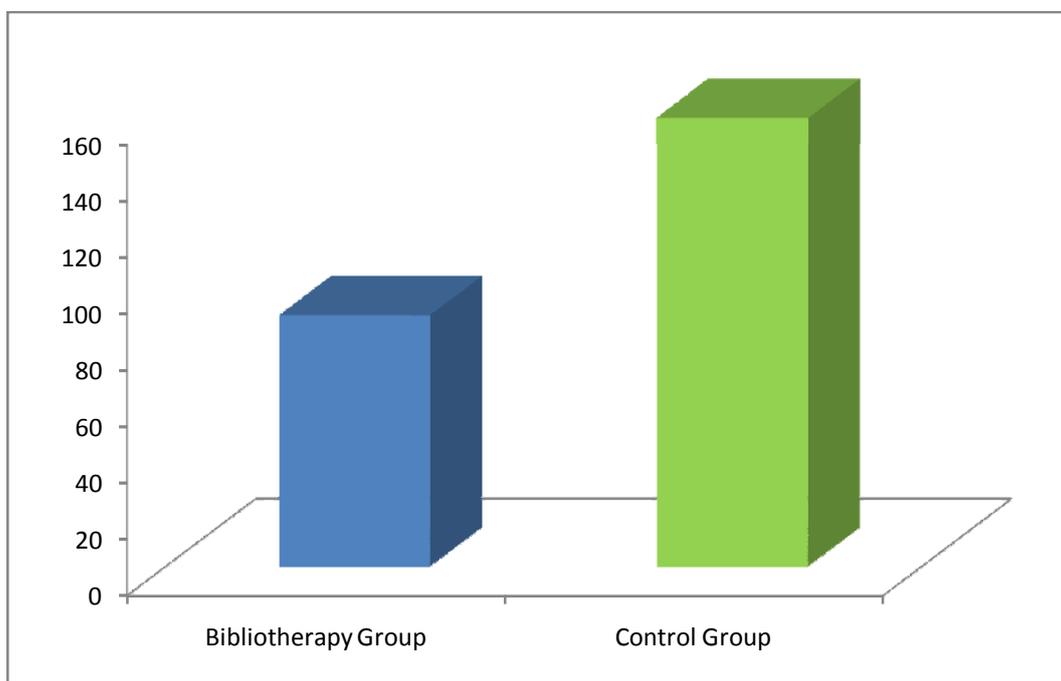


Figure 43. Posttest scores of Academic Stress of Bibliotherapy Group and Control Group for subsample Girls.

The graphical representation of mean posttest scores of Academic Stress for subsample Girls of Bibliotherapy Group and Control Group shows that the performance of students in two groups is dissimilar. Performance of students in two groups is dissimilar. Performance of Bibliotherapy Group is better than that of Control Group. The graphical observation confirms the results of mean difference analysis.

Discussion

Results of significance of mean posttest scores of Academic Stress of Bibliotherapy Group and Control group (given no intervention) for total sample and subsamples shows significant difference. The mean posttest scores of Experimental Group given Bibliotherapy was significantly lower than that of Control Group. This reveals that Bibliotherapy is highly effective in reducing Academic Stress of given total sample and subsamples.

Comparison of mean posttest scores of Progressive Muscle Relaxation Group and Control Group on Academic Stress for total sample.

The means and Standard Deviations of the posttest scores of Academic Stress of Progressive Muscle Relaxation Group and Control Group for Total sample were subjected to mean difference analysis. It was then tested for significance.

The consolidated results of the test of significance of difference between mean posttest scores of Academic Stress of the Progressive Muscle Relaxation Group and Control Group are given in Table 43.

Table 43

Test of Significance of Difference between Mean Posttest Scores of Academic Stress of Progressive Muscle Relaxation Group and Control Group for Total Sample

Variable	Progressive Muscle Relaxation Group			Control Group			t
	N ₁	M ₁	SD ₁	N ₂	M ₂	SD ₂	
Academic Stress	30	123.13	33.15	30	169.80	39.58	4.95**

**=P<0.01

Table 43 shows the results of t-test conducted to compare the Academic Stress mean scores between Progressive Muscle Relaxation Group and Control Group after the administration of Progressive Muscle Relaxation Exercise for total sample. There was significant difference in the mean posttest scores of Academic Stress of Progressive Muscle Relaxation Group ($M=123.13$, $SD=33.15$) and Control Group ($M=169.80$, $SD= 39.58$); $t(58) = 4.95$, $P<0.01$. These results suggested that the Progressive Muscle Relaxation Group and Control Group were significantly different in their Academic Stress after giving the intervention.

The results are presented graphically in Figure 44.

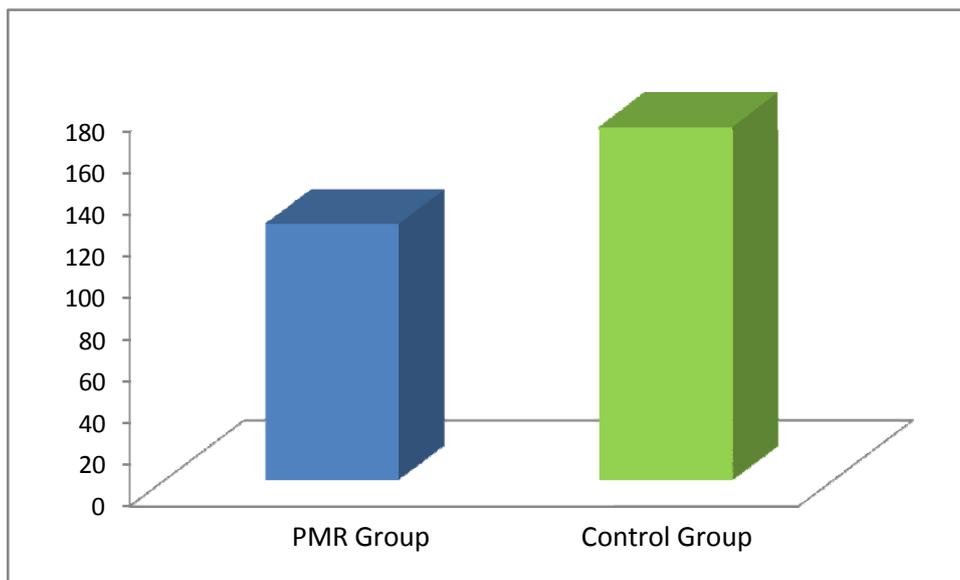


Figure 44. Posttest mean scores of Academic Stress of Progressive Muscle Relaxation (PMR) Group and Control Group for Total sample.

The graphical representation of mean posttest score on Academic Stress for Total sample of Progressive Muscle Relaxation Group and Control Group shows that the performance of students in two groups is dissimilar. Performance of Progressive Muscle Relaxation Group is better than that of

Control Group. The graphical observation confirm the results of mean difference analysis.

Comparison of mean posttest scores of Progressive Muscle Relaxation Group and Control Group on Academic Stress for subsample boys.

The means and standard deviations of the posttest score of Academic Stress of Progressive Muscle Relaxation Group and Control Group for subsample Boys were subjected to mean difference analysis. It was then tested for significance.

The consolidated results of the test of significance of difference between mean posttest scores of Academic Stress of the Progressive Muscle Relaxation Group and Control Group are given in Table 44.

Table 44

Test of Significance of Difference between Mean Posttest Scores of Academic Stress of Progressive Muscle Relaxation Group and Control Group for Subsample Boys

Variable	Progressive Muscle Relaxation Group			Control Group			t
	N ₁	M ₁	SD ₁	N ₂	M ₂	SD ₂	
Academic Stress	15	142.33	35.41	15	180.27	35.67	2.94**

**=P<0.01

Table 44 shows the results of t-test conducted to compare the Academic Stress mean scores between Experimental Group and Control group after the administration of Progressive Muscle Relaxation for Subsample Boys. There

was significant difference in the mean posttest scores of Academic Stress of Progressive Muscle Relaxation Group ($M= 142.33$, $SD = 35.41$) and Control Group ($M=180.27$, $SD = 35.67$); $t (28) = 2.94$, $P<0.01$. These results suggested that the Progressive Muscle Relaxation Group and Control Group were significantly different in their Academic Stress after giving the intervention.

The result are presented graphically in Figure 45.

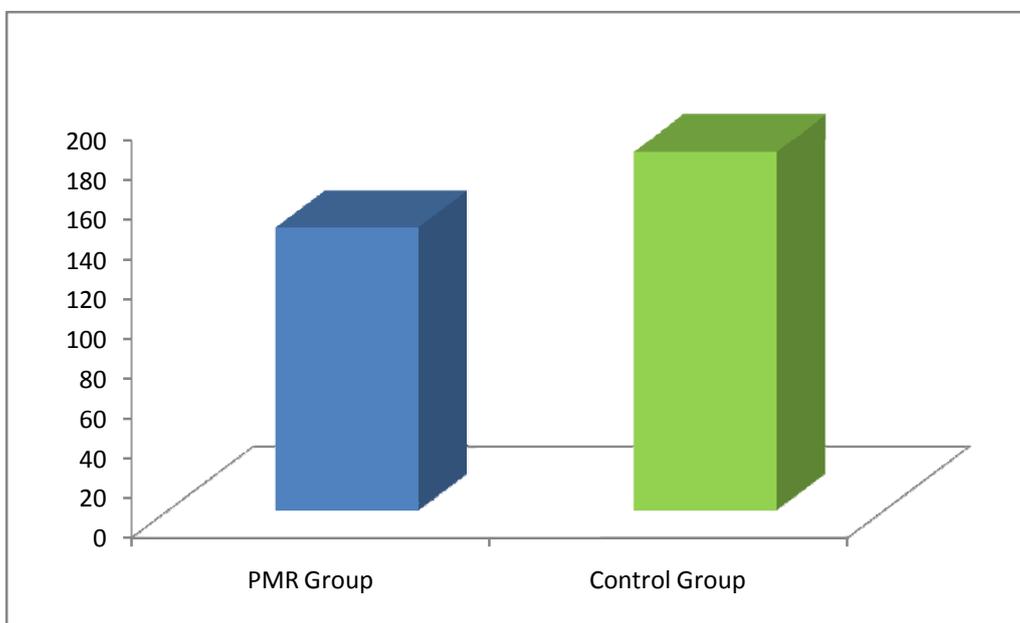


Figure 45. Posttest mean scores of Academic Stress of Progressive Muscle Relaxation Group and Control Group for subsample Boys.

The graphical representation of mean posttest scores of Academic Stress for subsample Boys of Progressive Muscle Relaxation Group and Control Group shows that the performance of students in two groups is dissimilar. Performance of Progressive Muscle Relaxation Group is better than that of Control Group. The graphical observation confirms the results of mean difference analysis.

Comparison of mean posttest scores of Progressive Muscle Relaxation Group and Control Group on Academic Stress for subsample girls.

The means and standard deviations of Posttest scores of Academic Stress of Progressive Muscle Relaxation Group and Control Group for subsample Girls were subjected to mean difference analysis. It was then tested for significance.

The consolidated results of the test of significance of difference between mean posttest scores of Academic Stress of the Progressive Muscle Relaxation Group and Control Group are given in Table 45.

Table 45

Test of Significance of Difference between Mean Posttest Scores of Academic Stress of Progressive Muscle Relaxation Group and Control Group for Subsample Girls

Variable	Progressive Muscle Relaxation Group			Control Group			t
	N ₁	M ₁	SD ₁	N ₂	M ₂	SD ₂	
Academic Stress	15	103.93	15.27	15	159.33	41.99	4.80**

**=P<0.01

Table 45 shows the result of t-test conducted to compare the Academic Stress mean scores between Experimental Group and Control group after the administration of Progressive Muscle Relaxation for Subsample Girls. There was significant difference in the mean posttest scores of Academic Stress of Progressive Muscle Relaxation Group (M=103.93, SD=15.27) and Control Group (M=159.33, SD= 41.99); $t(28) = 4.80, P < 0.01$. These results suggested

that the Progressive Muscle Relaxation Group and Control Group were significantly different in their Academic Stress after giving the intervention.

The result are presented graphically in Figure 46.

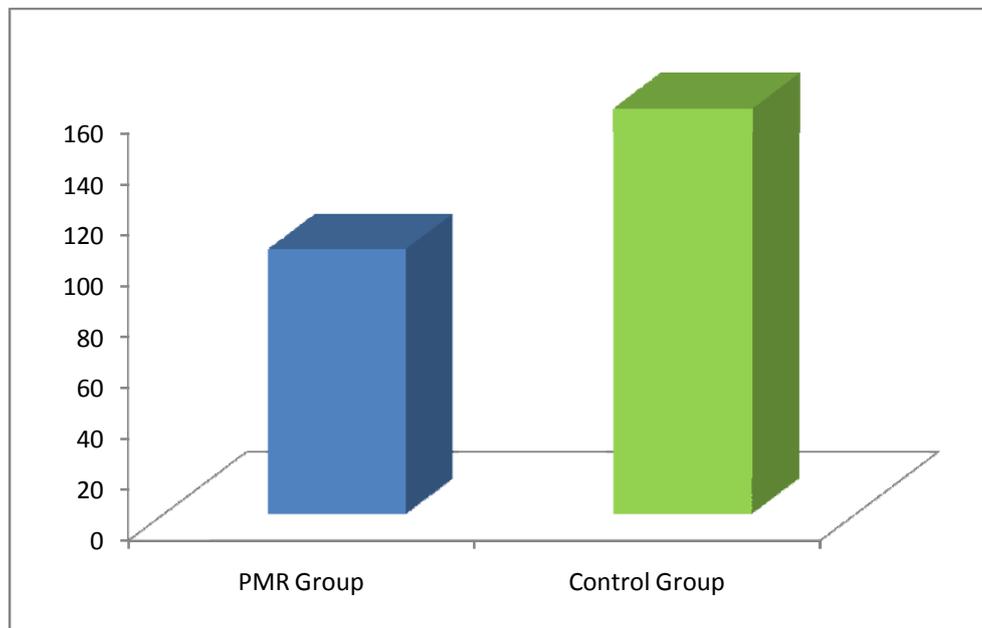


Figure 46. Posttest mean scores of Academic Stress of Progressive Muscle Relaxation Group and Control group for Subsample Girls.

The graphical representation of mean posttest scores of Academic Stress of Progressive Muscle Relaxation Group and Control Group for subsample Girls shows that there two groups are dissimilar. Performance of Progressive Muscle Relaxation Group is better than that of Control Group. The graphical observation confirms the results of mean difference Analysis.

Discussion.

Result of tests of significance of mean posttest scores of Academic Stress of Experimental Group (given Progressive Muscle Relaxation) and Control Group (given no intervention) for total sample and subsamples shows significant difference. The mean posttest scores of Experimental Group given

Progressive Muscle Relaxation is significantly lower than that of Control group. This reveals that Progressive Muscle Relaxation is effective in reducing Academic Stress of given total sample and subsamples.

Comparison of gain scores of Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group.

The mean gain scores of Academic Stress of secondary school students of Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group for Total sample and Subsample Boys and Girls were found out and compared for significance of mean difference using the test of significance of difference between means of independent samples. The magnitude of effect of Bibliotherapy and Progressive Muscle Relaxation was also found using effect size measure for two independent groups. The details of analysis are given in the following sections.

Comparison of mean gain scores of Academic Stress between Bibliotherapy Group and Progressive Muscle Relaxation Group for total sample.

The means and standard deviations of the gain scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group for total sample was subjected to mean difference analysis. It was then tested for significance. Effect size of Bibliotherapy was also found out.

The consolidated results of the test of significance of difference between gain scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group are given in Table 46.

Table 46

Test of Significance of Difference between Mean Gain Scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group for Total Sample

Variable	Bibliotherapy Group			Progressive Muscle Relaxation Group			t	Cohen's <i>d</i>
	N ₁	M ₁	SD ₁	N ₂	M ₂	SD ₂		
Academic Stress	30	73.07	26.64	30	47.30	36.37	3.00**	0.81

**=P<0.01

Table 46 shows the result of t-test conducted to compare the mean gain scores of Academic Stress between Experimental Groups after the administration of Bibliotherapy and Progressive Muscle Relaxation Exercise for total sample. There was significant difference in the mean gain scores of Academic Stress of Bibliotherapy Group (M=73.07, SD=26.64) and Progressive Muscle Relaxation Group (M=47.30, SD= 36.37); $t(58) = 3, P < 0.01$. Hence it is clear that there is significant difference between mean gain scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group. The mean gain scores of Bibliotherapy Group is significantly greater than Progressive Muscle Relaxation Group for Academic Stress. This clearly shows that Bibliotherapy is more effective for Total sample. This is also evident from Cohen's $d = 0.81$ implying large effect size.

The result is presented graphically in Figure 47.

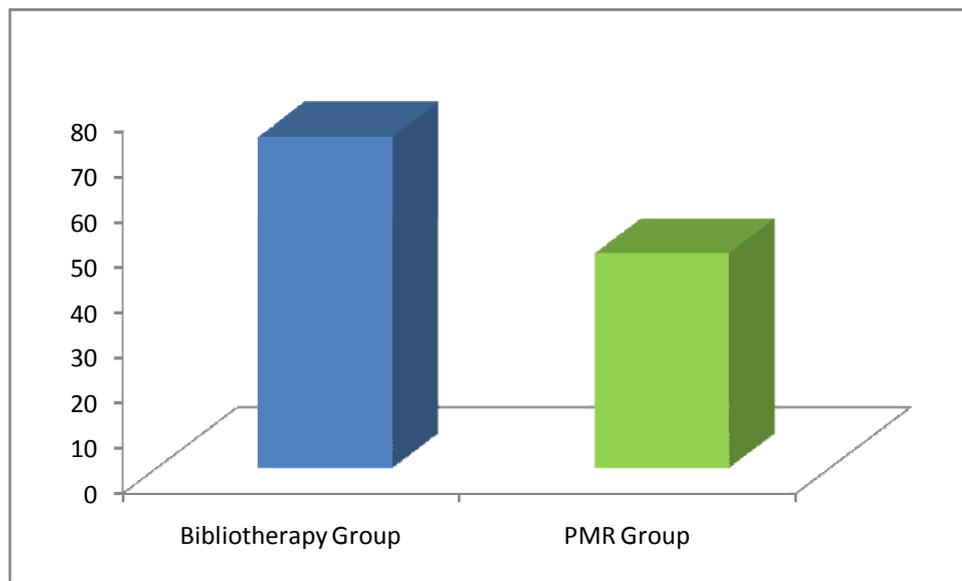


Figure 47. Comparison of mean gain scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group for total sample

The graphical representation of mean gain scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group for total sample shows that the performance of students in the two groups is dissimilar. Mean gain scores of Bibliotherapy Group is greater than mean gain scores of Progressive Muscle Relaxation Group. The graphical observation confirms the result of mean difference analysis.

Comparison of mean gain scores of Academic Stress between Bibliotherapy Group and Progressive Muscle Relaxation Group for subsample boys.

The means and standard deviation of the gain scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group for subsample boys were subjected to mean difference analysis. It was then tested for significance. Effect size of Bibliotherapy was also found out.

The consolidated results of the test of significance of difference between mean gain scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group are given in Table 47.

Table 47

Test of Significance of Difference between Mean Gain Scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group for Subsample Boys

Variable	Bibliotherapy Group			Progressive Muscle Relaxation Group			t	Cohen's <i>d</i>
	N ₁	M ₁	SD ₁	N ₂	M ₂	SD ₂		
Academic Stress	15	76.87	24.18	15	37.13	28.48	4.12**	1.51

**=P<0.01

Table 47 shows the results of t-test conducted to compare the mean gain scores of Academic Stress between Bibliotherapy Group and Progressive Muscle Relaxation Group after the administration of Bibliotherapy and Progressive Muscle Relaxation for Subsample Boys. There was significant difference in the mean gain scores of Academic Stress of Bibliotherapy Group (M=76.87, SD=24.18) and Progressive Muscle Relaxation Group (M=37.13, SD= 28.48); $t(28) = 4.12, P < 0.01$. Hence it is clear that there is significant difference between mean gain scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group. The mean gain scores of Bibliotherapy Group is significantly greater than that of Progressive Muscle Relaxation Group for Academic Stress. This clearly shows that Bibliotherapy is more effective for Subsample Boys. This is also evident from Cohen's $d = 1.51$ implying large effect size. .

The results are presented graphically in Figure 48.

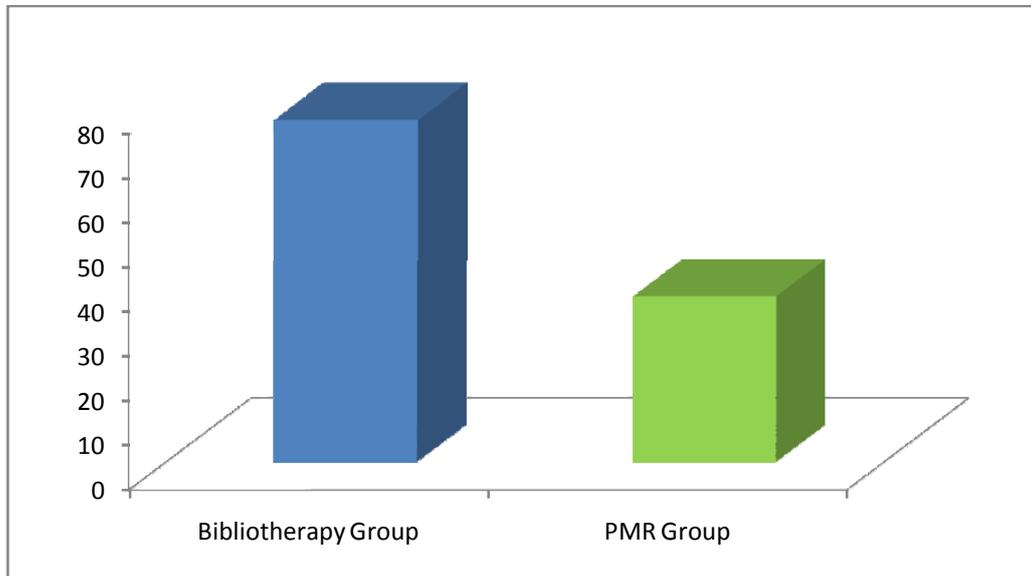


Figure 48. Comparison of mean gain scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group for subsample Boys.

The graphical representation of mean gain scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group for subsample (Boys) shows that the performance of students in two groups is dissimilar. Mean gain scores of Bibliotherapy Group is greater than mean gain scores of Progressive Muscle Relaxation Group. The graphical observation confirms the results of Mean Difference Analysis.

Comparison of mean gain scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group for subsample girls .

The means and standard deviations of the mean gain scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group for subsample Girls were subjected to mean difference analysis. It was then tested for significance. Effect size was also found out.

The consolidated results of the test of significance of difference between mean gain scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group are given in Table 48.

Table 48

Test of Significance of Difference between Mean Gain Scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group for Subsample Girls

Variable	Bibliotherapy Group			Progressive Muscle Relaxation Group			t	Cohen's <i>d</i>
	N ₁	M ₁	SD ₁	N ₂	M ₂	SD ₂		
Academic Stress	15	69.27	34.71	15	57.47	41.33	8.47**	0.31

**=P<0.01

From the Table 48 shows the result of t-test conducted to compare the mean gain scores of Academic Stress between experimental groups after the administration of Bibliotherapy and Progressive Muscle Relaxation for Subsample Girls. There was significant difference in the mean gain scores of Academic Stress of Bibliotherapy Group (M=69.27, SD=34.71) and Progressive Muscle Relaxation Group (M=57.47, SD= 41.33); $t(28) = 8.47$, $P < 0.01$. Hence it is clear that there is significant difference between mean gain on Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group. The mean gain scores of Bibliotherapy Group is significantly greater than Progressive Muscle Relaxation Group for Academic Stress. This clearly shows that Bibliotherapy is more effective for subsample Girls. This is also evident from Cohen's $d = 0.31$ implying small effect size.

The results are presented graphically in Figure 49.

