A STUDY TO EVALUATE THE EFFECTIVENESS OF STRESS MANAGEMENT PROGRAMME (SMP) ON STRESS AND ANXIETY REDUCTION AMONG ADOLESCENTS IN SELECTED PRE- UNIVERSITY (PU) COLLEGES, KOLAR

By

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Under the guidance of

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Kolar

2013

DECLARATION BY THE CANDIDATE

I hereby declare that this dissertation entitled **"A Study to evaluate the effectiveness of Stress Management Programme (SMP) on Stress and Anxiety reduction among adolescents in selected Pre- university (PU) colleges, Kolar"** is a bonafide and genuine research work carried out by me under the guidance of**, Prof. R.Sreevani,** Vice principal and Head of Department, Department of Psychiatric Nursing, **Sri Devaraj Urs college of Nursing, Tamaka, Kolar.**

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DEDICATED TO MY PARENTS,

SISTER, RESEARCH GUIDE AND

MY BELOVED TEACHERS

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Signature of the Candidate

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ABSTRACT

Background of the study

Stress and anxiety is a part of day-to-day living. It refers to the response you have when facing circumstances that force you to act, change or adjust in some way to keep things balanced. It is your body's way of responding to any kind of demand. In the right dose, stress can be healthy or even enjoyable. However, stress and anxiety can be very damaging for students when it becomes excessive.

The purpose of the study was to evaluate the effectiveness of Stress Management Programme (SMP) on reducing stress and anxiety among adolescents in selected pre-university (PU) colleges in Kolar. Stress Management Programme (SMP) has been found to provide significant stress reduction benefits.

Research methodology

For the present study, quasi experimental non equivalent control group pretest posttest design was adopted. The independent variable was Stress Management Programme (SMP) and dependent variable was stress and anxiety of pre-university (PU) college students.

The sample consisted of 60 students from selected colleges at Kolar by convenient sampling technique. Based on the convenience, 2 schools were selected. Students who are studying in Mahila samajam PU college were taken as experimental group and students who are studying in Vidhya jyothi PU college was taken as control group.

Standardised tools such as Students stress rating scale (SSRS) and Beck Anxiety inventory (BAI) was used to collect the data on assessing stress and anxiety among Pre-university(PU) college students. The Stress Management Program (SMP) was developed and given for validation to 5 experts.

The pretest was conducted on the 1stday for experimental and control group subjects. Stress Management Programme (SMP) was administered in 3 sessions each session lasting for 45 minutes at an interval of one week each. Post-test was conducted 15 days after the intervention for both the groups.

Results:

The study finding reveals that in terms of demographic variables majority (80%) of the study subjects were in the age group of 14-16yrs and were boys (60%) who are coming from nuclear family (70%). Majority of them (90%) are residing in urban area and their parents were employed (80%).

In terms of educational variables, all the subjects scored above 70% marks in 10^{th} standard and majority (60%) had taken more than two hours to do their home work. Majority of the subjects had a distance of more than 15kms and they are very satisfied in their relationship with friends (40%) and majority of them had close friends (80%) and about 60% of them were talking to parents while having problem.

The findings of the study revealed that there was a statistically significant difference between posttest stress scores of experimental (111.76± 30.53) and control group subjects (130.23±35.51). Hence the first hypothesis was accepted. It shows that Stress Management Programme (SMP) was effective to reduce stress among adolescents in pre-university (PU) colleges. It also shows that there was no significant association of pretest stress and anxiety scores with selected demographic and educational variables

Interpretation and conclusion

The present study implies that nurse should involve in conducting stress management programme to reduce stress and anxiety of students and help them to have a balanced lifestyle.