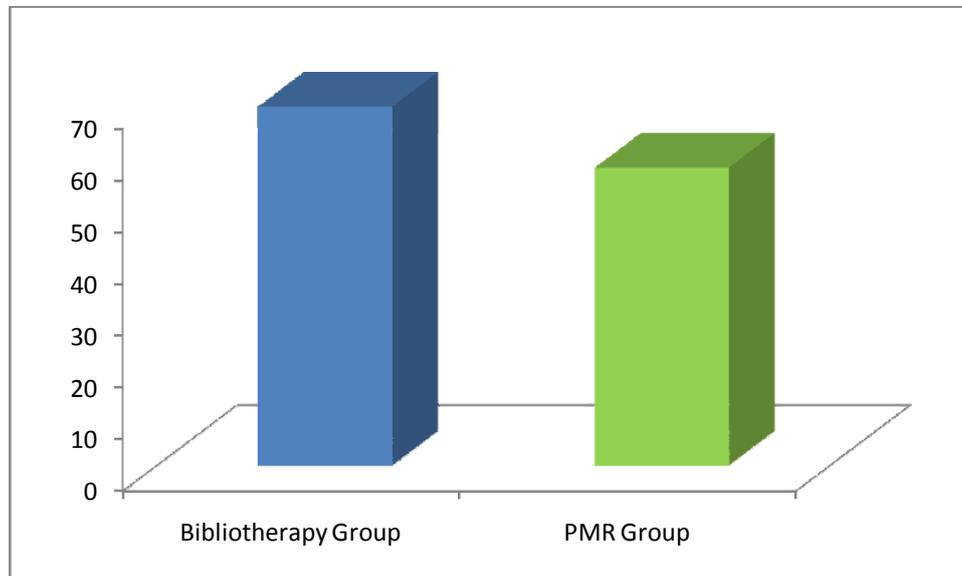


Figure 49. Comparison of mean gain scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group for Subsample Girls.

The graphical representation of mean gain scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group for subsample Girls shows that the performance of students in two groups is dissimilar. Mean gain scores of Bibliotherapy Group is greater than the mean gain score of Progressive Muscle Relaxation Group. The graphical observation confirms the results of mean difference analysis.

Discussion

Results of test of significance of difference between mean gain scores of Bibliotherapy Group given Bibliotherapy and Progressive Muscle Relaxation Group given Progressive Muscle Relaxation showed that there exists significant difference between the groups. The mean gain scores of Bibliotherapy Group is greater than the mean gain scores of Progressive

Muscle Relaxation group. This reveals that Bibliotherapy is more effective than Progressive Muscle Relaxation in reducing the Academic Stress for given total sample and subsamples.

Comparison of mean gain scores of Academic Stress between Bibliotherapy Group and Control Group for total sample.

The means and standard deviations of gain scores of Academic Stress of Bibliotherapy Group and Control group for Total sample were subjected to mean difference analysis. It was then tested for significance. Effect size was also found out.

The consolidated results of the test of significance of difference between mean gain scores of Academic Stress between Bibliotherapy Group and Control group for Total sample are given in Table 49.

Table 49

Test of Significance of Difference between Mean Gain Scores of Academic Stress of Bibliotherapy Group and Control Group for Total Sample

Variable	Bibliotherapy Group			Control Group			t	Cohen's <i>d</i>
	N ₁	M ₁	SD ₁	N ₂	M ₂	SD ₂		
Academic Stress	30	73.07	26.64	30	0.90	4.42	13.19**	3.78

** = P<0.01

Table 49 shows the results of t-test conducted to compare the mean gain scores of Academic Stress between Experimental Group and Control Group after the administration of Bibliotherapy for Total sample. There was significant difference in the mean gain scores of Academic Stress of

Bibliotherapy Group ($M=73.07$, $SD=26.64$) and Control Group ($M=0.90$, $SD=4.42$); $t(58) = 13.19$, $P < 0.01$. Hence it is clear that there is significant difference between mean gain scores of Academic Stress of Bibliotherapy Group and Control Group. The mean gain scores of Bibliotherapy Group is significantly greater than that of Control Group for Academic Stress. This clearly shows that Bibliotherapy is highly effective for Total sample. This is also evident from Cohen's $d = 3.78$ implying large effect size.

The result are represented graphically in Figure 50

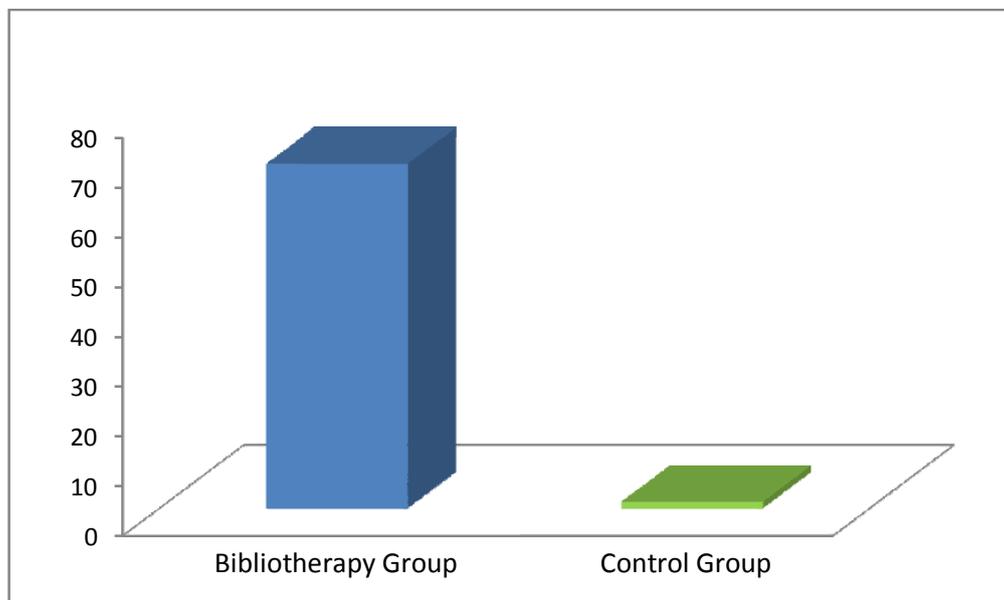


Figure 50. Comparison of mean gain scores of Academic Stress of Bibliotherapy Group and Control group for Total sample

The graphical representation of mean gain score of Academic Stress of Bibliotherapy Group and Control group for total sample shows that the performance of students in two groups is dissimilar. Mean gain scores of Bibliotherapy Group is greater than mean gain scores of Control group for Academic Stress. The graphical observation confirms the results of mean difference analysis.

Comparison of mean gain scores of Academic Stress of Bibliotherapy Group and Control Group for subsample boys.

The means and standard deviations of gain scores of Academic Stress of Bibliotherapy Group and Control group for subsample Boys were subjected to mean difference analysis. It was then tested for significance and effect size was also found out.

The consolidated results of test of significance of difference between mean gain scores of Academic Stress of Bibliotherapy Group and Control group for subsample Boys are given in Table 50.

Table 50

Test of Significance of Difference between Mean Gain scores of Academic Stress of Bibliotherapy Group and Control Group for Subsample Boys

Variable	Bibliotherapy Group			Control Group			t	Cohen's d
	N ₁	M ₁	SD ₁	N ₂	M ₂	SD ₂		
Academic Stress	15	76.87	24.18	15	0.47	4.55	12.18	4.39

Table 50 shows the results of t-test conducted to compare the mean gain scores of Academic Stress between Experimental Group and Control Group after the administration of Bibliotherapy for Subsample Boys. There was significant difference in the mean gain scores of Academic Stress of Bibliotherapy Group (M=76.87, SD=24.18) and Control Group (M=0.47, SD=4.55); $t(28) = 12.18, P < 0.01$. Hence it is clear that there is significant difference between mean gain scores of Academic Stress of Bibliotherapy Group and Control Group. The mean gain scores of Bibliotherapy Group is significantly greater than Control Group for Academic Stress. This clearly

shows that Bibliotherapy is highly effective for Subsample Boys. This is also evident from Cohen's $d = 4.39$ implying large effect size.

The results are represented graphically in Figure 51.

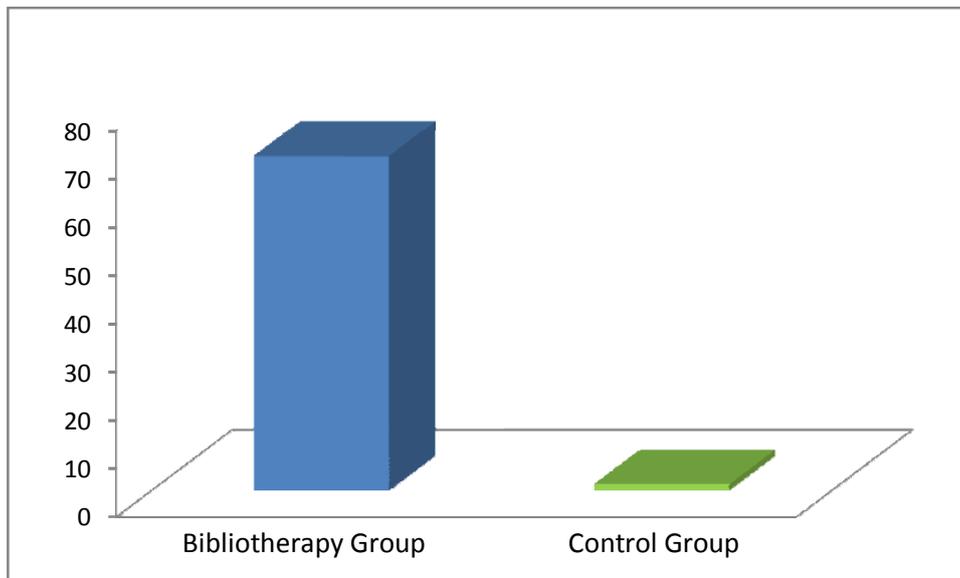


Figure 51. Comparison of mean gain scores of Academic Stress of Bibliotherapy Group and Control group for subsample Boys.

The graphical representation of mean gain scores of Academic stress of Bibliotherapy group and Control group for subsample Boys shows that the performance of students in two groups is dissimilar. Mean gain scores of Bibliotherapy Group is greater than mean gain scores of Control group. The graphical observation confirms the result of mean difference analysis.

Comparison of mean gain scores of Academic Stress of Bibliotherapy Group and Control group for subsample girls.

The consolidated results of test of significance of difference between mean gain scores of Academic Stress of Bibliotherapy Group and Control group for subsample Girls are given in Table 51.

Table 51

Test of Significance of Difference between Mean Gain Scores of Academic Stress Bibliotherapy Group and Control Group for Subsample Girls

Variable	Bibliotherapy Group			Control Group			t	Cohen's <i>d</i>
	N ₁	M ₁	SD ₁	N ₂	M ₂	SD ₂		
Academic Stress	15	69.27	34.71	15	1.33	4.40	7.52	2.75

Table 51 shows the results of t-test conducted to compare the mean gain scores of Academic Stress between Experimental Group and Control Group after the administration of Bibliotherapy for Subsample Girls. There was significant difference in the mean gain scores of Academic Stress of Bibliotherapy Group (M=69.27, SD=34.71) and Control Group (M=1.33, SD=4.40); $t(28) = 7.52$, $P < 0.01$. Hence it is clear that there is significant difference between mean gain scores of Academic Stress of Bibliotherapy Group and Control Group. The mean gain scores of Bibliotherapy Group is significantly greater than Control Group for Academic Stress. This clearly shows that Bibliotherapy is highly effective for Subsample Girls. This is also evident from Cohen's $d = 2.75$ implying large effect size.

The results are presented graphically in Figure 52.

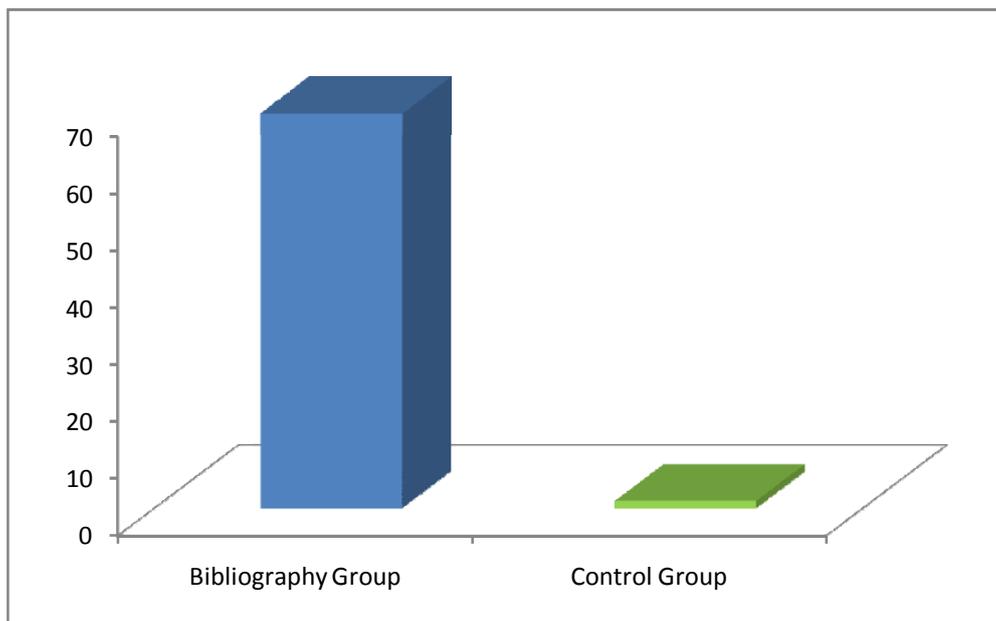


Figure 52. Comparison of mean gain scores of Academic Stress of Bibliotherapy Group and Control group for Subsample Girls.

The graphical representation of mean gain scores of Academic Stress of Bibliotherapy Group and Control Group for subsample girls shows that the performance of students in two groups is dissimilar. Mean gain scores of Bibliotherapy Group is greater than mean gain scores of Control group. The graphical observation confirms the results of mean difference analysis.

Discussion.

Results of test of significance of difference between mean gain scores of Bibliotherapy Group given Bibliotherapy and Control Group showed that there exists significant difference between the groups. The mean gain scores of Bibliotherapy Group is greater than the Mean Gain Scores of Control group. This reveals that Bibliotherapy is highly effective in reducing the Academic Stress for given total sample and subsample.

Comparison of mean gain scores of Academic Stress between Progressive Muscle Relaxation Group and Control Group for total sample.

The means and standard deviations of the gain scores on Academic Stress of Progressive Muscle Relaxation Group and Control group for total sample were subjected to mean difference analysis. It was then tested for significance and effect size was also found out.

The consolidated results of the test of significance of difference between mean gain scores of Academic Stress of Progressive Muscle Relaxation Group and Control group for Total sample are given in Table 52.

Table 52

Test of Significance of Difference between Mean Gain Scores of Academic Stress of Progressive Muscle Relaxation Group and Control Group for Total Sample

Variable	Progressive Muscle Relaxation Group			Control Group			t	Cohen's <i>d</i>
	N ₁	M ₁	SD ₁	N ₂	M ₂	SD ₂		
Academic Stress	30	47.30	36.37	30	.90	4.42	6.94**	1.79

**= P<0.01

Table 52 shows that shows the results of t-test conducted to compare the mean gain scores of Academic Stress between Experimental Group and Control Group after the administration of Progressive Muscle Relaxation for Total sample. There was significant difference in the mean gain scores of Academic Stress of Progressive Muscle Relaxation Group (M=47.30, SD=36.37) and Control Group (M=0.90, SD=4.42); $t(58) = 6.94, P < 0.01$.

Hence it is clear that there is significant difference between mean gain scores of Academic Stress of Progressive Muscle Relaxation Group and Control Group. The mean gain scores of Progressive Muscle Relaxation Group is significantly greater than Control Group for Academic Stress. This clearly shows that Progressive Muscle Relaxation is highly effective for Total sample. This is also evident from Cohen's $d = 1.79$ implying large effect size.

The results are presented graphically in Figure 53.

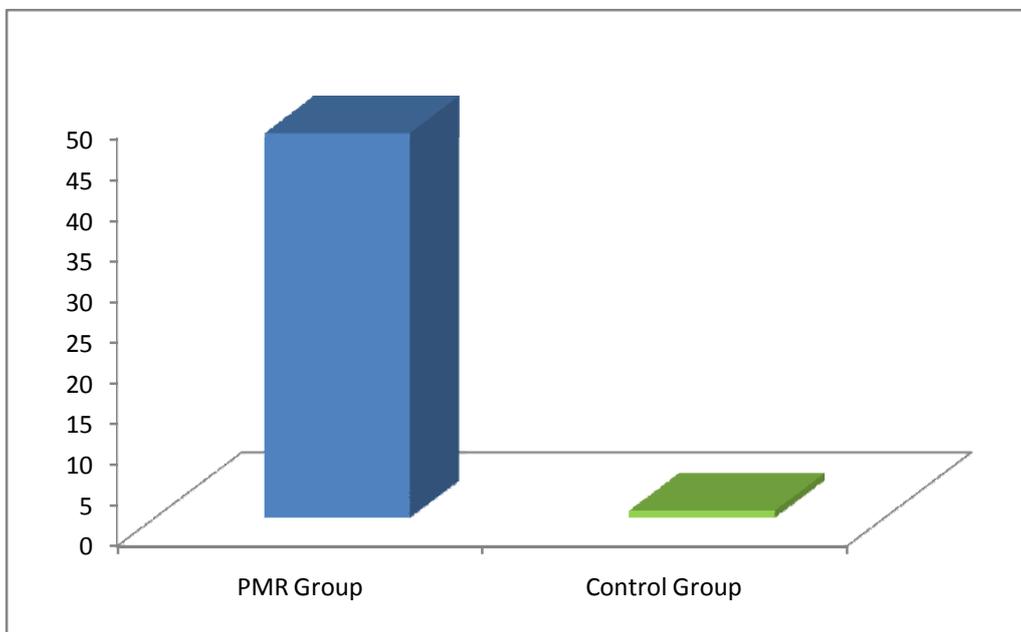


Figure 53. Comparison of mean gain scores of Academic Stress between Progressive Muscle Relaxation Group and Control Group for Total sample.

The graphical representation of mean gain scores of Academic Stress of Progressive Muscle Relaxation Group and Control group for total sample shows that the performance of students in the two groups is dissimilar. Mean gain scores of Progressive Muscle Relaxation Group is greater than the gain scores of Control group for Academic Stress. The graphical observation confirms the results of mean difference analysis.

Comparison of mean gain scores of Academic Stress between Progressive Muscle Relaxation Group and Control group for subsample boys.

The means and standard deviations of the gain scores of Academic Stress of Progressive Muscle Relaxation Group and Control Group for subsample Boys were subjected to mean difference analysis. It was then tested for significance. Effect size was also found out.

The consolidated results of the test of significance of difference between mean gain scores of Academic Stress of Progressive Muscle Relaxation Group and Control group for subsample Boys are given in Table 53.

Table 53

Test of Significance of Difference between Mean Gain Scores of Academic Stress of Progressive Muscle Relaxation Group and Control group for subsample Boys

Variable	Progressive Muscle Relaxation Group			Control Group			t	Cohen's <i>d</i>
	N ₁	M ₁	SD ₁	N ₂	M ₂	SD ₂		
Academic Stress	15	37.13	28.48	15	0.47	4.55	5.05**	1.80

**= P<0.01

Table 53 shows that shows the results of t-test conducted to compare the mean gain scores of Academic Stress between Experimental Group and Control Group after the administration of Progressive Muscle Relaxation for Subsample Boys. There was significant difference in the mean gain scores of

Academic Stress of Progressive Muscle Relaxation Group ($M=37.13$, $SD=28.48$) and Control Group ($M=0.47$, $SD=4.55$); $t(28) = 5.05$, $P < 0.01$. Hence it is clear that there is significant difference between mean gain scores of Academic Stress of Progressive Muscle Relaxation Group and Control Group. The mean gain scores of Progressive Muscle Relaxation Group is significantly greater than Control Group for Academic Stress. This clearly shows that Progressive Muscle Relaxation is highly effective for Subsample Boys. This is also evident from Cohen's $d = 1.80$ implying large effect size.

The results are presented graphically in Figure 54.

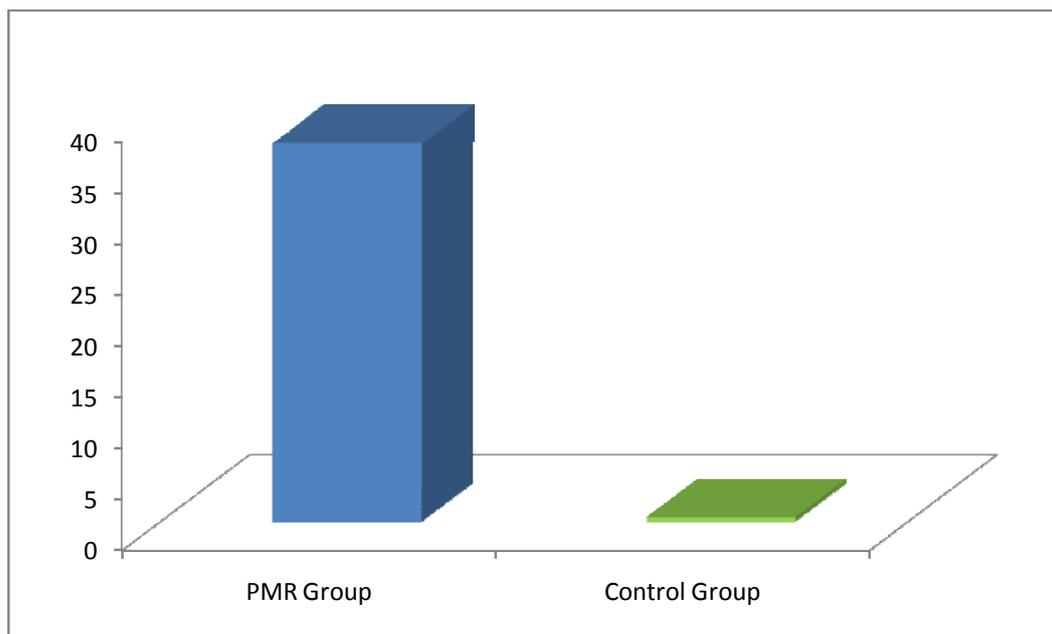


Figure 54. Comparison of mean gain scores of Academic Stress between Progressive Muscle Relaxation Group and Control group for subsample Boys.

The graphical representation of mean gain scores of Academic Stress of Progressive Muscle Relaxation Group and Control group for subsample Boys shows that the performance of students in the two groups is dissimilar. Mean gain scores of Progressive Muscle Relaxation Group is greater than the

mean gain scores of Progressive Muscle Relaxation Group is greater than the mean gain scores of control group for Academic Stress. The graphical observation confirms the results of mean difference analysis.

Comparison of mean gain scores of Academic Stress between Progressive Muscle Relaxation and Control group for subsample girls.

The means and standard deviations of the gain scores of Academic Stress of Progressive Muscle Relaxation Group and Control group for subsample Girls was subjected to mean difference analysis. It was then tested for significance and effect size was also found out.

The consolidated results of the test of significance of difference between mean gain scores of Academic Stress of Progressive Muscle Relaxation Group and Control Group for subsample Girls are given in Table 54.

Table 54

Test of Significance of Difference between Mean Gain Scores of Academic Stress of Progressive Muscle Relaxation Group and Control Group for Subsample Girls.

Variable	Progressive Muscle Relaxation Group			Control Group			t	Cohen's <i>d</i>
	N ₁	M ₁	SD ₁	N ₂	M ₂	SD ₂		
Academic Stress	15	57.47	41.33	15	1.33	4.40	5.23**	1.96

**=P<0.01

Table 54 shows that the results of t-test conducted to compare the mean gain scores of Academic Stress between Experimental Group and Control Group after the administration of Progressive Muscle Relaxation for Subsample

Girls. There was significant difference in the mean gain scores of Academic Stress of Progressive Muscle Relaxation Group ($M=57.47$, $SD=41.33$) and Control Group ($M=1.33$, $SD=4.40$); $t(28) = 5.23$, $P < 0.01$. Hence it is clear that there is significant difference between mean gain scores of Academic Stress of Progressive Muscle Relaxation Group and Control Group. The mean gain scores of Progressive Muscle Relaxation Group is significantly greater than Control Group for Academic Stress. This clearly shows that Progressive Muscle Relaxation is highly effective for Subsample Girls. This is also evident from Cohen's $d = 1.96$ implying large effect size.

The result are presented graphically in Figure 55.

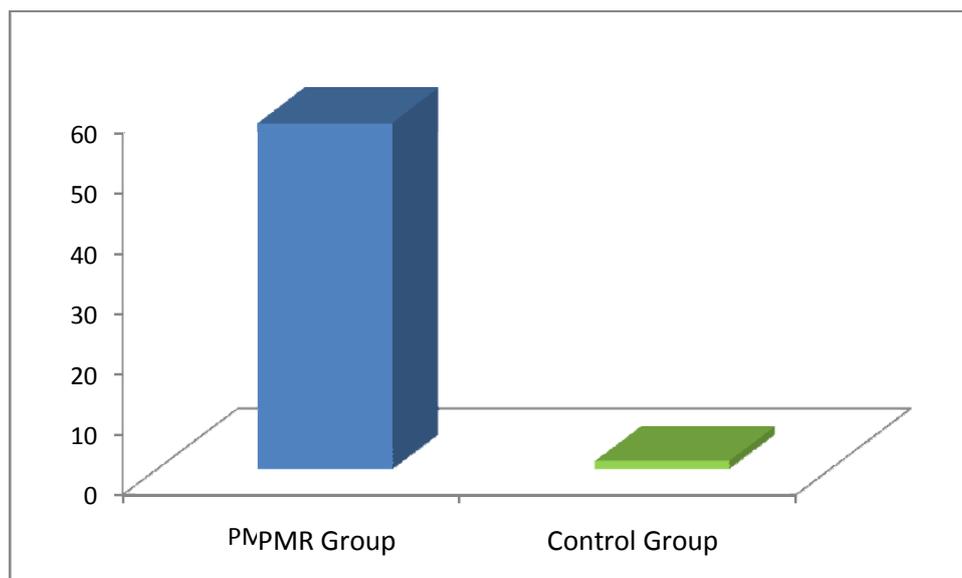


Figure 55. Comparison of mean gain scores of Academic Stress of Progressive Muscle Relaxation Group and Control group for subsample Girls

Graphical representation of mean gain scores of Academic Stress of Progressive Muscle Relaxation Group, and Control group shows that the performance of students in two groups is dissimilar. Mean gain scores of Progressive Muscle Relaxation Group is greater than mean gain scores of

Control Group for Academic Stress. The graphical observation confirms the results of mean difference analysis.

Discussion.

Results of test of significance of difference between mean gain scores of Experimental Group given Progressive Muscle Relaxation and Control group showed that there exists significant difference between the groups. The mean gain scores of Progressive Muscle Relaxation Group is greater than the Mean Gain Scores of Control group. This reveals that Progressive Muscle Relaxation is effective in reducing the Academic Stress for given total sample and subsample.

Discussion on the genuineness of the difference between Experimental Groups and Control Groups.

Genuineness of the difference in the performance of the groups.

The analysis of the pretest scores of the experimental groups and control group showed that mean scores of Academic Stress of secondary school students were more or less equitable. After administering the Bibliotherapy and Progressive Muscle Relaxation for Experimental Groups and not administering any of the methods in Control Group, it was found that the Academic Stress of students in Bibliotherapy Group and Progressive Muscle Relaxation Group are lower compared to Control Group. And it was also found that the Academic Stress of student in Bibliotherapy Group was lower than that of Progressive Muscle Relaxation Group. Hence it can be tentatively concluded that Bibliotherapy and Progressive Muscle Relaxation

can reduce the Academic Stress of secondary school students and Bibliotherapy is superior in reducing Academic Stress than Progressive Muscle Relaxation. But it cannot be conclusively stated that the groups differ significantly by just analyzing pretest and posttest scores of three groups. So the results were substantiated using the technique of Analysis of Covariance. The analysis done in this regard is given in the subsequent sections.

By employing single factor ANCOVA, the investigator could further study the relative effectiveness of Bibliotherapy and Progressive Muscle Relaxation in reducing Academic Stress after controlling the pretest score as covariate. The analysis was done for Total sample. The basic assumptions of using ANCOVA such as linearity and homogeneity were ensured using statistical package for social sciences. However the examination of the major assumptions revealed that the basic assumptions are met to a satisfactory extent.

Test for basic assumptions.

The basic assumptions of the ANCOVA were examined by analyzing the data collected. The results of the analysis are presented as follows.

Linear relationship between the dependent variable and the covariate.

The nature of the relationship between the Dependent Variables and the covariate was studied using scatter plots. A visual examination of the scatter plots revealed that the dependent variables and covariates did not depart greatly from linearity.

Scatter plots of the covariate against Dependent Variable (Academic Stress) are present in Figure 56 to 58.

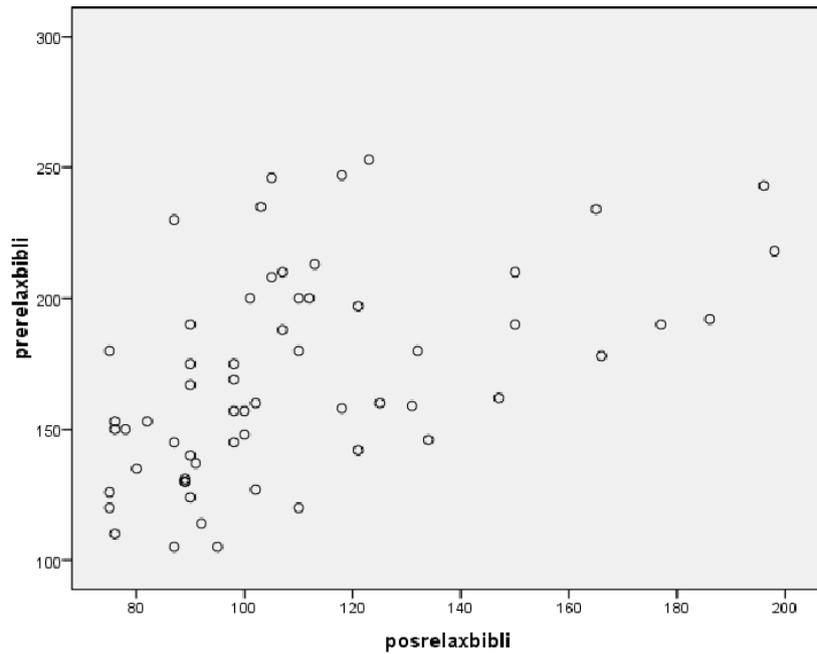


Figure 56. Scatter plot of Academic Stress with the Covariate Pretest Score of Bibliotherapy Group and Progressive Muscle Relaxation Group for Total sample.

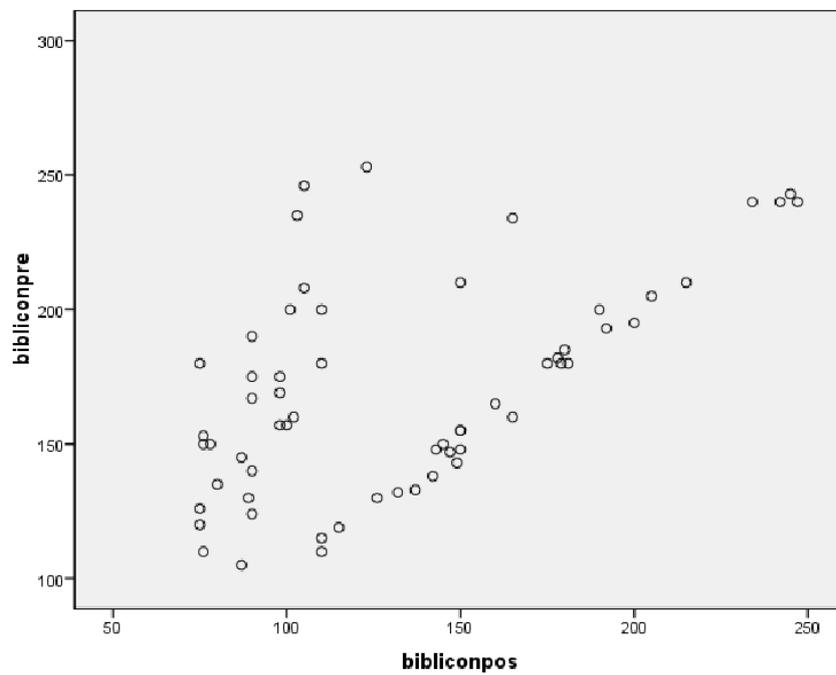


Figure 57. Scatter plot of Academic Stress with the covariate pretest of Bibliotherapy Group and Control group for Total sample.

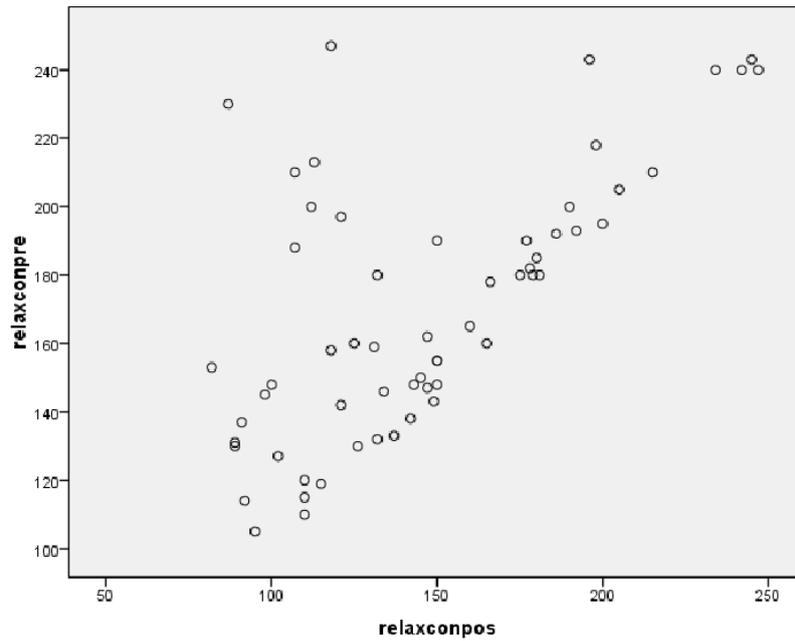


Figure 58. Scatter plot of Academic Stress with the Covariate pretest of Progressive Muscle Relaxation Group and Control group for Total sample.

Homogeneity of variance.

Leven’s test was used for testing the homogeneity of graphs. This test is designed to test the equality of group variance. That means testing whether the variance of groups significantly differ or not. The result shows that there is no significant difference for dependent variable of the three groups for total sample and subsamples. The result of homogeneity of variance is given in Table 55.

Table 55

Test of Homogeneity of Variance

Groups	Leven’s Static	df ₁	df ₂	Level of Significance
Bibliotherapy Group	11.95	1	58	.001
Progressive Muscle Relaxation Group	4.15	1	58	.046
Control Group	17.35	1	58	.000

Analysis of Co-variance (ANCOVA) for Academic Stress - Pretest Scores of Bibliotherapy Group and Progressive Muscle Relaxation Group as Covariate.

This part of the analysis was done to examine whether significant changes exists in the mean posttest scores of Academic Stress when pretest scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group were taken as covariate. Summary of the results of ANCOVA is given in Table 56.

Table 56

Summary of Analysis of Covariance (ANCOVA) for Academic Stress- Pretest Scores of Bibliotherapy Group and Progressive Muscle Relaxation Group as Covariate for Total Sample

Source of Variance	Sum of Squares	df	Mean Squares	F
Between	10416.58	1	1041.58	19.37**
Within	30646.00	57	537.65	
Total	778106.00	60		

**= P<0.01

Table 56 shows that F-test supports the effectiveness of intervention on Academic Stress of secondary school students after controlling pretest scores $F(1, 57) = 19.37, P < .01$. The result therefore suggests that the variation in the posttest scores of Academic Stress cannot be attributed to the influence of pretest scores of Academic Stress. Hence result of the ANCOVA suggests that, when a linear adjustment is made for the effect of variation due to the difference in pretest scores of the subjects on Academic Stress, there exist

statistically significant difference between the Bibliotherapy Group and Progressive Muscle Relaxation Group.

Bonferroni's Test of Post-hoc Comparison of Adjusted Means between Bibliotherapy Group and Progressive Muscle Relaxation Group for Total Sample.

To find out, of the two groups which received two different interventions that is Bibliotherapy Group and Progressive Muscle Relaxation Group which one differ in the adjusted mean posttest scores of Academic Stress, test of significance of difference between adjusted means was applied.

The data and results of the post-hoc comparison of the adjusted mean posttest scores of Academic Stress is presented in Table 57.

Table 57

Bonferroni's Test of Post-hoc Comparison of Adjusted Means between Bibliotherapy Group and Progressive Muscle Relaxation Group for Total Sample

Dependent Variable	Adjusted Mean		Standard Error	t-value
	Bibliotherapy Group	Progressive Muscle Relaxation Group		
Academic Stress	96.59	122.9	4.23	6.22**

** = $P < .01$

As per table 56 regarding the test of significance of difference between adjusted mean posttest scores of Academic Stress of Bibliotherapy Group ($M=96.59$) and Progressive Muscle Relaxation Group ($M=122.9$; $t(58)=6.22$, $p < 0.01$), it is noted that the low mean score associated with Bibliotherapy Group given Bibliotherapy suggested the advantage of Bibliotherapy over Progressive Muscle Relaxation.

Analysis of Covariance (ANCOVA) for Academic Stress Pretest Scores of Bibliotherapy Group and Control Group as Covariate.

To examine whether significant changes exist in the mean scores of Academic Stress for total sample, the pretest scores of Academic Stress was taken as covariate. Summary of results of ANCOVA is given in Table 58.

Table 58

Summary of Analysis of Covariance (ANCOVA) for Academic Stress- Pretest Scores of Bibliotherapy Group and Control Group as Covariate for Total Sample

Source of Variance	Sum of Squares	df	Mean Squares	F
Between	78965.13	1	78965.13	270.47**
Within	16641.36	57	291.95	
Total	1201722.00	60		

** =P<0.01

Table 58 shows that F-test supports the effectiveness of intervention on Academic Stress of secondary school students after controlling pretest scores $F(1, 57) = 270.47, P < .01$. The result therefore suggests that the variation in the posttest scores of Academic Stress cannot be attributed to the influence of pretest scores of Academic Stress. Hence result of the ANCOVA suggests that, when a linear adjustment is made for the effect of variation due to the difference in pretest scores of the subjects on Academic Stress, there exist statistically significant difference between the Bibliotherapy Group and Control Group.

Bonferroni's Test of Post-hoc Comparison of Adjusted Means between Bibliotherapy Group and Control Group for total sample.

To find out, of the two groups which received two different treatments, that is Experimental Group given Bibliotherapy and Control Group given no intervention, which differs in the adjusted mean posttest scores of Academic Stress, the test of significance of difference between adjusted mean was applied. The data and results of the post hoc comparison of adjusted mean posttest scores of Academic Stress is presented in Table 59.

Table 59

Bonferroni's Test of Post-hoc Comparison of Adjusted Means between Bibliotherapy Group and Control Group for Total Sample

Dependent Variable	Adjusted Mean		Standard Error	t-value
	Bibliotherapy Group	Progressive Muscle Relaxation Group		
Academic Stress	96.82	169.40	3.12	23.26**

**=P<0.01

As per Table 58 regarding the test of significance of difference between adjusted mean posttest scores of Academic Stress of Bibliotherapy Group (M=96.82) and Control Group (M=69.40; $t(58)= 23.26, p<.01$). It is noted that the low mean score associated with Bibliotherapy Group given Bibliotherapy suggested the advantage of Bibliotherapy.

It is noted that low mean score is associated with Bibliotherapy Group given Bibliotherapy suggesting effectiveness in reducing academic stress.

Analysis of Covariance (ANCOVA) for Academic Stress-Pretest Scores of Progressive Muscle Relaxation Group and Control Group for total Sample.

This part of the analysis was done to examine whether significant changes exist in the mean posttest scores of Academic Stress when pretest scores of Academic Stress was taken as covariate.

Summary of results of ANCOVA is given in Table 60.

Table 60

Summary of Analysis of Co-variance (ANCOVA) for Academic Stress Pretest Scores of Progressive Muscle Relaxation Group and Control Group as Covariate for Total Sample

Source of Variance	Sum of Squares	df	Mean Squares	F	Level of significance
Between	3239.48	1	32397.48	57.32	P<.01
Within	32218.06	57	565.23		
Total	1397076.00	60			

Table 60 shows that F-test supports the effectiveness of intervention on Academic Stress of secondary school students after controlling pretest scores $F(1, 57) = 57.32, P < .01$. The result therefore suggests that the variation in the posttest scores of Academic Stress cannot be attributed to the influence of pretest scores of Academic Stress. Hence result of the ANCOVA suggests that, when a linear adjustment is made for the effect of variation due to the difference in pretest scores of the subjects on Academic Stress, there exist statistically significant difference between the Progressive Muscle Relaxation Group and Control Group.

Bonferroni's Test of Post-hoc Comparison of Adjusted Means between Progressive Muscle Relaxation Group and Control Group for Total Sample.

To find out of the two groups, that is Experimental Group received Progressive Muscle Relaxation and Control group received no intervention, which differs in adjusted mean posttest scores of Academic Stress, test of significance of difference between adjusted means was applied.

The data and results of the post-hoc comparison of the adjusted mean posttest scores of Academic Stress is presented in Table 61.

Table 61

Bonferroni's Test of Post-hoc Comparison of Adjusted Means between Progressive Muscle Relaxation Group and Control Group for Total Sample

Dependent Variable	Adjusted Mean		Standard Error	t-value
	Bibliotherapy Group	Control Group		
Academic Stress	123.20	169.70	4.34	10.71**

**= P<0.01

As per Table 61 regarding the test of significance of difference between adjusted mean posttest scores of Academic Stress of Progressive Muscle Relaxation Group (M=123.20) and Control Group (M=169.70; $t(58)=10.71$, $p<.01$).

It is noted that high mean is associated with Experimental Group, that was given Progressive Muscle Relaxation suggesting the effectiveness of Progressive Muscle Relaxation in reducing Academic Stress.

Discussion

The result of Analysis of Covariance for Academic Stress pretest scores of Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group and the Post-hoc Comparison of Adjusted mean scores even after removing the effects of pretest scores as covariate showed significant difference in their mean Academic Stress score. This difference is due to lower academic stress associated with the Experimental Groups given Bibliotherapy and Progressive Muscle Relaxation.

Conclusion

From the analysis of data obtained prior to the intervention it can be concluded that experimental and control group students were equal in their Academic Stress. The Academic Stress of students were high and were almost equal. Three intact groups were randomly selected for the study, two experimental groups and one control group. The three groups were then given pretest and were compared based on pretest scores and was found to be equivalent.

After the administration of intervention to two experimental groups and no treatment to control group, posttest were conducted. The comparison of posttest scores showed significant difference between all the three groups. Comparing the mean pretest and posttest scores showed significant difference for the two experimental groups and no significant effectiveness for control groups. Comparing the intervention it was found that Bibliotherapy showed more effect on Academic Stress. Both the intervention made mental difference in the scores of experimental groups from which it can be concluded that the interventions are effective in helping the students to cope with their Academic Stress.

Summary, Findings, & Suggestions

- *Restatement of the Problem*
- *Variables*
- *Objectives of the Study*
- *Hypotheses of the Study*
- *Methodology*
- *Major Findings*
- *Tenability of Hypotheses*
- *Conclusion*
- *Educational Implications*
- *Suggestion for Further Research*

SUMMARY, FINDINGS AND SUGGESTIONS

This chapter briefly reviews the study, presenting the various aspects of the study such as variables, objectives, hypotheses, methodology, major findings of the study, tenability of hypotheses, educational implications and suggestions for further research.

Restatement of the Problem

The present study is entitled as “**EFFECTIVENESS OF BIBLIOTHERAPY AND PROGRESSIVE MUSCLE RELAXATION ON ACADEMIC STRESS REDUCTION AMONG SECONDARY SCHOOL STUDENTS OF KERALA**”

Variables

A preliminary survey among the secondary school teachers and students revealed that though there are physical education training, work experience classes, yoga and other extracurricular activities, there exist no systematic methods to help the children cope with their Academic Stress. So the researcher used Bibliotherapy and Progressive Muscle Relaxation to help the children to cope with their Academic Stress.

Independent Variables

Independent variable is the intervention programme for stress reduction. The two intervention programmes Bibliotherapy and Progressive Muscle Relaxation are considered as the independent variables.

Dependent Variable

Academic Stress is taken as dependent variable of the study.

Objectives of the Study

1. To check the views of teachers and students on giving certain programmes to reduce Academic Stress.
2. To identify the existing level of academic stress of secondary school students for total sample and subsample based on gender.
3. To find out effectiveness of Bibliotherapy and Relaxation Exercise on Academic Stress of secondary school students for total sample and subsample based on gender.
4. To compare the effectiveness of Bibliotherapy and Relaxation Exercise on academic stress of secondary students for total sample and subsample based on gender.
5. To compare the adjusted mean scores of dependent variable between experimental groups and control group by considering pretest scores as covariate.

Hypotheses of the Study

The hypotheses set for the study are:

1. There is no significant difference in the pretest scores of Academic Stress of Secondary school students of Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls

2. There is significant difference in the mean posttest scores of Academic Stress between Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls
3. There is no significant difference in between the mean pretest scores of Academic Stress of Secondary school students of Bibliotherapy Group and Progressive Muscle Relaxation Group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls
4. There is no significant difference in the mean pretest scores of Academic Stress of Secondary school students of Bibliotherapy Group and Control Group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls
5. There is no significant difference in the mean pretest scores Academic Stress of Secondary school students of Progressive Muscle Relaxation Group and Control Group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls

6. There is significant difference in the mean Pretest and Posttest scores of Academic Stress of Bibliotherapy Group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls
7. There is significant difference in the mean Pretest and Posttest scores of Academic Stress of Progressive Muscle Relaxation Group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls
8. There is no significant difference in the mean Pretest and Posttest scores of Academic Stress of Control group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls
9. There is significant difference in the mean posttest scores of Academic Stress between Bibliotherapy Group and Progressive Muscle Relaxation Group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls
10. There is significant difference in the mean posttest scores of Academic Stress between Bibliotherapy Group and Control Group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls

11. There is significant difference in the mean posttest scores of Academic Stress between Progressive Muscle Relaxation Group and Control Group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls
12. There is significant difference in the mean gain scores of Academic Stress between Bibliotherapy Group and Progressive Muscle Relaxation Group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls
13. There is significant difference in the mean gain scores of Academic Stress between Bibliotherapy Group and Control group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls
14. There is significant difference in the mean gain scores of Academic Stress between Progressive Muscle Relaxation Group and Control Group for
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls

15. There is significant difference in the adjusted mean scores of Academic Stress of Secondary school students between Bibliotherapy Group, Progressive Muscle Relaxation Group and Control group by considering pretest scores as co-variate.

Methodology

Methodology of the present study is described under the following headings.

Phase I- Preliminary Survey

Design

A survey was conducted among secondary school teachers and students to understand about the present situations and the need for interventions regarding stress management.

Sample

Investigator selected 50 secondary school teachers and 400 secondary school students randomly from different schools of Kozhikode district randomly selected for the study.

Tools used for the study

1. Questionnaire on Views of Students on Stress Reduction Programme
(Meera & Praseeda, 2011)
2. Questionnaire on Views of Teachers on Stress Reduction Programme
(Meera & Praseeda, 2011)

Phase II- Experimental Phase

Design

G ₁	O ₁	X ₁	O ₄
G ₂	O ₂	X ₂	O ₅
G ₃	O ₃	- -	O ₆

Where G₁ – Bibliotherapy Group

G₂ – Progressive Muscle Relaxation Group

G₃ – Control Group

O₁ – Pretest for Bibliotherapy Group

O₂ – Pretest for Progressive Muscle Relaxation Group

O₃ – Pretest for Control group

O₄ – Posttest for Bibliotherapy Group

O₅ – Posttest for Progressive Muscle Relaxation Group

O₆ – Posttest for Control Group

X₁ – Bibliotherapy

X₂ – Progressive Muscle Relaxation

Pretest posttest non-equivalent group design was employed. Bibliotherapy and Progressive Muscle Relaxation were given to two experimental groups and no such intervention was given to control group.

Sample

Secondary school students are the sample for the present study. They were selected from a school randomly selected from the different schools selected for survey. Three classes were selected and randomly assigned

Bibliotherapy Group and Progressive Muscle Relaxation Group and Control group. Each group consisted of 30 students.

Distribution of the Samples Selected for the Study

Bibliotherapy Group			Progressive Muscle Relaxation Group			Control Group		
Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
15	15	30	15	15	30	15	15	30

Tools

Investigator developed and used the following tools.

1. Academic Stress Inventory (Meera & Praseeda, 2012)
2. Bibliotherapy Lesson Frames (Meera & Praseeda, 2012)
3. Bibliotherapy Lesson Frame Evaluation Proforma (Meera & Praseeda, 2012)
4. Progressive Muscle Relaxation Technique (Based on Jacobson's Progressive Muscle Relaxation Techniques)

Statistical Techniques Used

1. Percentage Analysis
2. One-way ANOVA
3. Test of Significance of Difference between Means
4. ANCOVA

Major Findings

Result of Analysis of Variance of Academic Stress Pretest Scores for Total Sample and Subsample based on Gender

The mean pretest scores of three groups (Bibliotherapy Group, Progressive Muscle Relaxation Group and Control group) were subjected to ANOVA. There was no significant difference in the scores of Academic Stress, $F(2, 87) = 0.01$, $P > .05$ for total sample and $F(2, 42) = .01$, $P > .05$ for subsample boys and $F(2, 42) = .02$, $P > .05$ for subsample girls. This revealed that there was no significant difference in the mean pretest scores of the three groups for total sample and subsample based on gender.

Result of Analysis of Variance of Academic Stress Posttest Scores for Total Sample and Subsample based on Gender

The analysis of variance conducted to compare the mean posttest scores of three groups (Bibliotherapy Group, Progressive Muscle Relaxation Group and Control group) showed significant difference in the scores of Academic Stress $F(2, 87) = 40.09$, $P < .01$ for total sample and $F(2, 42) = 20.87$, $P < .01$ for subsample boys and $F(2, 42) = 29.11$, $P < .01$ for subsample girls. This revealed that there was significant difference in the mean post test scores of the three groups for total sample and subsamples based on gender.

The post hoc analysis carried out showed that all the three groups differ significantly.

Result of group wise comparison of mean pretest scores of Bibliotherapy Group and Progressive Muscle Relaxation Group and Control Group

Mean difference analysis conducted to find out mean difference showed that for total sample the mean difference of Academic Stress for Bibliotherapy Group and Progressive Muscle Relaxation Group, $t(58) = 0.10$, $P > .05$, for Bibliotherapy Group and Control group, $t(58) = .12$, $P > .05$ and for Progressive Muscle Relaxation Group and Control group $t(58) = 0.03$, $P > .05$. This showed that there exist no significant difference in the mean pretest scores of Bibliotherapy Group and Progressive Muscle Relaxation Group, Bibliotherapy Group and Control group and Progressive Muscle Relaxation Group and Control group.

For subsample boys the mean difference of Academic Stress for Bibliotherapy Group and Progressive Muscle Relaxation Group, $t(28) = .86$, $P > .05$, for Bibliotherapy Group and Control group, $t(28) = .02$ and for Progressive Muscle Relaxation Group and Control group $t(28) = .10$, $P > .05$. This also showed that there was no significant difference in the mean pretest scores of Bibliotherapy Group and Progressive Muscle Relaxation Group, Bibliotherapy Group and Control group and Progressive Muscle Relaxation Group and Control group for subsample boys.

For subsample girls the mean difference of Academic Stress for Bibliotherapy Group and Progressive Muscle Relaxation Group, $t(28) = .19$, $P > .05$, for Experimental and Control group, $t(28) = .15$, $P > .05$ and for Progressive Muscle Relaxation Group and Control group, $t(28) = .05$, $P > .05$. This showed that for subsample girls also there was no significant difference in the mean pretest scores of Academic Stress.

Result of Comparison of Mean Pretest and Posttest Scores of Academic Stress for the Three Groups Bibliotherapy Group, Progressive Muscle Relaxation Group and Control group

The result of paired t-test conducted to compare the mean pretest and posttest scores of Academic Stress of the Experimental group given Bibliography for total sample, $t(29) = 13.50$, $P < .01$ and for subsample Boys $t(14) = 12.32$, $P < .01$ and for subsample girls $t(14) = 7.73$, $P < .01$ showed that there existed significant difference in the mean pretest and posttest scores. This revealed that Bibliotherapy is effective in reducing the Academic Stress of the samples.

The result of paired t-test conducted to compare the mean pretest and posttest scores of Academic Stress of the Experimental group given Progressive Muscle Relaxation Exercise for total sample $t(29) = 7.12$, $P < .01$ and for subsample boys $t(14) = 5.05 < .01$ and for subsample girls $t(14) = 5.39$, $P < .01$ showed that there existed significant difference in the mean pretest and posttest scores of Academic Stress. This revealed that Progressive Muscle Relaxation is effective in reducing the Academic Stress of the sample.

The result of paired t-test conducted to compare the mean pretest and posttest scores of Academic Stress of the Control group given no intervention, for total sample $t(14) = 1.12$, $P > .05$ for subsample $t(14) = .40$ $P > .05$ and for subsample girls $t(14) = 1.17$, $P > .05$ showed that there existed no significant difference in the mean pretest and posttest scores for the samples.

Comparing the mean posttest scores on Academic Stress on Bibliotherapy Group and Progressive Muscle Relaxation Group and Control group

Mean difference analysis conducted to find out the mean difference showed that for total sample the mean difference of Academic Stress for

Bibliotherapy Group and Progressive Muscle Relaxation Group, $t(58) = 3.74$, $P < .01$, for Bibliotherapy Group and Control group $t(58) = 8.99$, $P < .01$ and Progressive Muscle Relaxation Group and Control group $t(58) = 4.95$, $P < .01$. This showed that there exist significant difference in the mean test scores of Bibliotherapy Group and Progressive Muscle Relaxation Group and Bibliotherapy Group and Control and Progressive Muscle Relaxation Group and Control group.

For subsample boys the mean difference of Academic Stress for Bibliotherapy Group and Progressive Muscle Relaxation Group, $t(28) = 3.42$ and for Bibliotherapy Group and Control group $t(28) = 6.29$ and for Progressive Muscle Relaxation Group and Control group, $t(28) = 2.94$, $P < .01$. This showed that there exist significant difference in the mean posttest scores of Bibliotherapy Group and Progressive Muscle Relaxation Group, Bibliotherapy Group and Control group, and Progressive Muscle Relaxation Group and Control group.

For subsample girls the mean difference of Academic Stress for Bibliotherapy Group and Progressive Muscle Relaxation Group, $t(28) = 3.05$ and for Bibliotherapy Group and Control group $t(28) = 6.26$ and for Progressive Muscle Relaxation Group and Control group, $t(28) = 4.80$, $P < .01$. This showed that there exist significant difference in the mean posttest scores of Bibliotherapy Group and Progressive Muscle Relaxation Group, Bibliotherapy Group and Control group, and Progressive Muscle Relaxation Group and Control group.

Comparison of Mean Gain Scores of Academic Stress for the three groups Bibliotherapy Group, Progressive Muscle Relaxation Group and Control group.

The result of mean difference analysis of the gain scores when compared for Bibliotherapy, for total sample $t(58) = 3.00$, $P < .01$ and for subsample boys $t(28) = 4.12$ and for subsample Girls $t(28) = 8.47$, $P < .01$ showed that there existed significant difference in the mean gain scores of Academic Stress of Bibliotherapy Group and Progressive Muscle Relaxation Group.

The result of mean difference analysis of the gain scores when compared for Bibliotherapy and control group for total sample $t(58) = 13.19$, $P < .01$ and for subsample Boys $t(28) = 12.18$, $P < .01$ and for subsample girls $t(28) = 7.52$, $P < .01$ and for subsample girls $t(28) = 7.52$, $P < .01$ showed that there existed significant difference in the mean gain scores of Academic Stress of Bibliotherapy Group and Control group.

The result of mean difference analysis of the gain scores when compared for Progressive Muscle Relaxation and Control group for total sample, $t(58) = 6.94 < .01$ and for subsample boys $t(28) = 5.05$, $P < .01$ and for subsample girls $t(28) = 5.23$, $P < .01$ showed that there was significant difference in the mean gain scores of Academic Stress of Progressive Muscle Relaxation Group and control group.

Result of Analysis of Covariance for Academic Stress with Pretest Scores of the Three Groups as Covariate

Analysis of Covariance was used to know whether experimental groups and control groups differ significantly or not in terms of the dependent variable Academic Stress, when the pretest scores were controlled.

Bonferroni's test of Post hoc comparison was employed after ANCOVA which showed significant t-value in comparison.

Comparing Bibliotherapy Group and Progressive Muscle Relaxation Group the result $F(1, 57) = 19.37, P < .01$, for Bibliotherapy Group and Control group of the result $F(1, 57) = 270.47, P < .01$ and for Progressive Muscle Relaxation Group and Control group the result $F(1, 57) = 27.47$ showed that there existed significant difference for the three groups when the pretest scores are controlled.

Bonferroni's Test of Post-Hoc Comparison result showed significant t-value 6.22 for Bibliotherapy Group and Progressive Muscle Relaxation Group, 23.26 for Bibliotherapy Group and Control group and 10.71 for Progressive Muscle Relaxation Group and Control group which showed significant difference ($P < .01$).

Tenability of Hypotheses

Tenability of hypotheses formulated for the study was verified in the view of the findings and commented below:

- 1) Hypothesis 1 states that "There is no significant difference in the pretest scores of Academic Stress of Secondary school students of Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group for.
 - a) Total sample
 - b) Subsample boys
 - c) Subsample girls"

Analysis of data revealed that significant difference was not there in the mean pretest scores of Bibliotherapy Group, Progressive Muscle

Relaxation Group and Control group for total sample and subsample based on gender ($P > .05$), hence the hypothesis was accepted.

- 2) Hypothesis 2 states that “There is significant difference in the mean posttest scores of Academic Stress between Bibliotherapy Group, Progressive Muscle Relaxation Group and Control Group for
- a) Total sample
 - b) Subsample boys
 - c) Subsample girls”

Analysis of data revealed that significant difference exist in the mean posttest scores of Bibliotherapy Group, Progressive Muscle Relaxation Group and Control group for total sample and subsample based on gender $P < .01$, hence the hypothesis was accepted.

- 3) Hypothesis 3 states that “There is no significant difference in between the mean pretest scores of Academic Stress of Secondary school students of Bibliotherapy Group and Progressive Muscle Relaxation Group for
- a) Total sample
 - b) Subsample boys
 - c) Subsample girls”

Analysis of data revealed that significant difference exist in the mean pretest scores of Bibliotherapy Group and Progressive Muscle Relaxation Group for total sample and subsamples based on gender $P > .05$, hence the hypothesis is accepted.

- 4) Hypothesis 4 states that “There is no significant difference in the mean pretest scores of Academic Stress of Secondary school students of Bibliotherapy Group and Control Group for
- a) Total sample
 - b) Subsample boys
 - c) Subsample girls”

Analysis of data revealed that significant difference exist in the mean pretest scores of Bibliotherapy Group and Control group for total sample and subsample based on gender $P > .05$, hence the hypothesis was accepted.

- 5) Hypothesis 5 states that “There is no significant difference in the mean pretest scores Academic Stress of Secondary school students of Progressive Muscle Relaxation Group and Control Group for
- a) Total sample
 - b) Subsample boys
 - c) Subsample girls”

Analysis of data revealed that significant difference exist in the mean pretest scores of Progressive Muscle Relaxation Group and Control group for total sample and subsample based on gender $P > .05$, hence the hypothesis was accepted.

- 6) Hypothesis 6 states that “There is significant difference in the mean Pretest and Posttest scores of Academic Stress of Bibliotherapy Group for
- a) Total sample
 - b) Subsample boys
 - c) Subsample girls”

Analysis of data revealed that significant difference exist in the mean pretest and posttest scores of Academic Stress of Bibliotherapy Group for total sample and subsample based on gender $P < .01$, hence the hypothesis was accepted.

- 7) Hypothesis 7 states that “There is significant difference in the mean Pretest and Posttest scores of Academic Stress of Progressive Muscle Relaxation Group for
- a) Total sample
 - b) Subsample boys
 - c) Subsample girls”

Analysis of data revealed that significant difference exist in the mean Pretest and Posttest scores of Academic Stress of Progressive Muscle Relaxation Group for total sample and subsample based on gender $P < .01$, hence the hypothesis was accepted.

- 8) Hypothesis 8 states that “There is no significant difference in the mean Pretest and Posttest scores of Academic Stress of Control group for
- a) Total sample
 - b) Subsample boys
 - c) Subsample girls”

Analysis of data revealed that significant difference exist in the mean Pretest and Posttest scores of Academic Stress of Control group for total sample and subsample based on gender $P > .05$, hence the hypothesis was accepted.

9) Hypothesis 9 states that “There is significant difference in the mean posttest scores of Academic Stress between Bibliotherapy Group and Progressive Muscle Relaxation Group for

- a) Total sample
- b) Subsample boys
- c) Subsample girls”

Analysis of data revealed that significant difference exist in the mean posttest scores of Bibliotherapy Group and Progressive Muscle Relaxation Group for total sample and subsample based on gender $P < .01$, hence the hypothesis was accepted.

10) Hypothesis 10 states that “There is significant difference in the mean posttest scores of Academic Stress between Bibliotherapy Group and Control Group for

- a) Total sample
- b) Subsample boys
- c) Subsample girls”

Analysis of data revealed that significant difference exist in the mean posttest scores of Bibliotherapy Group and Control group for total sample and subsample based on gender $P < .01$, hence the hypothesis was accepted.

11) Hypothesis 11 states that “There is significant difference in the mean posttest scores of Academic Stress between Bibliotherapy GroupI and Control Group for

- a) Total sample
- b) Subsample boys
- c) Subsample girls”

Analysis of data revealed that significant difference exist in the mean posttest scores of Progressive Muscle Relaxation Group and Control group for total sample and subsample based on gender $P < .01$, hence the hypothesis was accepted.

12) Hypothesis 12 states that “There is significant difference in the mean gain scores of Academic Stress between Bibliotherapy Group and Progressive Muscle Relaxation Group for

- a) Total sample
- b) Subsample boys
- c) Subsample girls”

Analysis of data revealed that significant difference exist in the mean gain scores of Academic Stress between Bibliotherapy Group and Progressive Muscle Relaxation Group for total sample and subsample based on gender $P < .01$, hence the hypothesis was accepted.

13) Hypothesis 13 states that “There is significant difference in the mean gain scores of Academic Stress between Bibliotherapy Group and Control group for

- a) Total sample
- b) Subsample boys
- c) Subsample girls”

Analysis of data revealed that significant difference exist in the mean gain scores of Academic Stress between Bibliotherapy Group and Control group for total sample and subsample based on gender $P < .01$, hence the hypothesis was accepted.

14) Hypothesis 14 states that “There is significant difference in the mean gain scores of Academic Stress between Progressive Muscle Relaxation Group and Control Group for

- a) Total sample
- b) Subsample boys
- c) Subsample girls”

Analysis of data revealed that significant difference exist in the mean gain scores of Academic Stress between Progressive Muscle Relaxation Group and Control Group for total sample and subsample based on gender $P < .01$, hence the hypothesis was accepted.

15) Hypothesis 15 states that “There is significant difference in the adjusted mean scores of Academic Stress of Secondary school students between Bibliotherapy Group, Progressive Muscle Relaxation Group and Control group by considering pretest scores as co-variate”.

The adjusted F value of dependent variable between Experimental Groups and Control group by considering pretest scores as co-variate is significant ($P < .01$). Hence the hypothesis was accepted.

Conclusion

From the survey conducted it was found that students generally feel stress regarding their academics. The survey revealed the need for stress management interventions. Most of the teachers and most of the students who participated in the survey strongly recommended for stress management intervention to be included in schools. So understanding the scenario the

investigator selected two interventions which can be administered among school students.

The two intervention selected were Bibliotherapy and Progressive Muscle Relaxation and the Objective of the study was to find out the effectiveness of Bibliotherapy and Progressive Muscle Relaxation in reducing the Academic Stress of students. The difference between the groups were also analyzed using mean difference analysis. Comparison of the mean pretest scores revealed that all the groups, is almost equal before giving the treatments. Comparing the posttest scores revealed that all three groups significantly differ in their posttest scores emphasizing the effectiveness of Bibliotherapy and Progressive Muscle Relaxation in lowering the Academic Stress of students. From the mean scores it is also evident that Bibliotherapy is more effective than Progressive Muscle Relaxation in lowering Academic Stress.

The test of effectiveness by comparing mean pre and posttest scores revealed significant difference which emphasized the effectiveness of Bibliotherapy and Progressive Muscle Relaxation. Here also the mean scores shows that Bibliotherapy is more effective than Progressive Muscle Relaxation. The mean gain score comparison also revealed the effectiveness of Bibliotherapy and Progressive Muscle Relaxation. The effect size found by calculating Cohen's *d* showed large effect size emphasizing the effectiveness of Bibliotherapy and Progressive Muscle Relaxation for Total sample and subsamples. The result of ANCOVA and succeeding Post Hoc Analysis showed that considering pretest scores as covariate there existed significant

effect for Bibliotherapy and Progressive Muscle relaxation in lowering the Academic Stress of Students.

From all these results it can be concluded that stress management interventions in school contexts are effective in helping the students cope with their academic stress.

Educational Implications

The study revealed that secondary school students are under considerable stress. Most of the students, teachers and parents were not able to identify these stress and the source of their stress. There stress arise from different domains such as personal, familial, school, peer, community etc. By using, certain intervention we can help students cope with their stress. In the present study Academic Stress was considered and two interventions namely Bibliotherapy and Progressive Muscle Relaxation was administered to help the students cope with their stress. From the result of the present study it is recommended that:

Teachers and parents can be empowered first to cope with their stresses so that it will be easy for them to identify the stress of the children whom they have to take care.

By helping the teachers reduce their stress they can be relaxed and that will improve their efficiency as a teacher. They can identify their students problem and can find remedial measures.

Giving the teachers training in stress management interventions, schools can effectively make use of these resources and improve the mental

health of the children. Good mental set up is inevitable for successful education. Some of the schools make use of relaxation techniques like yoga with special trainers. Along with this simple methods which can be managed by teachers who understand their students well will be more effective for helping the students. In the case of Bibliotherapy it is very easy for teachers to find out stories and help the students cope with their problem using these stories, for children are always interested in hearing stories.

Teachers especially language teachers can easily select stories which have bibliotherapeutic effect. There is no need for a particular time to give such stories to the children. Almost all the children will be focusing similar problems and if there will be any other problem for individual students it can be easily detected and remedial measures can be taken.

In the present era it is very essential to have such stress management programmes in schools to help the students for a bright and good future.

Suggestions for Further Research

Though the study revealed effectiveness of bibliotherapy and Progressive Muscle Relaxation in helping the students cope with their Academic Stress further research can be conducted in these areas.

- The combined effect of the two intervention can be done
- The samples can be selected from other locales for change in localities may change the environment which causes stress.
- Use the interventions to reduce other stressors affecting the students.

- The academic performance of students who have undergone such intervention can be analyzed as a further research.
- A study can be conducted by taking engineering and medical students as sample.
- It can be conducted among secondary and higher secondary school teachers.

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Appendices

Appendix I

DEPARTMENT OF EDUCATION
UNIVERSITY OF CALICUT

Questionnaire on Views of Teachers on Academic Stress Reduction Programme

Dr. K.P. MEERA
Associate Professor
Department of Education
University of Calicut

PRASEEDA P. NAIR
Research Scholar
Department of Education
University of Calicut

Instruction

This is a questionnaire to find out your views on Academic Stress Reduction Programme. Read each question carefully and mark your view in the space provided against each question by putting a tick (✓) mark.

No.	Statement	Yes	No
1	Do you feel that students have stress?		
2	Is there any activity at school to reduce student's stress?		
3	Do you feel that academic stress of students should be reduced?		
4	Do you wish to have stress management programmes in your school?		
5	Do you like to give stress management activities for students?		
6	Do you feel that stress can be reduced through different stress reduction activities?		
7	Do you know any stress management programmes or activities?		
8	Do you feel that stress management programmes can be effectively given at schools?		
9	Do you feel that all students should be given stress management activities?		
10	Do you feel that only students having stress should be identified and given such stress reducing programmes?		
11	Do you tell stories to your students?		
12	Do you feel that stress can be reduced through proper stories?		
13	Is it necessary to appoint special trainers to reduce stress among students?		
14	Do you feel that teachers can reduce stress among students?		
15	Do you feel that students are interested in hearing stories?		

Appendix II

DEPARTMENT OF EDUCATION
UNIVERSITY OF CALICUT

Questionnaire on Views of Students on Academic Stress Reduction Programme

Dr. K.P. MEERA
Associate Professor
Department of Education
University of Calicut

PRASEEDA P. NAIR
Research Scholar
Department of Education
University of Calicut

Instruction

This is a questionnaire to find out your views on Academic Stress Reduction Programme. Read each question carefully and mark your view in the space provided against each question by putting a tick (✓) mark.

No.	Statement	Yes	No
1	Do you feel that you have stress?		
2	Is there any activities in schools to reduce your stress?		
3	Do you feel that stress of students must be reduced?		
4	Do you wish to have stress management programmes at school?		
5	Do you like to do stress management activities?		
6	Do you believe that stress can be reduced through different stress reduction activities?		
7	Do you know any stress management programmes or activities?		
8	Do you feel that stress management programmes can be effectively given at schools?		
9	Do you feel that all students should be included in stress management programmes?		
10	Do you feel that only students having stress should be identified and given such stress reducing activities?		
11	Do your teachers tell stories in your class?		
12	Do you feel that stress can be reduced through proper stories?		
13	Is it necessary to appoint special trainers to reduce student's stress?		
14	Do you believe that teachers can reduce student's stress?		
15	Are you interested in hearing stories?		

Appendix - III

DEPARTMENT OF EDUCATION
UNIVERSITY OF CALICUT

ACADEMIC STRESS INVENTORY (DRAFT)

Dr. K.P. MEERA

Associate Professor
Department of Education
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PRASEEDA P. NAIR

Research Scholar
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University of Calicut

നിഷ്കേതനങ്ങൾ:

താഴെ കൊടുത്തിരിക്കുന്ന പ്രസ്താവനകൾ ശ്രദ്ധിച്ച് വായിക്കുക. ഓരോ പ്രസ്താവനയും വായിക്കുമ്പോൾ അതിന് പറയുക കാര്യങ്ങൾ നിശ്ചയിച്ച് എത്രത്തോളം ബുദ്ധിമുട്ട് അനുഭവിക്കുന്നു എന്നതിനെക്കുറിച്ച് വിവരം ഉണ്ടാക്കുകയും എങ്കിൽ ഉചിതമായ കോളത്തിന് (✓) അടയാളം ഉപയോഗിച്ച് രേഖപ്പെടുത്തുക.

Sl. No		വളരെയധികം	അധികം	കുറവ്	വളരെ കുറവ്	ഒന്നുമില്ല
1.	ഞാൻ ജോലി ചെയ്യുന്നതിന് ആവശ്യമായ വായനയും എഴുതിയതും ഇല്ലാത്തത്					
2.	സ്കൂൾ പരിസരം വൃത്തിയാക്കി സൂക്ഷിക്കാത്തത്					
3.	കുഴപ്പം കാര്യങ്ങൾ ഒറ്റപ്പെടുത്തുക					
4.	എനിക്ക് വേണ്ടത്ര പരിഗണന ലഭിക്കുന്നില്ല എന്നതോ കേൾക്കുന്നില്ല.					
5.	എന്റെ എല്ലാ കാര്യങ്ങളിലും മാതാപിതാക്കൾ തൽപരരല്ലാത്തത്.					
6.	ഞാൻ ജോലി ചെയ്യുന്നതിന് വൃത്തിയും സൗകര്യവുമുള്ള ബാത്ത്റൂം ഇല്ലാത്തത്					
7.	ടീച്ചർമാരുടെയും കൂടെയുള്ളവരുടെയും കൂടി പാഠ്യപ്രവർത്തനങ്ങൾ ചെയ്യാൻ ഞാൻ ഉപദേശിക്കാത്തത്.					
8.	കുഴപ്പം കാര്യങ്ങൾ സഹിക്കാതെ.					
9.	ഞാൻ നിസ്സഹായനാണെന്ന് പലപ്പോഴും തോന്നാറുള്ളത്.					

Sl. No		വളരെയധികം	അധികം	കുറഞ്ഞു	വളരെ കുറവ്	ഒഴിവില്ല
10.	മാതാപിതാക്കൾ എങ്കെ ആവശ്യമില്ലാതെ വഴററു പറയുകയും ശിക്ഷിക്കുകയും ചെയ്യുക.					
11.	പഠനരീതികളിലും പഠനപ്രവർത്തനങ്ങളിലും ഉള്ള ആവർത്തന വിരസത.					
12.	ടീണ്ടുപോയവർക്കു കഴിയുന്ന രീതിയിൽ എല്ലാ വർഷവും കാണാൻ കഴിയാത്തത്					
13.	കുഴപ്പമില്ലാതെ ടീം പിന്നെടുക്കുക.					
14.	എങ്കെ ഏകദേശം കാര്യങ്ങൾ കാര്യക്ഷമമായി ചെയ്യാൻ കഴിയാത്തത്.					
15.	എന്റെ പരാജയം ഉണ്ടാകാൻ മാതാപിതാക്കൾ സഹായിച്ചിട്ടുണ്ട്.					
16.	സ്കൂളിൽ എത്തുമ്പോൾ പഠിപ്പിക്കുന്ന അധ്യാപകർ ഉണ്ടാകാത്തത്.					
17.	കൃത്യസമയത്തുതന്നെ ക്ലാസിൽ എത്തണമെന്ന് അധ്യാപകർ നിർദ്ദേശം പിടിക്കുക.					
18.	ഞാൻ ആഗ്രഹിക്കുന്ന രീതിയിൽ കുഴപ്പമില്ലാതെ ടീം ചെയ്യാൻ കഴിയാത്തത്.					
19.	ഞാൻ ആഗ്രഹിക്കുന്നതുപോലെ കാര്യങ്ങൾ നടത്തിയെടുക്കാൻ കഴിയാത്തത്.					
20.	എങ്കെ ടീം വളരെ സന്തോഷത്തോടെ മാതാപിതാക്കൾ ചെയ്യാൻ കഴിയാത്തത്					
21.	കുഴപ്പമില്ലാതെ അനുഭവിക്കാൻ ശ്രമിക്കുക.					
22.	ടീണ്ടുപോയവർക്കു കഴിയുന്ന രീതിയിൽ എല്ലാ വർഷവും കാണാൻ കഴിയാത്തത്					
23.	കുഴപ്പമില്ലാതെ വികൃതികൾ ചെയ്യാൻ പ്രേരിപ്പിക്കുക.					
24.	ഞാൻ തീരുമാനിച്ചതുപോലെ കാര്യങ്ങൾ നടത്താത്തത്					
25.	എന്റെ ആവശ്യം ഉൾക്കൊള്ളാൻ മാതാപിതാക്കൾ ശ്രദ്ധയോടെ കേൾക്കുന്നതല്ല.					
26.	മാതാപിതാക്കളോട് കുഴപ്പമില്ലാതെ ഞാൻ സമയം ചിലവഴിക്കുക.					
27.	പഠനത്തിൽ മികവ് പുലർത്താത്തതുകൊണ്ട് എങ്കെ ഒന്നിനും കൊള്ളിക്കുക മാതാപിതാക്കൾ പറയുക.					

Sl. No		വളരെയധികം	അധികം	കുറഞ്ഞു	വളരെ കുറഞ്ഞു	ഒഴുതി
28.	കുഴപ്പകാരോടൊപ്പം നസ്സരീതിയിൽ പെരുമാറാൻ കഴിയാത്തത്.					
29.	കുഴപ്പകാരെക്കാൾ കൂടുതൽ മാപ്പ് എനിക്ക് തക്ക വേണം എന്ന് എനിക്ക് നിശ്ചയിച്ചിട്ടുള്ളത്.					
30.	ബുദ്ധിമുട്ടുകൾ അനുഭവപ്പെടുക ത്.					
31.	എങ്കെ സംബന്ധിച്ച് എന്തു കാര്യം ഉം മാതാപിതാക്കളോട് പറയാനുള്ള സാഹചര്യം തോന്നാത്തത്.					
32.	ടീബിറ്റുകൾ കളിയാറാകുക ത്.					
33.	എന്റെ കുഴപ്പകാരുടെ അഭിപ്രായങ്ങൾ മാതാപിതാക്കളുടെ അഭിപ്രായങ്ങൾ നസ്സാണെന്ന് തോന്നുന്നു.					
34.	മറ്റുള്ളവരെപ്പോലെ ഓട് മോശമായി പെരുമാറുക ത്.					
35.	ഞാൻ പറയുന്ന കാര്യങ്ങൾ കേൾക്കാൻ മാതാപിതാക്കൾക്ക് സമയമില്ലാത്തത്.					
36.	ഞാൻ ചെറുപ്പം തെറ്റും ശരിയാണ് എന്ന് തോന്നുക ത്.					
37.	ടീബിറ്റുകളുടെ പ്രശ്നം ഉം ബുദ്ധിമുട്ടുകളും മനസ്സിലാക്കാത്തത്					
38.	മറ്റുള്ളവരുടെ വിമർശനങ്ങൾ					
39.	എന്റെ വിഷമം ഉം ബുദ്ധിമുട്ടുകളും എനിക്ക് മാതാപിതാക്കളോട് പറയാൻ കഴിയാത്തത്.					
40.	തടസ്സം ഉള്ള അഭിമുഖീകരിക്കേണ്ടിവരുക ത്					
41.	പാഠ്യപുസ്തക പ്രവൃത്തനങ്ങൾക്ക് യാതൊരുവിധ പ്രോത്സാഹനവും ഉണ്ടാകാത്തത്.					
42.	പഠിപ്പിച്ചെടുക്കുന്നതിലേക്കും എങ്കിലും വിശ്വാസം ഇല്ലാത്തത്.					
43.	വീട് എനിക്ക് സ്വന്തമായിരുന്ന് പഠിക്കാൻ ഒരിടമില്ലാത്തത്					
44.	ഓരോ കുഴപ്പമുണ്ടായാലും പഠനത്തിലൊരുകാരെപ്പോലെയും പ്രവൃത്തനങ്ങൾ നന്നാക്കാത്തത്.					
45.	ഞാൻ ചെറുപ്പം പ്രവൃത്തികൾക്ക് നസ്സാലും ലഭിക്കുമോ എന്ന് ഉറപ്പില്ലാത്തത്.					
46.	എപ്പോഴും നസ്സു മാത്രമേ സംഭവിക്കൂ എന്ന് തോന്നുന്നു ഇല്ലാത്തത്					

Sl. No		വളരെയധികം	അധികം	കുറഞ്ഞു	വളരെ കുറച്ച്	ഒട്ടുമില്ല
47.	എനിക്ക് ആവശ്യമുള്ള പുസ്തകം ഉം സ്കൂളിലേക്കു വാങ്ങിയവയുമായ മറ്റു സാധനം ഉം വാഗ്ദാനം ചെയ്തവയെപ്പറ്റി മാതാപിതാക്കൾക്ക് കഴിയാത്തത്.					
48.	പഠിക്കാൻ ബുദ്ധിമുട്ടുള്ള പാഠഭാഗങ്ങൾ അധ്യാപകർക്കുവേണ്ടി പഠിപ്പിക്കാൻ തരാത്തത്.					
49.	ഞാൻ പഠിക്കാൻ താല്പരനായവർക്ക് മാതാപിതാക്കൾ വിഷമിക്കുകയോ ചെയ്യുകയോ ചെയ്യുന്നില്ല.					
50.	പരീക്ഷകളിൽ വിജയിക്കാനും എങ്കിലും വിശ്വാസമില്ലാത്തത്.					
51.	വീട്ടിൽ എനിക്ക് പഠിക്കാൻ തോക്കും വിധത്തിലുള്ള ഒരു അട്ടിമറയും ഇല്ലാത്തത്.					
52.	മുതിർന്നവർക്കുവേണ്ടി വഴിയൊരുക്കുകയോ ചെയ്യുകയോ ചെയ്യുന്നില്ല എന്നാണ് എന്റെ അഭിപ്രായം.					
53.	അധ്യാപകർക്കുവേണ്ടി പഠിപ്പിക്കാൻ പഠനത്തോട് താല്പര്യം തോക്കും രീതിയിൽ അല്ലാത്തത്.					
54.	ഞാൻ പ്രതീക്ഷിക്കുന്നവിധം ഉണ്ടായില്ലെങ്കിൽ പിന്നീട് അതിനുവേണ്ടി പരിശ്രമിക്കാൻ തരാത്തത്.					
55.	പഠിക്കാൻ താല്പരനായവർക്ക് പ്രത്യേകിച്ച് ഗുണമൊക്കെയുമില്ലാത്ത പഠിപ്പിക്കൽ മാതാപിതാക്കൾ എങ്കിൽ നിർബന്ധം വെച്ചു കൊടുക്കുകയോ ചെയ്യുന്നില്ല.					
56.	പരീക്ഷയിൽ മാർക്ക് കുറവായവർക്കുവേണ്ടി അടുത്ത തവണ കൂടുതൽ മാർക്ക് വാഗ്ദാനം ചെയ്യുകയോ ചെയ്യുന്നില്ല എന്നാണ് എന്റെ അഭിപ്രായം.					
57.	സ്കൂളിൽ വഴിയൊരുക്കാനും ബഹുമാനം ഉണ്ടാക്കുകയോ ചെയ്യുന്നില്ല എന്നാണ് എന്റെ അഭിപ്രായം.					
58.	പഠിക്കാൻ ബുദ്ധിമുട്ടുള്ളതോക്കും പാഠഭാഗങ്ങൾ ഞാൻ കൂടുതൽ ശ്രദ്ധിക്കാൻ തരാൻ തരാത്തത്.					
59.	പഠനത്തെ സംബന്ധിക്കുന്ന എന്റെ ബുദ്ധിമുട്ടുകളെക്കുറിച്ച് മാതാപിതാക്കൾ അന്വേഷിക്കാൻ തരാത്തത്.					
60.	മധ്യസ്ഥരായവർക്ക് ഞാൻ തന്നെ മുൻപട്ടിയിലെത്തണം എങ്കിൽ എന്റെ തീവ്രമായ ആഗ്രഹം.					
61.	പാഠ്യപാഠ്യേതര പ്രവൃത്തികളിൽ ഉൾപ്പെടുന്നവർക്ക് നിന്നുനിന്നു വെച്ച് സ്കൂളിൽ സമ്മാനങ്ങൾ നൽകാത്തത്.					
62.	കുടുംബങ്ങളുടെ ചെറിയ തൊഴിലുകൾക്കും ടീച്ചർമാർക്കുവേണ്ടി ശിക്ഷ നൽകുകയോ ചെയ്യുന്നില്ല.					

Appendix -IV

DEPARTMENT OF EDUCATION UNIVERSITY OF CALICUT

ACADEMIC STRESS INVENTORY (FINAL)

Dr. K.P. MEERA

Associate Professor
Department of Education
University of Calicut

PRASEEDA P. NAIR

Research Scholar
Department of Education
University of Calicut

നിഷ്കേദഗുണ ശ:

താഴെ കൊടുത്തിരിക്കുന്ന പ്രസ്താവനകൾ ശ്രദ്ധിച്ച് വായിക്കുക. ഓരോ പ്രസ്താവനയും വായിക്കുമ്പോൾ അതിനു പറയുക കാര്യം ശരിയെന്ന് എത്രത്തോളം ബുദ്ധിമുട്ട് അനുഭവിക്കുന്നു എന്നതിനെ മാനസികമായ വിഷമം ഉണ്ടാകുന്നു എന്ന് ഉചിതമായ കോളത്തിൽ (✓) അടയാളം ഉപയോഗിച്ച് രേഖപ്പെടുത്തുക.

Sl. No		വളരെയധികം	അധികം	കുറഞ്ഞു	വളരെ കുറഞ്ഞു	ഒട്ടുമില്ല
1.	ഞാൻ ക്ലാസ്സിലെ കാര്യങ്ങൾ ആവശ്യത്തിന് വായനയ്ക്കും വെളിപ്പും ഇല്ലാത്തതാണ്.					
2.	കുഴപ്പം കാര്യങ്ങൾ ഒഴിവാക്കേണ്ടതാണ്.					
3.	എനിക്ക് വേണ്ടത്ര പരിശീലന ലഭിക്കുന്നില്ല എന്ന് തോന്നുന്നു.					
4.	എന്റെ എല്ലാ കാര്യങ്ങളിലും മാതാപിതാക്കൾ തടസ്സമാകുന്നു.					
5.	ഞാൻ ക്ലാസ്സിലെ കാര്യങ്ങൾ വ്യക്തമായി സഹായം വേണ്ടതാണ്.					
6.	കുഴപ്പം കാര്യങ്ങൾ ഒഴിവാക്കേണ്ടതാണ്.					
7.	ഞാൻ നിസ്സഹായനാണെന്ന് പലപ്പോഴും തോന്നുന്നു.					
8.	മാതാപിതാക്കൾ എന്റെ ആവശ്യങ്ങളെ വഴിയിൽ തടയുന്നതും ശിക്ഷിക്കുന്നതും ഉണ്ടാകുന്നു.					

Sl. No		വളരെയധികം	അധികം	കുറഞ്ഞു	വളരെ കുറവ്	ഒന്നുമില്ല
9.	ടീണ്ടുപോയവർക്കായി കഴിയുന്ന രീതിയിൽ എന്തു ചെയ്യാൻ കഴിയുമെന്ന്					
10.	കുടുംബാംഗങ്ങൾക്ക് പണയം ചെയ്യപ്പെടാൻ.					
11.	എങ്കിൽ ഏതുവിധത്തിൽ കാര്യങ്ങൾ കാര്യക്ഷമമായി ചെലവഴിക്കാൻ കഴിയുമെന്ന്.					
12.	എന്റെ പരാജയം ജീൻ മാതാപിതാക്കൾ സ്വാഭാവികമായിട്ടാണ്.					
13.	സ്കൂളിൽ എത്തുമ്പോൾ പഠിക്കാനുള്ള അത്ഭുതം ഉണ്ടാകാത്തത്.					
14.	ഞാൻ ആഗ്രഹിക്കുന്ന രീതിയിൽ കുടുംബാംഗങ്ങൾക്ക് പെരുമാറാത്തത്.					
15.	ഞാൻ ആഗ്രഹിക്കുന്നതുപോലെ കാര്യങ്ങൾ നടത്തിയെടുക്കാൻ എനിക്ക് കഴിയാത്തത്.					
16.	എങ്കിൽ വളരെ സന്തോഷത്തോടെ മാതാപിതാക്കൾ പെരുമാറാത്തത്					
17.	ടീണ്ടുപോയവർക്കായി കഴിയുന്ന രീതിയിൽ എന്തു ചെയ്യാൻ കഴിയുമെന്ന്					
18.	കുടുംബാംഗങ്ങൾക്ക് വികൃതികൾ ചെയ്യാൻ പ്രേരിപ്പിക്കാൻ.					
19.	ഞാൻ തീരുമാനിച്ചതുപോലെ കാര്യങ്ങൾ നടന്നുവരുന്നത്					
20.	എന്റെ ആവശ്യം ഉൾക്കൊള്ളുന്ന മാതാപിതാക്കൾ ശ്രദ്ധയോടെ കേൾക്കുന്നത്.					
21.	പഠനത്തിൽ മികവ് പുലർത്താൻ കഴിയുമെന്ന് എങ്കിൽ ഒന്നിനും കൊള്ളിക്കാൻ മാതാപിതാക്കൾ പറയുന്നത്.					
22.	കുടുംബാംഗങ്ങൾക്ക് നന്നായി പെരുമാറാൻ കഴിയാത്തത്.					
23.	ബുദ്ധിമുട്ടുകൾ അനുഭവപ്പെടുന്നത്.					
24.	എങ്കിൽ സംബന്ധിച്ചുള്ള കാര്യങ്ങൾ ഉൾക്കൊള്ളുന്ന മാതാപിതാക്കളോട് പറയാനുള്ള സാധ്യതകൾ തോന്നാത്തത്.					
25.	ടീണ്ടുപോയവർക്കായി കഴിയുന്ന രീതിയിൽ എന്തു ചെയ്യാൻ കഴിയുമെന്ന്					
26.	മറ്റുള്ളവർക്കെതിരെ മോശമായി പെരുമാറുന്നത്.					
27.	ഞാൻ പറയുന്ന കാര്യങ്ങൾ കേൾക്കാൻ മാതാപിതാക്കൾക്ക് സമയമില്ലാത്തത്.					

Sl. No		വളരെയധികം	അധികം	കുറവേറെ	വളരെ കുറവ്	ഒട്ടുമില്ല
28.	ടീൻ്റെ കുഴപ്പങ്ങളുടെ പ്രശ്നം ഉം ബുദ്ധിമുട്ടുകളും മനസ്സിലാക്കാത്തത്					
29.	മറ്റുള്ളവരുടെ വിമർശനം ശ്രദ്ധിക്കാൻ					
30.	എന്റെ വിഷയം ഉം ബുദ്ധിമുട്ടുകളും എനിക്ക് മാതാപിതാക്കളോട് പറയാൻ കഴിയാത്തത്.					
31.	പാഠ്യപുസ്തകങ്ങൾ ശ്രദ്ധിക്കാൻ യാതൊരുവിധ പ്രോത്സാഹനം ഉം ക്ലാസ്സിൽ നൽകാത്തത്.					
32.	പഠിപ്പിച്ച കാര്യങ്ങൾ നിലയിലെത്താൻ എങ്കിൽ വിശ്വാസം ഇല്ലാത്തത്.					
33.	വീട്ടിൽ എനിക്ക് സ്വന്തം മാതാപിതാക്കൾ പഠിപ്പിക്കാൻ ഒരിക്കലുമില്ലാത്തത്					
34.	ഓരോ കുഴപ്പമുണ്ടായാലും പഠനനിലവാരമനുസരിച്ച് പഠനം പ്രവർത്തിക്കുന്ന ശ്രമം നൽകാത്തത്.					
35.	എപ്പോഴും നന്നായി മാത്രമേ സംഭവിക്കുന്നു എങ്കിൽ തോക്കു നൽകാത്തത്					
36.	എനിക്ക് ആവശ്യമായ പുസ്തകങ്ങൾ ഉം സ്കൂളിലേക്കു വിതരണമായ മറ്റു സാധനങ്ങൾ ഉം വിതരണമാക്കാൻ മാതാപിതാക്കൾക്ക് കഴിയാത്തത്.					
37.	പഠിപ്പിക്കാൻ ബുദ്ധിമുട്ടുള്ള പാഠഭാഗങ്ങൾ അധ്യാപകർക്ക് വീണ്ടും പഠിപ്പിക്കാൻ തരാത്തത്.					
38.	പരീക്ഷകളിൽ വിജയിക്കാനും എങ്കിൽ നിന്ന് വിശ്വാസമില്ലാത്തത്.					
39.	വീട്ടിൽ എനിക്ക് പഠിപ്പിക്കാൻ തോക്കും വിധത്തിലുള്ള ഒരു അടവ് രീതിയും ഇല്ലാത്തത്.					
40.	അധ്യാപകർക്ക് ക്ലാസ്സിൽ പഠിപ്പിക്കാൻ പഠനത്തോട് താല്പര്യം തോക്കും രീതിയിൽ അല്ലാത്തത്.					
41.	ഞാൻ പ്രതീക്ഷിക്കുന്ന വിജയം ഉണ്ടായില്ലെങ്കിൽ പിന്നീട് അതിനു വേണ്ടി പരിശ്രമിക്കാത്തത്.					
42.	പഠിപ്പിക്കാൻ പ്രത്യേകിച്ച് ഗുണമൊന്നുമില്ലാത്ത എന്റെ പഠിപ്പിക്കാൻ മാതാപിതാക്കൾ എങ്കിൽ നിന്നും പ്രോത്സാഹനം നൽകാത്തത്.					
43.	സ്കൂളിൽ വഴിയും ബഹുമാനം ഉണ്ടാകാൻ അധ്യാപകർക്ക് അധ്യാപകർക്ക് നൽകുന്ന പ്രതിഫലം ഇല്ലാത്തത്.					
44.	പഠിപ്പിക്കാൻ ബുദ്ധിമുട്ടുള്ളതോക്കും പാഠഭാഗങ്ങൾ ഞാൻ കൂടുതൽ ശ്രദ്ധിക്കാൻ പഠിപ്പിക്കാൻ തരാത്തത്.					

Sl. No		വളരെയധികം	അധികം	കുറഞ്ഞു	വളരെ കുറഞ്ഞു	ഒട്ടുമില്ല
45.	പഠനത്തെ സംബന്ധിച്ച് എന്റെ ബുദ്ധിമുട്ടുകളെ കുറിച്ച് മാതാപിതാക്കൾ അന്വേഷിക്കാത്തത്.					
46.	പാഠ്യപാഠ്യേതര പ്രവൃത്തികളിൽ നിന്നും നിന്നും വെല്ലുവിളികൾ നൽകാത്തത്.					
47.	കുട്ടികളുടെ ചെറിയ തെറ്റുകൾക്കും ടീച്ചർമാർ ശിക്ഷ നൽകാത്തത്					
48.	സ്കൂളിലെ കാര്യങ്ങൾക്കു കുറിച്ചു കേൾക്കാൻ മാതാപിതാക്കൾ താല്പര്യം കാണിക്കാത്തത്.					
49.	അധ്യാപകർക്കിടയിൽ സഹകരണം ഇല്ലാത്തത്.					
50.	ഓരോ ദിവസവും എടുത്തുപാഠ്യങ്ങൾ ഞാൻ അർജ്ജിച്ചു തന്നെ പഠിക്കാത്തത്.					
51.	പരീക്ഷകൾ സ്കൂളിൽ കൃത്യമായോടെ നടത്താത്തത്.					
52.	പഠന മികവിന് എങ്കിലും മറ്റും കുട്ടികളുമായി താരതമ്യം ചെയ്യുക					

Appendix - V

DEPARTMENT OF EDUCATION UNIVERSITY OF CALICUT

ACADEMIC STRESS INVENTORY (DRAFT)

Dr. K.P. MEERA

Associate Professor
Department of Education
University of Calicut

PRASEEDA P. NAIR

Research Scholar
Department of Education
University of Calicut

Instruction

Read carefully the below given statements and rate how much the matter discussed in each statement affects you using a (✓) mark.

Sl. No		Very Severely	Severely	Moderately	Feebly	Not at all
1.	Insufficient ventilation and lighting in the classroom					
2.	School premises are not maintained neatly					
3.	Friends are avoiding me					
4.	Feeling that I am not getting enough consideration					
5.	Parents are not taking interest in matters relating to me.					
6.	Unhygienic bathroom facilities in the school.					
7.	Teachers are not giving directions to do the curricular activities in a systematic manner.					
8.	Selfishness of my friends.					
9.	Feeling that I am always helpless.					
10.	Unnecessary scolding and punishments of parents.					
11.	Monotonous curricular activities					
12.	Improper view of black board work of teacher.					

Sl. No		Very Severely	Severely	Moderately	Feebly	Not at all
13.	Quarrels of my friends with me.					
14.	Inability to carry out the duties assigned to me properly.					
15.	Parents are not consoling me in my failures.					
16.	Insufficient learning atmosphere in schools.					
17.	Teachers are insisting to reach school in time.					
18.	Friends are not behaving to me as I wish.					
19.	Inability to carryout matters according to my wish.					
20.	Parents are not affectionate to me.					
21.	I try to imitate my friends.					
22.	Teachers are not giving individual attention while teaching.					
23.	Friends persuading me to do mischieves					
24.	Things are not happening according to my plans.					
25.	Parents are not listening to my needs and wishes.					
26.	I spend more time with my friends than my parents.					
27.	Parent's opinion that I am not good for nothing as I am backward in my studies					
28.	I cannot behave well with my friends.					
29.	My intense desire to score more marks than my friends.					
30.	Experiencing of difficulties.					
31.	Lack of freedom to share my personal matters with parents.					
32.	Ridiculing of students by teachers.					
33.	I feel that friend's opinions are better than that of parents.					
34.	Others are misbehaving to me.					
35.	Parents are not having enough time to listen to me.					

Sl. No		Very Severely	Severely	Moderately	Feebly	Not at all
36.	My feeling that everything I do is correct.					
37.	Teachers do not understanding problems and difficulties of students.					
38.	I feel that others are criticizing me.					
39.	Unable to share my worries and difficulties with my parents.					
40.	I experience hindrances.					
41.	School is not giving any importance to extracurricular activities					
42.	I feel less confidence in attaining good position through education.					
43.	Lack of proper place at home for my studies.					
44.	Lack of learning activities according to individual difference.					
45.	I am not sure of attaining positive results for my activities.					
46.	Lack of belief that things will happen in a good way.					
47.	Parent's inability to buy books and other necessary items for studies.					
48.	Teachers do not revise difficult portions.					
49.	Parent's worry over the low level of my study.					
50.	Lack of confidence in passing the exams.					
51.	Lack of learning atmosphere at home.					
52.	Not having a feeling that elders are scolding me for my goodness.					
53.	Teacher's disinteresting methods of teaching.					
54.	Not attempting again to get the desired result.					
55.	Parent's discouragement that my study will not lead to anything worthy.					

Sl. No		Very Severely	Severely	Moderately	Feebly	Not at all
56.	I am not trying to gain more marks than the previous one.					
57.	Teachers do not control the misbehaviour in schools.					
58.	I do not try to study difficult portions more carefully.					
59.	Parents are not enquiring about my difficulties in my studies.					
60.	My intense desire to win the first position in all competitions.					
61.	School do not properly encourage the winners in curricular and co-curricular activities.					
62.	Teachers' sever punishments for minor mistakes.					
63.	Over expectations of my parents.					
64.	Parents are not interested to listen to my school matters.					
65.	My parents are meeting all my requirements.					
66.	Lack of co-operation among teachers.					
67.	I am not studying the daily lessons properly					
68.	Lack of communication among family members during free time.					
69.	No proper conduct of exams in schools.					
70.	Parents are comparing me with other students in my studies.					

Appendix - VI

DEPARTMENT OF EDUCATION UNIVERSITY OF CALICUT

ACADEMIC STRESS INVENTORY (FINAL)

Dr. K.P. MEERA

Associate Professor
Department of Education
University of Calicut

PRASEEDA P. NAIR

Research Scholar
Department of Education
University of Calicut

Instruction

Read carefully the below given statements and rate how much the matter discussed in each statement affects you using a (✓) mark.

Sl. No		Very Severely	Severely	Moderately	Feebly	Not at all
1.	Insufficient ventilation and lighting in the classroom					
2.	Friends are avoiding me					
3.	Feeling that I am not getting enough consideration					
4.	Parents are not taking interest in matters relating to me.					
5.	Unhygienic bathroom facilities in the school.					
6.	Selfishness of my friends.					
7.	Feeling that I am always helpless.					
8.	Unnecessary scolding and punishments of parents.					
9.	Improper view of black board work of teacher.					
10.	Quarrels of my friends with me.					
11.	Inability to carry out the duties assigned to me properly.					
12.	Parents are not consoling me in my failures.					

Sl. No		Very Severely	Severely	Moderately	Feebly	Not at all
13.	Insufficient learning atmosphere in schools.					
14.	Friends are not behaving to me as I wish.					
15.	Inability to carryout matters according to my wish.					
16.	Parents are not affectionate to me.					
17.	Teachers are not giving individual attention while teaching.					
18.	Friends persuading me to do mischieves					
19.	Things are not happening according to my plans.					
20.	Parents are not listening to my needs and wishes.					
21.	Parent's opinion that I am not good for nothing as I am backward in my studies					
22.	I cannot behave well with my friends.					
23.	Experiencing of difficulties.					
24.	Lack of freedom to share my personal matters with parents.					
25.	Ridiculing of students by teachers.					
26.	Others are misbehaving to me.					
27.	Parents are not having enough time to listen to me.					
28.	Teachers do not understanding problems and difficulties of students.					
29.	I feel that others are criticizing me.					
30.	Unable to share my worries and difficulties with my parents.					
31.	School is not giving any importance to extracurricular activities					
32.	I feel less confidence in attaining good position through education.					
33.	Lack of proper place at home for my studies.					
34.	Lack of learning activities according to individual difference.					

Sl. No		Very Severely	Severely	Moderately	Feebly	Not at all
35.	Lack of belief that things will happen in a good way.					
36.	Parent's inability to buy books and other necessary items for studies.					
37.	Teachers do not revise difficult portions.					
38.	Lack of confidence in passing the exams.					
39.	Lack of learning atmosphere at home.					
40.	Teacher's disinteresting methods of teaching.					
41.	Not attempting again to get the desired result.					
42.	Parent's discouragement that my study will not lead to anything worthy.					
43.	Teachers do not control the misbehaviour in schools.					
44.	I do not try to study difficult portions more carefully.					
45.	Parents are not enquiring about my difficulties in my studies.					
46.	School do not properly encourage the winners in curricular and co-curricular activities.					
47.	Teachers' sever punishments for minor mistakes.					
48.	Parents are not interested to listen to my school matters.					
49.	Lack of co-operation among teachers.					
50.	I am not studying the daily lessons properly					
51.	No proper conduct of exams in schools.					
52.	Parents are comparing me with other students in my studies.					

Appendix - VII
DEPARTMENT OF EDUCATION
UNIVERSITY OF CALICUT



BIBLIOTHERAPY-

**LESSON
FRAMES**

By

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2010-2015

Introduction

The teacher who wants to use books to help children understand the challenges, stressful events and situations, childhood traumas and problems of growing up need not be a clinical psychologist. The main qualifications are an interest in and concern for children and a willingness to become familiar with children's literature. Children's literature provide special medium or teaching technique, many teachers can feel comfortable using in classroom since it involves reading, listening to and analysing a story. When used in a stress intervention, the story selected has as its theme a particular stressor, and the procedure consists of encouraging children to react through discussion to the story elements and the character's behavioural reactions. The cognitive and language skills of reading, listening, speaking and analysis are employed, just as in other familiar language activities. The use of children's book as a reactive intervention can be used with a single child, with a small group of children or with an entire class.

Reading can serve multiple psychological purposes. These include: fantasy expression and gratification; channeling impulsive expression; providing information that aids reality testing; offering ideas and values that can guide behaviors dealing with universal conflicts and feelings; nurturing

cognitive development and functioning. Reading can also serve to liberate oneself from one's own environment, offer comic relief, find pleasure in words and ideas and prepare for any integration of life experiences. Children can experience these feelings and thoughts if, they are given enough favourable opportunities with appropriate books and with adequate processing opportunities. Selection of books aimed at achieving these ends offers both challenges and opportunities for teaching. The content and theme of the story should not only a source of information but it also has a positive emotional impact on the reader.

Objectives

1. Help the students to identify the stresses felt by them.
2. Equip the children to cope with stressors.
3. Equip the children to cope with stressors in identical situation in their life as told in the story.
4. Involve children in the story telling process.
5. Actively engage the child in therapeutic process and help in search for the means to reach desired outcome.

Process of Bibliotherapy-Key Elements

1. **Identification** – Children come to realize that they are not the only person with particular, stressful living condition by recognizing similarities between themselves and characters. Identification entails recognizing the thoughts and behaviour of others.

2. **Catharsis** – Catharsis builds upon identification when a child who identifies with a fictional character lives through situations and shares feelings with that character, that child experience catharsis. This vicarious experience may produce a release of tension or an imitation of the character's behaviour. When this happens; it is important that there should be some one to share or discuss, a one to one basis or in a group. After releasing emotional tension, individual become better able to apply what they have learned to their own similar situations resulting in insight.

Insight- Reading makes children more aware of human motivations and rationalization for their own behaviour. More realistic views of their abilities and self worth can be developed. Written materials tend to carry authority, and authors of fiction generally become trusted because they rarely impose judgement explicitly. Children who feel doubt and suspicious towards adults and peers tend to be less doubtful and suspicious of books.

Teaching Framework for Bibliotherapy

1. Pre-reading plan
2. Guided reading
3. Post reading discussion
4. Follow-up/reinforcement activity

Pre-reading plan

This is the first step in selecting appropriate book or story. Careful selection of reading material is significant so that students can identify

connect and relate to the real or fictional character. The teacher should provide with a brief statement about the story and ask open ended question.

Allow children to find similarities and differences between their lives and character(s) pre-reading activities should include appropriate questions that will enable students to identify what they know about the topic and what they want to know.

Guided Reading

Reading the story aloud to students preferably in one sitting. Read the story in appropriate pace and appropriate volume so students are listening and paying attention. Interject appropriate questions and respond to children's comments and concerns.

Post Reading Discussion

Before moving forward ensure that students comprehend the story. Allow the students retell and evaluate character feelings and any such situations that occurred.

Students are then asked probing questions to help them think about their feelings and better identify with the character and events in the story. Questions should vary that some are knowledge and comprehension type and some require analysis and evaluation. By identifying with characters they recognize that they are not alone. The discussions and dialoging will help the students as they develop insight into the character difficulty and discuss the merits and shortcomings of any solution. Moreover students can generate possible solutions to their problems by using newly acquired insight.

Follow up/ Reinforcement Activity

As students identify with characters in the story and discuss solutions, they are applying an interpersonal problem-solving strategy and developing additional alternatives. Teacher may help the students to go through all the problems felt by the character and find solutions. Then analyze each solution and find out the obstacles in it.

Select solutions with few or no obstacles while other solutions have many obstacles. This emphasize in selection of good solution that have long run not just solutions for the moment.

Reinforcement activity includes practice and application. Activities should have one social skills within natural setting or real life situation. Or incidental learning, such as role playing. Not all children can verbalize their thoughts and feelings for these children. Art work, poetry, writing, stories, play activities and many other opportunities can be provided. Home assignments are also preferable for reinforcement. Number of writing activities can be used and open ended questions can be used for this purpose.

Lesson Frame 1

Outcomes offered

- Developing self esteem
- Learning to enjoy what you do
- Positive self evaluation

Problems addressed

- Being put down
- Not feeling valued
- Doubting oneself
- Engaging in avoidance behaviour

Time: 1 ½ hrs.

Strategies used: Role Play

Materials used:



STORY 1: LET JOE DO IT

There was a familiar saying that the family had about Joe when he was young. In fact, it even persisted when he got older. From what they said you might think they meant something different but, over a long time, Joe had come to know what they meant.

His mother and father said it first, then his sister picked it up, and now even uncles, aunts, and cousins were saying it... And mostly they laughed when they did, leaving Joe to feel even worse.

What they said was, “Let Joe do it”. Now, an outsider may have thought they were giving Joe a compliment, suggesting that he was competent and capable of doing things, that the family could trust Joe to do it. In fact, it meant just the opposite. If Joe was to turn on a tap, the water was likely to come out in a great rush, splashing all over him or the floor and making a mess in his mother’s kitchen. Seeing it, the first thing she would say is, “Oh no, let Joe do it”. If he was drying the dishes and dropped one, it was always a piece of her best crockery. “Let Joe do it,” she’d say. Reaching out to pick up a glass, his movement was likely to be too quick or too awkward no matter how hard he tried to get it just right, and even as it fell to the floor, smashing glass and spilling his drink, he could hear the words, “Let Joe do it”.

Of course, there were other sayings, too. Whenever they went on summer vacation it was almost a daily routine for the family to play cricket on the beach. If he was fielding, there might be a nice gentle hit of the ball off the bat, arching high in the air, falling softly toward him with Joe in the perfect position to make a catch. Somebody would call out, “Watch it, Joe will drop it” and sure enough, he did. If he was batting and he had a dead-easy shot pitched to him, all that was needed was for someone to all out. “Joe will miss it,” and his bat would somehow swing wrong and hit a foul ball to the sound of someone’s excited cry. “How’s that?”

It is probably little wonder that Joe began to doubt himself. He felt reluctant to do things. He was scared that if he tried something it would go wrong and he would hear those dreaded words again. He began to think that he was no good at ball games and he started to use every ploy he could to avoid participating in team sports at school. When he had to do sports, he

chose individual activities like running and swimming, where he was not so likely to be put down yet again--at least not by a whole team.

It was not until he got to high school that Joe began to discover things could be different from what they had been. Some of his friends decided to form a cricket team and asked Joe to join them. “No, I’m no good at ball sports,” came his quick reply. They answered, “Neither are we. None of us have ever played before. We’re all in the same boat.” When he still declined, they pressed him. “We know how good you are at running, and we need a good runner.”

Joe reluctantly gave into their pressure and, to his own surprise – while learning from scratch with his friends--he found he could run and play a ball game at the same time. They all fumbled a bit at first, struggling to field or bat up. And Joe found he was not much worse than anyone else. They practiced as a team twice a week and Joe even practiced in his back-yard almost every day without telling the others. In their first competitive game, Joe surprised himself by being the first to have a six. Their coach was excited. Joe became their hero and found that, not only could he do it, he *enjoyed* doing it.

You see, there was something that Joe did not realize at the time when people used to say, “Let Joe do it”. He was young and growing up. You have to *learn* to turn on a tap so that it doesn’t rush out too fast. You cannot necessarily expect to be perfect the first time – or even at all the later times – you try to do something. You have to *learn* how to hold a plate so that it doesn’t slip from your fingers when you’re washing or drying up. You have to *learn* how to judge the right distance and speed to move your arm when picking up a glass of water. Joe didn’t know this because everyone around

him was bigger than he and had already learned how to do those things. He just expected – as every-one else seemed to expect – that he should be as good as they were.

He hadn't realized when he was playing cricket on summer vacation that his father and uncle and cousins were all older and physically more mature than he was. Joe was the youngest and, consequently, you really couldn't expect him to be as skilled as they were in managing the coordination between his eyes and hands, could you? But as he grew up he became as equally capable of doing the sorts of things they could do. Maybe not all of those things, but certainly some of them. May be he could even learn to do things that they couldn't do.

He doesn't often hear people say "Let Joe do it" anymore. One of those few occasions when he does, however, he is able to smile to himself and think, "Yeah, that's just part of growing up."

Teacher Activity

Teacher reads the story for children. Make sure to stop to discuss and explain whenever it is needed. Teacher should have good voice modulation and pausing so that children are attentive to the story. Teacher can ask a few questions based on the story to help the children more attentive and to understand the story better.

Questions

- 1) Was Joe a very happy boy?
- 2) Was Joe competent and capable of doing all things himself?
- 3) Was Joe a good cricket player?

4) How Joe learned cricket?

5) Was Joe happy at the end?

Identify and list the problems faced by Joe

Identify similar problems faced by you

How did Joe overcome his problems?

How do you overcome your problems?

Can you suggest some other ways Joe could have taken to overcome his problems?

Can you suggest a better method you could have adapted to overcome your problems?

Role Play

Students are divided into four groups and are asked to present a role play with a similar theme that is presented in the story. Required time is given for each group to present it.

Lesson Frame - 2

Outcomes Offered:

- developing power to achieve a goal
- developing a willingness to experiment
- developing positive thought patterns
- avoiding false beliefs through reality testing.
- Learning to control thoughts.

Problems addressed

- Do not having power to achieve goal
- Fear of what one do not know
- Thinking worst of the situation
- Relectant to test reality

Time: 1 ½ hrs

Strategy: Story Writing



STORY 2: **FACING FEARS: A TEEN STORY**

Charlie had heard a story that he didn't know whether to believe or not. It was just that all the other trainees on the sailboat seemed to believe that the ship had its own ghost. *Ghost stories are for kids*, thought Charlie, for not teenagers.

For as long as Charlie could remember, he had enjoyed boats and the sea. He would look enviously at sailboats cruising by on the ocean. He looked at them in magazine, read books about sailing, and drew sailboats in the backs of his schoolbooks when he should have been concentrating in class. He had

joined the Sea Scouts (which was sort of like Boy Scouts with a special interest in boats and sailing) as soon as he was old enough and he was now on this old, square-rigged sailboat for a week's training at his Christmas present from his parents.

Years and years ago, according to the story Charlie had just heard, an old-time sailor had gone crazy while on crow's-nest duty at the top of the main mast. Any other crew member sent up to relieve him of his post was attacked. In one of the scuffles that ensued, the old-time sailor fell from the top of the mast to his death. His ghost, people said, still resided in the upper reaches of the rigging, attacking any solitary climber of the mast. As it happened there had been several mishaps of sailors slipping from the rigging, being buffeted by unexpected winds on their ascent, or hearing terrifyingly strange sounds through the rigging, like the scream of someone falling to his death, it was said. Consequently, none of the crew would climb to the crow's nest alone. They always escorted each other up in pairs or threes. This was an unspoken rule.

Late one afternoon, as they were approaching the harbor, clouds filled the sky as light faded with the approach of sunset. The wind howled in the rigging. Wild seas rocked the ship violently and the captain ordered all hands on deck. They needed a lookout... and Charlie was sent to the crow's nest. As the rest of the crew was busy preparing to enter harbor, he had no choice but to climb alone. Hooking safety harness onto the rigging, he started the ascent. The wind tore at his clothes, the mast swayed more the higher he climbed, and

the stories of the old-time sailor filled his mind. Fear struck at his heart. There might not be a ghost, he thought, but stories often have a basis of truth. Perhaps it was a bad-luck ship. The knowledge that his safety harness was securely attached didn't help ease the thoughts. The fear of falling to his death like the old-time sailor refused to leave him.

What was he to do? He could descend, but disobeying orders was a serious business on a ship and he would be the laughing stock of all the other trainees when they got into harbor. There was no other alternative, no one free to accompany him, no way around the scary situation. No, Charlie said to himself, *it is something I need to do, and do alone*. As he climbed on, slowly, steady step by steady step up the rope rigging, thoughts of the ghost kept coming back to him. What if he should slip from the rigging? What if he should fall to this death? What if there was a ghost, or just the ship's bad luck awaiting him?

Yet again he checked that his harness was securely fastened. He looked up at the crow's nest and he began to think how much safer he would be when he was there. He started to anticipate the calm and peace of arriving in harbor. He remembered the feeling of achievement and exhilaration he had felt on reaching the crow's nest in the company of others on calmer days during the trip. Thinking about such thoughts, he began to forget about the ghost, at least for a while.

When thoughts of the old-time sailor's ghost and questions about whether the stories were true popped back in his head, the terror again struck

his heart. But Charlie had learned something, by realizing that he would be the tallest person on the ship when they docked to awaiting parents and friends, he found that the fear again began to subside.

The rigging trembled beneath him. If he let himself imagine it, it could almost feel as though a ghost were trying to shake him off. He didn't know whether it was the howling wind vibrating the ropes or his own fear. No, he thought, *is isn't a ghost*, and again began to think about reading the safety of the crow's nest. As he climbed, the crow's nest grew closer and closer. He chose not to look back or think about what might happen if he fell, but rather to think about how much closer he was getting and how much better he would feel when he arrived. When he finally stepped from the rigging into the crow's nest, he felt a sense of relief and joy.

This is probably where our story could finish, but in reality that is not where it ends. You see, Charlie saw something that nobody else saw and couldn't see from the deck below... and it certainly wasn't a ghost. He lifted his binoculars to his eyes to make doubly sure. There, floating dead ahead, was a large, semi-submerged metal container that had obviously fallen from a cargo ship. Charlie called his warning, the captain ordered the helmsman to alter course, and the ship – along with all its crew – was saved.

Charlie was a hero. Not only had he saved the ship, but he had also conquered the myth of the old-time sailor's ghost seeking to destroy any solo climber on his way to the crow's nest for himself as well as for others. He became a regular member of the crew after that, showing new trainees how to

climb alone to the crow's nest without fear of the old-time sailor's ghost. "It's not just a matter of checking for safety and taking it step by step," he told them, "but how you direct your thoughts. Look ahead, imagine where you want to be, think how it will feel when you arrive, and the ghost won't bother you".

Teacher Activity

Teacher reads the story for children. Teacher makes sure that he/she stops and explains where ever explanation is required. Discussion can also be made when ever required. Teacher should have good voice modulation and pausing so that children can understand the story well. Teacher should make sure that the children are attentive. Teacher can ask a few questions based on the story to help the children more attentive and to understand the story better. Questions can be asked while telling the story or after the story.

Questions

- 1) Who was Charlie?
- 2) What was the story Charlie had heard?
- 3) What was the unspoken rule while climbing to crow's nest and why?
- 4) Why Charlie had to climb alone?
- 5) Why Charlie cannot descend?
- 6) What thoughts made Charlie forget about the ghost?
- 7) Did Charlie see any ghost at the top?
- 8) How Charlie save his crew & Ship?

Identify and List the situations faced by Charlie

Identify similar situations faced by you

How did Charlie face the situations?

How do you overcome similar situations in your life?

Can you suggest some other thoughts which is not positive and what will be the result?

Can you say some other way you might have faced the situation and what will be the result?

Story Writing

Can you write a story or any incident with the given type of situations and how you can face the situation and should have a happy ending.

Lesson Frame 3

Outcomes Offered

- Developing Hardiness
- Knowing attitudes can determine outcome
- Knowing thoughts can determine feelings.
- Knowing not event, but how we handle the event determines the result.
- Possessing skills to manage trauma

Problems addressed

- facing tough times,
- overcoming difficulties
- seeming hopelessness

Time : 1½ hours

Strategies : Collecting similar incidents from Journals and Newspapers.

STORY 3: **OVERCOMING ADVERSITY: A TEEN STORY**

I have a great love of mountains and high-mountain trekking. Whenever I can, I visit places like the Himalayas. Because I love mountains so much I have also read a lot about them and am fascinated by stories of climbers who pushed themselves beyond what you might think humans are capable of experiencing. Of the many stories of climbers who have battled against seemingly intolerable odds, there is one that touches me very deeply and reminds me very clearly of some of those things that help people get through the really tough times in life.

Dr. Beck Weathers was a specialist, a pathologist, who fulfilled a lifelong dream of climbing to the summit of Mt. Everest on May 10, 1996. Unfortunately, it was a tragic day in the history of Everest. A blizzard swept down on the mountain and within a few days fifteen people had died. Beck was thought to be one of them – in fact, about four times he was thought to be one of them.

Trying to get down, Beck, with a few other climbers, got lost; their oxygen – which is necessary to survive at those altitudes – had run out, they couldn't see in the storm and the darkness, they had no tents or sleeping bags, and they didn't know which way to go. When he took off a glove to warm his hand inside his jacket, the glove blew away, his hand snap-froze, he couldn't do up his jacket, and his whole body started to freeze in the howling wind. He passed out. Other climbers who came to the rescue of those in trouble couldn't find him and doubted there was any way that he could have survived the night on the mountain without a sleeping bag and tent. This was the first time he was written off as dead.

The next morning rescuers found Beck, partly buried in the snow. A doctor, among the rescuers, scraped ice off Beck's face to recognize him, checked his vital signs for life, and pronounced that he was so near death that he was beyond help. For a second time he was written off.

That afternoon, miraculously, Beck regained consciousness, later saying that he had a mental vision of his family, of the people he loved, and that it inspired him to get going. With one arm frozen and only able to see a short distance in front of him, he staggered across the mountain face, again miraculously, into Camp IV. He was given oxygen and hot water bottles, and

wrapped in two sleeping bags in a tent. For a third time, nobody expected him to survive through the night. Even if he did, he wouldn't have the strength to face all the hazards of getting down the mountain.

In the tent by himself, Beck's hands were too frozen to allow him to open a water bottle and have a drink. The blizzard blew the tent flaps open and tore the sleeping bags from his body. His arms were swollen and his wristwatch was cutting off the blood flow to his hand. Being a doctor, he knew that meant he could lose his hand – so he tried to chew through the watchband. He screamed, helplessly, for the exhausted rescuers couldn't hear him over the howling blizzard.

In the morning when Beck stood and even began to walk his rescuers could hardly believe it, but still no one thought he would survive. They were 26,000 feet up the highest mountain in the world. There was a long, tortuous descent ahead – tough for even the fittest.

On the rescue was a famous mountaineer and mountain photographer, David Breashears, who personally helped Beck. Beck's arms were frozen as stiff as poles, he had limited sight and strength, and his face was so frostbitten that he would later have to have his nose amputated, along with his hands. Being a doctor he must have known this, but he remained hopeful, saying at one point, "I'm gonna lose my hands, but I might just see my wife and kids again".

David Breashears later wrote a book entitled *High Exposure*, in which he said he kept expecting Beck to complain – but he never did. In fact, even after having been written off for dead so many times, knowing that he could

lose his arms and never be able to work as a doctor again, Beck Weathers was cracking jokes.

Climbing Mt. Everest is a costly exercise – probably about the same as buying a small apartment or a couple of cars. As David virtually carried Beck down the mountain on his own back, Beck laughed that before leaving home he'd said to his wife. "This is costing me an arm and a leg", and then, knowing that he would lose his arms, added, "but I guess I bargained them down".

What interests me is just how people facing such tough times and difficult situations survive and are able to get on with their lives. I find Dr. Beck Weathers an inspiration and I guess this is part of the reason that I love reading about mountains and the adventures of mountaineers, particularly what they do when faced with such difficult times.

Teacher Activity

Teacher reads the story for children. Make sure to stop to discuss and explain whenever it is needs. Teacher should have good voice modulation and pausing so that children are attentive to the story. Teacher can write a few questions based on the story to help the children to be more attentive and understand the story better.

Questions:

- 1) Who was Dr. Beck Weathers?
- 2) What is the life long dream of Dr. Beck Weathers?
- 3) What happened to Beck's gloves?
- 4) What was the condition of Dr. Beck next day?

5) What happened to Dr. Beck's hands and watch?

6) What was Dr. Beck's attitude after meeting with all those accidents.

List out the difficulties faced by Dr. Beck

- 1.
- 2.
- 3.

List out some of such difficulties faced by you

- 1.
- 2.
- 3.

How Beck faced his difficulties what was his attitude

- 1.
- 2.
- 3.

How you faced such difficulties. What was your attitude

- 1.
- 2.
- 3.

What would have happened to Dr. Beck in such a situation when he was not able to face his difficulties....

What would have happened to you when you faced such situation in another way.....

Collecting Similar Incidents

Collect from journals or newspapers incidents similar to that we have discussed in the above story and how the victim overcome it.

Lesson Frame 4

Outcomes offered:

- Working towards goals.
- being hopeful and having optimistic thoughts.
- looking to change that can change.
- accepting what cannot be changed.

Problems Addressed

- lack of hopefulness
- loneliness
- despair
- unwillingness to accept what cannot be changed.

Time : 1½ hours

Strategies : Discussion



STORY 4: **DAYS TO COME** (Contributed by Erin Kelley)

As the days go by I wonder. I wonder how. I wonder why. I wonder where I'll be in ten years.... Hi I'm Steph, and I have been seated in this chair for the last three years. I hate it. Every moment I think of my mum! Thoughts, memories, disasters. It all floats up above in my head. I feel as if I'm locked in a cage and can't break through! How will I ever fulfill my life while being seated in this chair?

My brain is all I have. It's the only one I can trust but now I'm even turning on him. If you can't trust your brain you can't trust any one. I feel like all I have now is memories. Memories of when Mum died. Memories of when Dad died. Memories of when I was the only one to survive.

I always wondered if I would be taken away from all this, up above here no one can bully you, tease you, and even hurt you. I could live with my mum and dad up there. We could be happy, peaceful, and everyone would love me, and I would love everyone. I guess that's why they call it heaven because it's so peaceful. But what if Mum was split up from Dad? What if he went to heaven and she went to hell? What would happen to me? No, that would never happen. Any way that's a dream. I would never be taken, not while I'm with my Aunty Sue.

In case you haven't guessed the chair I have been talking of is a wheel chair and I've been in it for three years but the disaster happened may be a year ago. It started when Mum and Dad were having a fight while driving the car. Mum wouldn't stop bickering about how dad drove and dad wouldn't keep his eyes on the road and that's when it happened. The car went out of control, Spun and, Wham, it hit!

I woke up with my aunt sitting over me. I was in the hospital. She explained that I was to come home with her. I was confused. Where were Mum and Dad? Where had they gone?

I refused to go home with her. I wouldn't go until I was told the truth. I had already guessed what had happened but I kept telling myself that it

wasn't true, that they were OK and that they were at home resting and waiting for me to come home.

No, the year has past and my mum and dad have never returned. I'm alone with Aunt Sue. Aunt Sue is nice and all, I mean she brought me welfare, food, and a roof over me. She even brought home a puppy I named Pal. But that's not the point. I want, I need, I desire Mum and Dad to come home to me.

It'll never happen but I really wish it would. They always told me one day I would be able to walk again but now all that has faded away. The doctors are nowhere near finding an antidote to bring my legs back to life and I have left all hope behind in the smashed car that my mother and father died in.

Two Years Later

My legs are getting stronger by the day and I have become aware of the possibility that I could walk again! Yeah, at least I will be able to play soccer and netball and anything I desire because I will have the eagerness to run, walk, and cycle, I will defeat all sports and conquer any challenge because I will be alive again!

Well I'm still dreaming but the physio guy said if I put in a lot of hard work and do all the exercises and routines every morning and night I should be able to conquer the sleeping of my legs! If I stand and take a few steps every so often that will also help and then gradually I should be able to walk again. Aunt Sue isn't so sure. She said he could be getting all your hopes up for nothing but she said either way she would help.

As the months pass I get stronger and gradually I walk. At first I took a step and fell over but now I am stronger and can take seven steps. But once my legs get wobbly, bang I'm back on the floor. The floor seems to be my favourite place right now but soon the sky will be. Soon I will be running on the track and shooting on the court. There I go again, getting my hopes up. Aunt Sue keeps telling me to try a bit harder than I know I can do, because that way I will always get better.

Three Months Later

I'm doing it! I'm really running! Look at me go. This is the best day of my life. If only my mother and father were here then maybe it would be the most spectacularly best day. Oh how I wish they were here to see me, to see me skip, to see me happy: Aunt Sue said they were always watching and were always here, so in a way I am with them and I am happy!

Teacher Activity

Teacher reads the story for children. Makes sure to stop to discuss and explain whenever it is needed. Teacher reads with good voice modulation and pausing, so that children are attentive to the story. Teacher asks some questions to make sure that students are listening well and able to understand the story.

Questions

- 1) Who is the narrator in this story?
- 2) Who is Sue?
- 3) What happened to Steph's Dad and Mom?
- 4) What happened to Steph in the disaster?
- 5) How the disaster took place?

6) What did Steph do to attain his goal?

7) Was he able to attain his goal?

List out difficulties felt by Joe in his life

- 1.
- 2.
- 3.

Can you list out some of such difficulties you faced

- 1.
- 2.
- 3.

What did Steph do to attain his goal?

- 1.
- 2.
- 3.

How have you attained your goal in the midst of your difficulties?

- 1.
- 2.
- 3.

What was the goals and dream of Steph? Is he able to attain and fulfill all his goal and dream?

What are your goals and dreams? What will you do to attain it?

Group discussion: Sit in four or five groups. Share your goals. Give suggestions to your friends to attain the goal and seek suggestions from your friends to attain your goals.

Lesson Frame 5

Outcomes offered:

- Helping to have good communication with parents
- Helping to see other's perspective.
- Helping to find acceptable compromises.
- Building strategies for negotiation.

Problems addressed

- Failure to see parents perspective
- Conflicting wants
- Not making acceptable compromises
- Lack of negotiation skills.

Time : 1 ½ hrs

Strategies : Narrating own experience



STORY 5: **NEGOTIATING A SOLUTION**

Suzi wanted to go to a party. Who wouldn't? Especially as this was no ordinary party. It was a beach party. It had been almost the only thing her friends had been talking about for the last couple of weeks. What they would do? Who would be there? What they would wear? It was going to be the best party of the year, perhaps the best party of her life.

But there was a hitch... and a big hitch. Her mom had said no. Suzi was desperate, and the more desperately she pleaded her case, the more emphatically her mother said no.

“But everyone is going,” pleaded Suzi.

“I don’t care who’s going,” replied her mother. “Even if the Queen of England were going, you are still not going”.

Suzi was disappointed. No, worse than that, she was heartbroken. This was her best friend’s party. How could she tell her that Suzi’s mom wouldn’t let her go? She’d look a real dork if she was the only one not there. The other kids were bound to teacher. Heck, they might even dump her as a friend if she didn’t join in and participate in what they were doing.

Sunday dinner came around and Suzi’s grandmother joined the family for the meal, as she nearly always did on Sunday. Gran noticed how glum Suzi had been looking during the meal but didn’t say a thing. It was Suzi’s turn to wash up and Grand said, “Let me help you,” while the rest of the family shifted into the living room to watch a video.

“What’s up?” asked Gran as Suzi dumped the dishes into the foaming water. Gran wiped a plate with a tea towel.

“Mom won’t let me go to my best friend’s party,” said Suzi, sadly.

“Has Mom explained why she doesn’t want you to go?” asked Gran.

“No,” replied Suzi.

“Then for a moment, put yourself in her position,” said Gran, “If you were Mom, what would your objections be?”

Suzi hadn't stopped to think about her mom's side. All she had seen was what she wanted. "Well," she answered after thinking for a moment or two. "It's beach party, Maybe she doesn't trust us or thinks we'll get into trouble. Maybe she thinks we'll drown or something, but we all know how to swim and look after ourselves."

"Are there going to be any adults there?" asked Gran.

"No," said Suzi, "who wants their parents hanging around when you're trying to have fun?"

"Might it just be," said Gran, "that your mother is concerned and doesn't want anything to happen to you?"

"Nothing will happen," objected Suzi.

"Maybe you're right," said Gran, "but maybe Mom's worried in case it could. You know, when your mother was your age, we used to play a bit of a game. I think we both knew what was happening but we still played it out any way, as if neither of us knew. If she was going out somewhere, I would ask what time she wanted me to pick her up. She would always add an hour or two to it, saying maybe eleven or twelve o'clock, thinking I wouldn't know what she was doing. I'd tell her that was far too late and that I wanted her home by nine. She'd object and we'd both come to a compromise at ten or ten-thirty, which was around what both of us had been thinking all along. That way, neither of us was the winner or loser; that way, she got to have time out as she wanted and I got to see her home at a reasonable time. By finding a compromise we both got something, though maybe not completely, of what we wanted."

“I am wondering how you might reach a compromise with your mother on this one. What do you think she wants?”

“I think that she wants to see that we’re supervised,” answered Suzi, quickly adding, “but we don’t need an adult around.”

“Then how can you reach a compromise” asked Gran, “where Mom is happy that you are being supervised and you don’t feel you have an adult peering over your shoulder all the time. How might that happen?”

“I don’t know. It can’t,” said Suzi. “Mom wants to be there and nobody else wants an adult there”.

“Then maybe think of some compromises,” suggested Gran. “What if Mom dropped you off and sat in the car park in her car, spending the time studying for the course she is doing? What if she took her laptop into the cafe at the beach and worked on her studies, while glancing out over the beach at times to make sure you’re not drowning? Perhaps she could take a walk along the beach and still not be seen by your friends while you’re not drowning? Perhaps she could take a walk along the beach and still not be seen by your friends while you’re having your party.”

Gran could see the possibilities being thought over by Suzi. “When can you make the time to have a chat with Mom about what her concerns are, what you want, and what sort of compromises you both can make?” asked Gran.

They quietly finished off the dishes and joined the rest of the family to watch the video. Next Sunday over dinner. Gran was delighted to hear Suzi happily recounting the beach party details of the day before. She was also

delighted to hear Suzi's mom telling about how she had enjoyed a walk along the beach and some quiet time sitting in the cafe working on her laptop. Suzi came into the cafe and joined her at the end of the great party.

Teacher Activity

Teacher reads the story for children. Makes sure to stop to discuss and explain whenever it is needed. Teacher reads with good voice modulation and pausing, so that children are attentive to the story. Teacher asks some questions to make sure that students are listening well and able to understand the story.

Questions

- 1) Where did Suzi want to go?
- 2) Whether her mother permitted her to attend the party?
- 3) What will happen to Suzi when she won't join the party?
- 4) Who came to help Suzi?
- 5) What type of solution did grandmother suggested?
- 6) How Suzi and mother come to a compromise?
- 7) Was Suzi and her mother happy at the end?

<u>List out the problems between Suzi and her mother</u>
1.
2.
3.

<u>List out problems between you and your parents</u>
1.
2.
3.

How they came to a compromise? What is the role of grandmother?

- 1.
- 2.
- 3.

How you often come to compromise with your parents? Whether any body help you in making solutions?

- 1.
- 2.
- 3.

What may be the consequences of not communicating well with Suzi's parents?

What are the positive results of having good communication with your parents?

What may be the consequences of not obeying her mother?

What may be the consequence of not obeying your parents?

Narrating experience

Narrate a similar incident from your life about having good communication with your parents.

Lesson Frame 6

Outcomes offered

- assessing new and old friends
- talking interest in others
- developing social skills
- decision making
- overcoming problems of undesirable friendships.

Problems addressed

- Lack of discriminating power
- Loss of old friendships
- Lack of social skills
- Undesirable friendships

Time : 2 hours

Strategies : Talking with friends



STORY 6: NEW FRIENDS

Have you noticed how sometimes parents can be as subtle as a sledgehammer? Sometimes they might not even consciously be aware of the effects of what they are saying... but just say it anyway. Sometimes, too, it is easy for kids to take what they say in a way that it might not have really been intended. I'm not sure what the problem was for Rob.

His parents are friends of mine and I happened to be sharing a meal with them one night around their kitchen table. Somehow conversation moved on to Sally, the daughter of a mutual friend who wasn't very happy and hadn't been for several weeks. Rob's mom said that Sally had been getting into trouble for a while and that her parents didn't approve of the company she had been keeping. Then, suddenly, all her friends had dumped her and she was sad... For a while afterward she just sat at home and didn't want to go out. She didn't want to go to school, and when her mother and father tried to make suggestions, she'd snap back a reply like, "Get off my case."

Then something interesting happened, though Rob's mom said she didn't know what had made the difference. What happened was that Sally began to take a serious look at her friendships. For so long, she had just drifted along with her old friends without even questioning whether they were the best friends for her to have. Being dumped didn't feel good, but it did give her the chance to rethink whom she wanted to spend her time with and whom she didn't. She then thought about which kids she really wanted to be her friends. She made the effort to speak with them a little more than she had done previously. She smiled when they passed in the corridors and she started to dress in a similar, though not identical, way. She paid attention to what TV programs they talked about, what boys they discussed, what teachers they liked or didn't, and the sorts of things that they did on their weekends... and she began to ask them question about these things they were interested in. She found she started to enjoy the conversations and liked doing the things they were interested in.

Rob's mom had said that Sally came home one day after school and said to her mother, "You know, I never realized it before, but I didn't really

like my old friends. Some of them were always getting into trouble in class, some were experimenting with drugs, and some were always talking negatively and angrily about their parents. I can see now that some weren't nice people to be mixing with. My new friends are so much nicer. They want to get ahead and the fact that they apply themselves to homework and study means I feel more interested in doing, too. I wasn't happy at the time when my old friends dumped me but I'm sure happy with the new friends I've made."

As Rob's mom finished telling the story, Rob folded his arms, looked down at the table, and said, "Okay, I know what you're saying."

Isn't it interesting how we all can see things a little differently? Maybe we hear our own messages in what's being told. For me, sharing dinner with them. I thought Rob's mom was just telling me a nice, positive story about Sally. Rob obviously thought she was sending a pointed message his way about the sort of friends he keeps. Of course, I don't know what she had in mind in telling me, but I was interested that Rob saw it so differently.

Teacher Activity

Teacher presents the story very interestingly so that teacher can maintain curiosity in students to know further. Teacher uses proper pausing, explanations and discussion where ever necessary so that students can understand the story well. In the midst of story telling teachers ask questions to keep the students attentive.

Questions

1. Who is Rob?
2. Who is Sally? Who talks about Sally?
3. What is Sally's problem?
4. What did Sally decide to do?
5. How Sally made friendship with other students?
6. What did she understand about her old friends?
7. Was she happy with her new friends?
8. Was it a good decision to change her old friends?

List out the effects of having bad friendships

- 1.
- 2.
- 3.

Have you ever experienced company of bad friends?

- 1.
- 2.
- 3.

How are friends helpful to us?

- 1.
- 2.
- 3.

How can you overcome the company of bad friends?

- 1.
- 2.
- 3.

Discussion and Narrating Incidents

Talk with friends about their faults and discuss what may be their problems and how they should have behaved to get away from such problems. Narrating incidents of peer influences.

Lesson Frame 7

Outcomes offered:

- anger management
- accepting consequences of behaviour
- accepting suggestion from parents
- learning about impact of actions
- creating positive alternatives

Problems addressed:

- feeling of anger towards peer
- uncontrollable behaviors
- feelings of powerlessness to change
- unaware of impact of actions

Time : 2 hours

Strategies : Role play



STORY 7: **NAILING DOWN ANGER**

Matt was a nice enough guy. He enjoyed his friends and family and, mostly, they enjoyed him. I say “mostly” because sometimes Matt could get really angry. If things didn’t go quite his way, he could shout and scream at people. He would slam doors, push other kids around, or throw things that happened to be near him. His mom and dad had long said things like, “You’d better learn to control that temper, young man, or one day you will get into

real trouble.” Now Matt was noticing that some of his friends at school tended to be avoiding him more and more. The more he got angry, the less they wanted to spend time with him.

This worried Matt. He liked his friends. He didn’t want to lose them but he didn’t know what to do about. He had always been like this. Try as he might, at times things would build up like a volcano until he erupted. Matt felt it was outside his control. What could he do?

One Saturday morning his dad came home from the hardware store and said, “Matt, I’ve got a present for you.” Out of the shopping bag he pulled a brand-new hammer and bag of big, shiny nails. He got an old baked-bean can and tipped the nails into the empty container. Handing Matt the brand-new hammer and can of nails, he said, “Every time you get angry, go outside and hammer a nail into the wooden fence that runs down the side of the house.”

At first, Matt thought his old man must be going crazy or something. Perhaps he’d been under too much pressure at work, but Matt gave a shrug. He had tried everything else, why not do what his father had said?

Each time he got angry at home he went and hammered a nail in the side fence. If he got angry at school he’d remember how many times he’d lost his temper and as soon as he got home he’d go and hammer the appropriate number of nails into the fence.

Soon Matt found the task of hammering the nails in got boring. He didn’t like having to keep track of all the times he got angry and then go out into the shed, gather the nails and hammer, walk over to the fence, and pound in a few more nails, particularly if it was cold and raining, surprisingly, Matt

found that he was getting less and less angry. It was easier, in fact, to control his temper than to remember the times he hadn't, then go and hammer another nail in the fence. After a week of not having to face up to the fence, even on one single occasion, he proudly went and told his dad.

“Good,” said his dad. “I’m pleased to hear it. Now, every day you have *without* losing your temper, I want you to go and remove one of those nails you hammered in the fence.”

The days went by, and the nails came out one at a time, but somewhere in the task of removing them, Mat noticed that they were leaving holes. The wood sprung back around some of the holes, closing them up a little, while others stayed the full size of the nail. Matt became concerned about the gaps that remained even after he’d removed the nails.

When he told his dad, his dad said, “That’s bits like what happens when we get Angry. Anger can hurt and sometimes it leaves as wound or a scar that people remember long after the anger has passed.”

Matt thought about his dad’s words over the next few days. He didn’t like the fact that he’d left holes in the fence. Every time he walked by he could see the wounds that remained from his actions. The next weekend he asked his dad for some putty and filled up all the holes in the fence, but he could still see where they’d been. Matt wanted to fix what he’d done, so he asked his dad if he could paint the fence next weekend.

“What color would you like to use?” asked his dad, Matt had several ideas. He could paint the fence all one colour, paint each picket a different color, or do a mural over the whole fence. Perhaps he could have a fence-

painting party, inviting his friends around to do some graffiti art. As he considered it, he discovered there were many things he could do that might change what he had done to the fence. This, thought Matt, is a lot more fun than hammering in nails.

Teacher Activity

Teacher presents the story very interestingly with explanations and discussions. Teacher asks questions while telling the story so that students stay listening. Teacher presents the story with good voice modulation. He/she stops the story wherever necessary to have more explanation and discussion.

Questions

- 1) What is the character of Matt?
- 2) Did Matt know about his character?
- 3) Did Matt's parents know about his character?
- 4) What did Matt's friends do?
- 5) What did Matt's parents present him?
- 6) What was the present a good one?
- 7) What Matt observed while removing the nails?

List out all the occasions that you become angry at home

- 1.
- 2.
- 3.

List out all the occasions you become angry at school

- 1.
- 2.
- 3.

Write down the consequence of being angry at home

1.

2.

3.

Write down the consequences of being angry at school

1.

2.

3.

write down your own tips to control your temper

Role Play:

Present the whole story as a role play. For this divide the class into groups and each group select different ways to control the anger.

Lesson Frame 8

Outcomes

- looking at positives
- seeking solutions
- finding the exception
- develop global thinking

Problems addressed:

- issues with peers
- negative thinking
- focusing only on problems
- not seeing exceptions

Time : 2 hours

Strategies : Discussion



STORY 8: FINDING EXCEPTIONS TO PROBLEMS

Christine, or Chrissie as her friends called her, was a good student. She might not have been top of her class but she was a long way from the bottom, and had always really enjoyed going to school. Therefore, it came as a surprise to her parents when she started to say that she didn't want to go to school any more. She was too young to leave school, and her parents had high hopes that she might go on to get a college degree. Certainly, she was smart enough. But Chrissie began to sleep in longer, she dawdled while getting ready to go to school, and her parents felt they had to be on her back more and more. Of course, the more they were, the less she wanted to go.

“What’s going on?” her mother eventually asked.

Chrissie confessed, “Some of the kids are constantly picking on me. They’re either on my case all the time, or they just ignore me completely. They keep teasing me about the braces I got on my teeth last vacation. They’re saying that I suck up to the teachers, I’ve had enough,” she said angrily.

“Perhaps I should go and see the principal,” said her mother, “to see if we can put a stop to it.”

Chrissie objected. She was horrified. “That would just make it worse. Then the kids would really have something to tease me about.” She knew it wouldn’t stop them doing what they did behind the teachers’ backs, anyway.

Chrissie’s mom had to acknowledge that Chrissie was probably right. It wouldn’t stop it and they might even give Chrissie a harder time. Wondering what else she could do, she went and got a sheet of paper and a pen and brought it back to Chrissie, saying, “Write down the list of the names of all of the pupils in your class.”

“You aren’t going to make me write down all the bullies and then take it to the principal, are you?” asked Chrissie suspiciously.

“No,” said her mother, “I promise you I won’t. Just write out the list of everyone’s names and I’ll explain what we do next.”

Chrissie was both curious and cautious, but she wrote out the list as her mother requested. Her mother then handed her a yellow highlighter and said, “Now, I want you to go through the list and highlight the names of every student that does *not* bully you.”

Soon Chrissie had every name highlighted with the exception of three or four.

“Good,” said her mom, “now here is a red pen. I want you to go back and circle the names of all those students who are usually good or kind to you.”

From where her mother was sitting it looked as though Chrissie had circled about ten or twelve. Chrissie’s mother didn’t need to interpret what Chrissie had done and Chrissie didn’t need a lecture about what it meant. The next morning she was up on time, chatted jovially over breakfast, and was waiting at the bus stop with plenty of time for the bus to arrive.

Teacher Activity

Teacher presents the story very interestingly with good voice modulation. Teacher stops where further discussion and explanation is required. Teacher asks questions while telling the story so that she/he can check whether students understand the story.

Questions

- 1) What kind of student was Christine?
- 2) What change in her behaviour was noticed by her parents?
- 3) What did her friends do with her?
- 4) What suggestion did Christine’s mother give her?
- 5) What did she understand from her mother’s suggestion?

Can you list the name of friends who teased you

- 1.
- 2.
- 3.

Can you list the name of friends who are good at you

- 1.
- 2.
- 3.

Why did your friend tease you?

- 1.
- 2.
- 3.

Why are they good at you?

- 1.
- 2.
- 3.

Based on above problems.

Imagine that of you were in your friends position. How will you behave?

Discussion

Write down some suggestions for behaving well with your friends.

Lesson Frame 9

Objectives : - consideration for others
- making choice about appropriate behaviour
- learning to discriminate
- ownership of behaviour
- consideration needs of others and oneself

Time : 2 hours

Strategies : Role play

Problems addressed : - not knowing when behaviour is appropriate or okay.
- confusion about double standards



STORY 9: **LEARNING TO DISCRIMINATE**

Sometimes when you are growing up it's hard to know what is expected of you. Mom says, "Do the dishes," and Dad says, "Do your homework." Dad says "Come here." and Mom says, "Go there." I'm sure you know what I mean. What do you do? What is okay and what is not? And how do you know?

That was the dilemma Harry was in. His mom and dad had some friends visiting from out of town. These friends had two boys: Dave, who was a little older than Harry, and Mitch, who was a little younger. While the two sets of parents sat talking over coffee after lunch, the boys disappeared into Harry's bedroom and were soon rough-housing and having pillow fights with each other. The parents had a laugh about it, commenting on how "Boys will be boys."

Later, visiting the neighborhood park, the parents walked and talked while the boys hung back, still rough-housing. When Mitch, the youngest, got

dumped to the ground and came up crying, Harry got a lecture from his dad-- probably because he happened to look guiltier than Dave did.

“Hang on,” said, Mitch’s mom, trying to calm the situation a bit. “They were just doing what they were doing back home with a pillows before.”

“Yes,” said Harry’s dad, “but they have to learn to tell the difference between when it’s okay to fool around and when it’s safe and when it’s dangerous. Mitch could have hit his head on one of the rocks by the path.”

Harry felt bad. He hadn’t meant to hurt Mitch. They had just been fooling around like at home, as Mitch’s mom had said. So how can you tell when one time is okay and when another is not?

Harry’s dad’s anger was an example. Harry was always being told not to be angry, but he saw his dad come home angry from work at time and he sure saw his dad get angry at the umpire when they went to the baseball game on Saturdays. In fact, sometimes his dad would stand up and scream so much that Mitch almost felt embarrassed to be with him. But he never saw his dad get angry with Mom, and rarely angry with him. So Harry wondered, *When is it okay and when is it not okay?*

“You should always tell us the truth,” insisted both his mom and dad. But he had learned that if he told the truth he could get into trouble. Besides, he had heard his mom tell a friend that she had other plans when the friend invited her out... and Harry knew she didn’t have any other plans, at all. He’d also heard Dad phone his boss one morning and say he had a really bad headache and wouldn’t be coming to work that day, when Harry knew he didn’t have a headache but wanted to go somewhere with Mom.

At the end of the walk, Harry's parents and their friends stopped at the tavern in the park for a drink. The tavern had a little sanctuary with some young male kangaroos that were fighting. They balanced on their strong tails, punched each other with their paws, and slashed out with their long hind legs. A crowd had gathered to watch in fascination. People were taking photos.

It's okay for us boys to rough-house in my room, thought Harry, but not do the same in the park. It's okay for the kangaroos to fight and box in the park, but I bet Mom would go nuts if they did it in my room.

No wonder it's confusing. How could Harry expect to know what was okay and what wasn't when he got messages like that? He certainly hadn't wanted to hurt Mitch and, fortunately, he didn't; but I guess he was a little smarter from the experience because he began to wonder: If he hadn't got it right this time, how might he do it better next time?

In his head, Harry began to ask himself some questions. *Is it for me to do what I'm doing? Is it likely to hurt me or someone else? If we're playing, how can we have fun and do it safely? One thing may be okay for one set of circumstances or with one group of friends but not for another. How do I judge that?*--wondered Harry. Of course, things do happen that we may not want to happen at times, and there may not be any firm answers to those questions, but by asking them Harry put himself in a better position to know in the future what was okay and what wasn't.

Teacher Activity

Teacher presents the story for children with necessary explanations. Teacher discusses with children each and every point that needs explanation

teacher asks questions in between to make sure that the children are listening and understanding the story.

Questions

- 1) Who came to Harry's house?
- 2) What did he do in Harry's room?
- 3) What happened to Mitch while playing in the park?
- 4) What did Harry notice in his parents' character?
- 5) What did Harry notice in the zoo?
- 6) What decision did Harry take while watching Kangaroo?
- 7) What change happened in Harry's character?

<p><u>List out the standards your parents expect from you</u></p> <p>1.</p> <p>2.</p> <p>3.</p>
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<p><u>List out how you behaved when your parents expected you to behave in a standard way.</u></p> <p>1.</p> <p>2.</p> <p>3.</p>

<p><u>How do you want to be your self?</u></p> <p>1.</p> <p>2.</p> <p>3.</p>

<p><u>Why you are not always possible to behave as you like?</u></p> <p>1.</p> <p>2.</p> <p>3.</p>

Role play:

Present a role play with same theme but with different situations. Criticize each group with their positives and negatives.

Lesson Frame 10

- Objectives : - exploring personal model standards and responsibility
- learning to face consequences
- learning to make considered judgement
- acknowledgement of cause and effect
- Time : 2 hours
- Materials Used :
- Strategies : Story Telling
- Problems addressed : - moral dilemma
- lack of responsibility
- telling lies
- lack of good communication with parents
- lack of acknowledgement about care and effect



STORY 10: **FACING A MORAL DILEMMA: A KID STORY**

“Did you tell your parents?” Brad’s friends asked him when he got to school on Monday morning. “What did they say? Did you get in trouble again?”

Brad had been in trouble on Friday. Jess, one of the girls in his class, was constantly teasing him. On Friday, she had recruited several other girls and they were all skipping along behind Brad, teasing, laughing, and giggling. Brad was at the end of his teacher. He turned around and gave Jess a push. She fell backward and hit her head against a corner of the wall. It began to bleed. It was only a small cut but cuts to the head can bleed a lot.

It so happened that Ms. Brown, one of the school teachers, saw Brad push Jess. She grabbed him by the wrist and held him tightly while asking Jess's friends to accompany her to the nurse's office. Brad was taken to the principal's office, lectured about bullying, and told to write out twenty-five lines, *I must not be a bully*, and another twenty-five lines, *I must not hurt girls*. The principal then wrote a letter for him to take to his parents, put it in an envelope, and sealed it. Brad was to give this letter to his parents and have them sign the total of fifty lines that he was to do over the weekend.

During class that afternoon, Brad was too terrified to concentrate... and even more terrified about going home. When his mother asked him how school had been he just shrugged his shoulders and headed for his bedroom. What was he to do? Should he tell her the truth? If he did he would probably get into trouble from her and Dad as well as Ms. Brown and the principal.

Could he just not tell his parents? But then, he had to give them the letter and get them to sign his lines. Maybe he could fake one of their signatures. Maybe the principal wouldn't know. He knew other kids who had done it but he wasn't sure if he could.

Maybe he could tell a lie and make it sound as though it really hadn't been his fault. After all, he had told some little lies in the past and gotten away with it – but this time it felt like something big. He had heard other kids lie with excuse about their homework. He knew that some did, but then others said that you should never lie.

Previously, his parents had given him talks about lying. "You should always tell the truth," they'd said, but he found there were times when he told

the truth and ended up getting into more trouble. Then there were other times when he'd told some lies and managed to escape without punishment.

Brad wrote out the lines secretly and hid them in his room. Come Sunday night, he was about to burst with the worry of it all. He hadn't been able to find a way out and knew he had to tell his parents. Over dinner he said, "I got into a bit of trouble at school on Friday and the principal gave me a letter to give to you."

"I wondered what was going on," his mother replied. "You've been pretty quiet all weekend. What happened?"

Brad said, "Jess and her friends were teasing me and started to push me around. Then one of her friends got down behind me and Jess gave me a push so that I fell over. When I got up I pushed her back and she hit head against the wall. Ms. Brown only saw the last bit, blamed me for it, and took me to the principal's office." With that he handed over the letter and the fifty lines that he'd written.

"You shouldn't push girls around," his father said at first, but as his parents discussed it, they agreed the girls had been responsible, in part, so Brad's mom said that she would go to school in the morning and talk to Ms. Brown.

Oh, no! Brad was really in trouble now. Ms. Brown was the teacher who'd seen what happened and his mom was going to support his lie about the girls pushing him over first! How bad could it get?

I bet you would like to know how the story ended. But, to be honest, I don't know, so I can't tell you. However, if you were in Brad's shoes, what

would you have done? Would you have confessed to Mom and Dad? Would you let Mom visit Ms. Brown in the morning and wait to see what happened? How would you have faced up to the consequences of what you had done? Or taken responsibility for what you had done? How would you make your own judgment about what was best to do?

Teacher Activity

Teacher presents the story very interestingly so that students are enjoying it. Teacher discussed and explained wherever discussion and explanation is needed. Teacher presents in such a way that each student can identify himself/herself in place of the character. Teacher asks question in between to make them more attentive.

Questions

- 1) Who is constantly teasing Brad?
- 2) What happened to Jess?
- 3) Who punished Brad? What was the punishment?
- 4) What change happened to Brad that week?
- 5) What was Brad thinking of?
- 6) Do you think Jess is innocent?
- 7) What should have Brad done to avoid such a situation?
- 8) What is your concept about MS Brown?

If you were in Brad's place what would you have done?

Would you let mom visit Ms. Brown and want to see what happened?

Would you face the consequences of what you had done?

How would you make your own judgement about what was but to do?

Narrations

Narrate similar incidents in your life and what were the consequences.

Retell the story from the view point of Brad's mother.

Lesson Frame 11

Outcomes Offered:

- learning the need for school policies
- explaining values of rules
- observing benefits of rules

Problems addressed

- Neglecting rules
- Being disgusted with rules and regulations.
- Not knowing the value of restricted freedom.

Time : 2 hours

Strategies : Play activities with rules



STORY 11: **LEARNING ABOUT RULES**

That was a jolly story which Mr. Arthur Ransome told the other day in one of his messages from Petrograd. A stout old lady was walking with her basket down the middle of a street in Petrograd to the great confusion of the traffic and with no small peril to herself. It was pointed out to her that the pavement was the place for foot passengers, but she replied: "I am going to walk where I like. We've got liberty now." It did not occur to the dear old lady that if liberty entitled the foot passenger to walk down the middle of the road it also entitled the cab-driver on the pavement, and that the end of such liberty would be universal chaos. Everybody would be getting in everybody else's way and nobody would get anywhere. Individual liberty would have become social anarchy.

There is danger of the world getting liberty-drunk in these days like the old lady with the basket, and it is just as well to remind ourselves of what the rule of the road means. It means that in order to preserve the liberties of all, the liberties of everybody must be curtailed. Often you may have to submit to a curtailment of private liberty in order that you may enjoy a social order which makes your liberty a reality.

Liberty is not a personal affair only, but a social contract. It is an accommodation of interests. In matters which do not touch anybody else's liberty, of course, I may be as free as I like. If I choose to go down the street in a dressing gown, with long hair and bare feet, who shall say me nay? You have liberty to laugh at me, but I have liberty to be indifferent to you. And if I have a fancy for dyeing my hair, or wearing a frock-coat and sandals, or going to bed later or getting up early, I shall follow my fancy and ask no man's permission. I shall not inquire of you whether I may eat mustard with my mutton. And you will not ask me whether you may marry the dark lady or the fair lady.

I got into a railway carriage at a country station the other morning and started reading a Blue-Book. I was not reading it for pleasure. The truth is that I never do read Blue-Books for pleasure. I read them as a barrister reads a brief, for the very humble purpose of turning an honest penny out of them. Now, if you dare reading a book for pleasure it doesn't matter what is going on around you. I think I could enjoy *Tristram Shandy* or *Treasure Island* in the midst of an earth quake.

But when you are reading a thing as a task you need reasonable quiet. That is what I didn't get, for at the next station in came a couple of men, one of whom talked to his friend for the rest of the journey in a loud and pompous voice. As I wrestled with clauses and sections in the Blue-Book, his voice rose like a wing and his family history, the deeds of his sons in the war, and his criticisms of the generals and the politicians submerged my poor attempts to hang on to my job. I shut up the Blue-Book, looked out of the windows, and listened wearily to his thundering voice. It was like a barrel-organ groaning out some banal song of long ago.

If I had asked him to be good enough to talk in a lower tone I dare say he would have thought I was a very rude fellow. It did not occur to him that anybody could have anything better to do than to listen to him, and I have no doubt he left the carriage convinced that everybody in it had, (thanks to him) had a very illuminating journey, and would carry away a pleasing impressing of his encyclopaedic range. He was obviously a well-intentioned person. The thing that was wrong with him was that he had not the social sense. He was not "a clubbable man."

A reasonable consideration for the rights or feelings of others is the foundation of social conduct. I believe that the rights of small people and quiet people are as important to preserve as the rights of small nationalities.

I suppose the fact is that we can be neither complete anarchists nor complete socialists in this complex world – or rather we must be a judicious mixture of both. We have both private liberty and our social liberty. I shall not

permit any authority to say that my child must go to this school or that, shall specialize in science or arts, shall play rugger or soccer. These things are personal. But I cannot have the liberty to be a nuisance to my neighbours or make my child a burden and a danger to the commonwealth.

It is in small matters of conduct, in the observance of the rule of the road, that we pass judgement upon ourselves, and declare that we are civilized or uncivilized. The great moments of heroism and sacrifice are rare. It is the little habits of common place social exchange that make up the great sum of life sweeter or make bitter the journey. I hope my friend in the railway carriage will reflect on this. Then he will talk in a way that will permit me to read my Blue-Book undisturbed.

(Slightly abridged and adapted)

Teacher Activity

Teacher presents the story in a very interesting way so that children pay attention and are involved in the story. Teacher gives explanation wherever necessary and involves children in the story by asking questions.

Questions

- 1) What is the character of stout old lady?
- 2) What will you do with the lady when you are the lab driver?
- 3) What does the author read?
- 4) How is the man next to him making him nuisance?
- 5) Can you agree with the person talking?
- 6) What would you have done with that man?

Have you had any such experience in your life?

Write down your concept about your freedom

Teacher gives the children ludo board, snake and ladder board, chess board and asks them to play without having any rules. From the group teacher asks them about the difficulty they felt while playing without rules.

Write down why rules are necessary

Do you want some rules and regulations in your school, home and in your life?

Lesson Frame 12

Outcomes Offered

- learning to change what you can
- doing constructive/useful things
- creating beauty giving other pleasures
- how learning to make a difference
- considering others
- overcome boredom

Time : 2 hours

Strategies : Creative activities like flower making, etc.

Problems addressed

- feeling neglected/uncared
- limited choice
- boredom



STORY 12: TENDING TO THE NEGLECTED

There is a busy street corner besides a bus station where kids change buses going to and from school. It's not what you would call a pretty spot. There's a lot of noisy traffic and the nearby buildings are gray and unloved. In fact, it has a very uncared-for feeling about it. However, it has a patch of beauty – a small garden plot called Pete's Patch, because Pete created it in nine and half minutes.

Pete is one of the kids who, for nine and a half minutes each day, waited here to change buses. It wasn't a fun or pleasant place to hang out. The station was noisy and smelled of gas fumes. There was nowhere nice to walk and the patch of land next to the station was littered with trash. Maybe it had once been a garden, but now it was an eyesore. Kids and adults had thrown their empty drink cans there, along with burger wrappings and fried-chicken boxes. Someone had sprayed swearwords and what Pete thought was pretty rude graffiti up the walls. No, it wasn't a nice spot to spend nine and a half minutes of every school day when all you wanted to do was get home. But Pete was here. He didn't have a choice. If he wanted to get home, this was the only way.

He felt like he was wasting his life away. There was nothing to look at, nothing to occupy his mind or hands, and hanging around like that each day drove him crazy. He knew he couldn't do anything to change the bus company's timetable, but, he began to think, he might be able to make his nine and a half minutes more enjoyable for him and others.

He asked Mom for some plastic trash bags and a pair of gardening gloves. That week, he put on the gloves and filled his nine and a half minutes each day by piling the trash into the bags.

"Hey, man, are you crazy or something?" his schoolmates teased. "What difference will it make? Why waste your time?" They didn't know that for Pete it was a bigger waste of time to sit doing nothing.

On the weekend he asked his dad to drive down, collect the bags, and take them to the dump. On Monday morning, the patch looked so much cleaner and nicer.

Then next week, Pete began to pull the weeds from around the old plants that had been hidden behind the rubbish and weeds. One of his friends, as bored as Pete was with filing in nine and a half minutes doing nothing each day, came to help. Mom and Dad came down on the weekend to collect the new pile of bags, prune back the old rose bushes that no one had seen for years, and offer some suggestions to Pete. Soon the patch was looking good, but the swearwords and rude graffiti on the walls behind were really bugging him. They seemed to detract from what he had done.

“What can I do?” he asked his dad.

“What would you like to do?” his dad replied, bouncing the problem back to Pete.

Pete had an idea. He started to save his pocket money. He asked his dad to talk to the owner of the building and, as soon as he got permission, he went straight to the hardware store where he spent every cent he had saved on cans of spray paint. On the wall, he sketched a mural in chalk to cover all the dirty graffiti and, when he started to put his cans of spray to work, more of his school friends wanted to join in for those nine and a half minutes each day.

Now a whole bunch of kids are pretty proud of that patch, and they sure aren't going to let any other kids – or adults – mess it up. They water the roses regularly, they've planted fresh flowers, and one of the other kids' dads gave them an old swing that they painted and set up on the patch. They walk through the patch while waiting for their next bus, gather any rubbish, pull out a weed or two, and have a swing. In fact, sometimes when you pass you may even see an adult swinging among the roses.

One Monday, however, as he rode the bus to school, Pete was in for a surprise. He looked, as usual, toward the patch. Something had changed. There was a sign on it. His friends had painted it. It read: Pete's Patch.

Teacher Activity

Teacher presents the story very interestingly with good voice modulation. Teacher stops and discusses whenever explanation is required. Teacher makes sure that children are interested and are attentive. Teacher asks questions while telling the story to check whether children are attentive or not.

Questions

- 1) Where does the story happen?
- 2) What is Pete's patch?
- 3) What kind of place was that bus station?
- 4) How did Pete feel while waiting for the bus?
- 5) What was his schoolmates' attitude towards Pete while he was piling the trash into the bag?
- 6) What did Pete do with that old garden?
- 7) How did his friends give Pete a surprise?

How often do you feel bored?

- 1.
- 2.
- 3.

How do you try to remove your boredom?

- 1.
- 2.
- 3.

Do you do any creative activities while getting bored? List out what all things you do.

1.

2.

3.

How do you spend your time?

1.

2.

3.

Suggest how you can attire your time effectively.

Craft work:

Teacher divides the class into 5 or 6 groups, each group with atleast a student knowing something to create so that he/she can teach others how to make it. Then one member from each group presents the method to the whole class.

Appendix - VIII

DEPARTMENT OF EDUCATION
UNIVERSITY OF CALICUT

BIBLIOTHERAPY LESSON FRAME EVALUATION PROFORMA

Dr. K.P. MEERA

Associate Professor
Department of Education
University of Calicut

PRASEEDA P. NAIR

Research Scholar
Department of Education
University of Calicut

Instruction

Read the following statements carefully. Each statement is concerned with the features of the developed Bibliotherapy Lesson Frame.

Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree are the five options for each statement. Read each statement carefully and mark your response by using a '✓' mark.

Name :

Designation :

Official Address :

.....

Sl. No.	Statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1.	Stories are suitable for the secondary school students	<input type="checkbox"/>				
2.	Stories include the stressors mentioned	<input type="checkbox"/>				
3.	The stories are capable of bringing out the outcomes offered	<input type="checkbox"/>				
4.	The activities are student friendly	<input type="checkbox"/>				
5.	The whole process in lesson frames are simple	<input type="checkbox"/>				

Sl. No.	Statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
6.	The stories enjoyable and interesting	<input type="checkbox"/>				
7.	Good visual clarity and design	<input type="checkbox"/>				
8.	The lesson frames are appealing	<input type="checkbox"/>				
9.	Lesson frame are simple in appearance	<input type="checkbox"/>				
10.	The activities are interesting	<input type="checkbox"/>				
11.	The lesson frame can be easily transacted in classroom.	<input type="checkbox"/>				
12.	The time limit of the lesson frame are appropriate	<input type="checkbox"/>				
13.	The Lesson frames are suitable for present education scenario	<input type="checkbox"/>				
14.	Students stress can be reduced using these lesson frames	<input type="checkbox"/>				
15.	Students will be interested in hearing these stories	<input type="checkbox"/>				
16.	Students who are not willing to participate in stress reducing physical exercises can benefit from this.	<input type="checkbox"/>				
17.	Teachers can easily apply this in classroom.	<input type="checkbox"/>				

Appendix- IX

PANEL OF EXPERTS

- 1) Dr. K.V. Dominic
Professor (Rtd.)
Newman College
Thodupuzha
- 2) Prof. (Dr.) C.N. Balakrishnan Nambiar
Clinical Psychologist
Vijaya Hospital &
District Co-operative Hospital, Calicut
- 3) Dr. P. Usha
Associate Professor
Department of Education,
University of Calicut.
- 4) Dr. Jaya Jais
Associate Professor,
School of Pedagogical Science,
M.G. University.
- 5) Dr. R. Krishnakumari,
Principal,
Govt. College of Teacher
Education, Kozhikode
- 6) Dr. Baby Shari
Associate Professor,
Department of Psychology
University of Calicut.
- 7) Anitha, K.D.
Assistant Professor,
Govt. College of Teacher
Education, Kozhikode
- 8) Syamala Devi, M.B.
Asst. Professor
Govt. Brennen College of Teacher
Education
Thalassery
- 9) Dr. Manju Dileep,
Consultant Psychologist,
Appolo Hospital,
Kannur
- 10) Preetha Elizabeth Thomas,
H.S.S.T. English,
G.H.S.S. Kuttikkattoor,
Calicut
- 11) Rincy Mol Sebastian,
H.S.S.T. English
G.H.S.S. Eranhimangad
Malappuram
- 12) Remya, C.
H.S.S.T. English (Jr.)
G.H.S.S. Kuttikkattoor.
- 13) Sivadasan, C.
PD Teacher
G.H.S.S. Kuttikkattoor,
Kozhikode
- 14) Biju James,
H.S.A. (English)
G.H.S.S. Kuttikkattoor,
Kozhikode.
- 15) Gokul Raj,
Librarian
Department of Psychology
University of Calicut