Key words: Stress, Anxiety, Stress Management Programme

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ABBREVATIONS

SMP- Stress Management Programme

PU- Pre-University

SD- Standard deviation

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1. INTRODUCTION

"It is the birth right of every human being to have a stress - free mind and a disease - free body"- Sri Sri Ravishanker

Life is a series of challenges and experiences. Stress and anxiety is a part of life. Stress is a universal human experience. [(1)] It is a fact of life that every human being deals with on a daily basis. A certain amount of stress is normal and not always bad. [(2)] Sometimes it can push a person on to greater achievement. Stress varies from person to person, and how much stress one can easily handle varies, too. [(1)]

Adolescent stress is a major concern where needs a major attention. They account for about one-fifth of India's population. It is their minds which are unfocused, irritable and getting distracted easily and not taking appropriate actions to the situations. [(3)]

Adolescence is a transitional stage of physical and mental human development generally occurring between puberty and legal adulthood but largely characterized as beginning and ending with the teenage stage.[(3)] During this period stress and anxiety is natural. There are five major stressors an adolescent have to go through: academic, personal, family, financial, and future. [(4)]

In the field of education, a moderate degree of stress is thought to be constructive, even to promote creativity. [(5)] Majority of the adolescent undergo stress, whatever the sources; may be internal or external it hampers the major functioning of the body. Most of the youngsters face multiple problems in their life. Each individual has to cope with different kinds of pressure laid down by the society and family. Dealing more effectively with stress improves performance and the quality of life. [(6)]

Today, stress levels among students have been going up dangerously due to the pressure of their academic or cultural activities. Stress forms an inseparable part of life and up to a degree may be essential for adequate development. [(7)]

Adolescents enter Pre- university colleges (PUC) from high school having every possibility of increasing stress. Because during PUC, students have to adjust with the various aspects of development such as physical, psychological, emotional, adjusting with the peer group, and also there is a need to develop commitment and high exploration to meet the expectation and demands of the society. In this process of

developmental adjustment, sometimes students experience failure in meeting these demands, as a result there is possibility of perceiving these experiences as stressful. It may not be possible to eliminate stress and anxiety totally; students need to handle both stress and anxiety in a healthy manner. Both to a degree may be essential for adequate personality development. [8]

Anxiety is a condition of persistent and uncontrollable nervousness, stress, and worry that is triggered by anticipation of future events, memories of past events, or ruminations over day-to-day events, both trivial and major, with disproportionate fears of catastrophic consequences. [9]

Anxiety in adolescence can have negative consequences. Adolescents have a tendency to see things in stark contrast. Anxiety is a psychological and physiological state characterized by somatic, emotional, cognitive, and behavioral components. [9]

When mental health problems like stress and anxiety of young adults go untreated, it can affect their development, school performance and relationships and academic performance. It also leads to school failure, running away, family conflicts, drug abuse, and violence. [10]

Adolescents clearly experience stressors and could benefit from strategies to reduce it. Stress Management Programs for adolescence like Deep Breathing exercises, Progressive muscle relaxation techniques, meditation, and yoga improves restoration for mind and spirit.

School demands, social relationships, technology, blurred boundaries, academic expectations, are some of the stressors facing today. Most of the students do not have the skills to cope with these stressors. Unchecked stress can lead to anxiety, physical illness, and drug and or alcohol use. [11]Adolescents spend most of their time outside the home with peer group, it is understandable that peers would have a greater influence on them and sometimes cause tension too. It is vital importance to the adolescent that his peer group contain a certain number of friends who can accept him and upon whom he can depend. Otherwise this will indirectly causes stress and anxiety to them. [12]

All adolescents regardless of anything normative sources of stress, such as daily hassles and transition experiences like greater stress, related to social and economic factors. They are exposed to a variety of continuous stressors including poverty and family disruption.[11] Adolescents report much stress in their daily lives, which may lead to psychological and physical problems. Students are prone to stressors due to the transitional nature of life. High levels of stress affect students' health as well as their academic performance. [4]

Stress management education is important for adolescents because of increased stress and increased number of developmental challenges inherent in their life. An educational oriented framework was found to be helpful in integrating and interrelating information pertaining to stress management and was readily understood by them.[13]

Adolescents need to be aware of the type of stressors that are most common to their age and the effects of those stressors on outcomes such as academic performance and health (Nonis, Hudson, 1998). [4]

There are certain stress management programs designed to facilitate stress awareness and promote effective strategies to reduce it. Stevens; 1984, outlines eight components of stress management that can be incorporated into individual or group format, stress information, relaxation training, problem solving, memory enhancement, positive reappraisal, engagement in leisure pursuits, time management, and planning. [13]

Adolescents are often unaware of the subtle manifestations of stress and underestimate the impact of stress on their physical and psychological well-being. [5] Knowledge of the dimensions of the stress response can heighten awareness of stress as it is experienced and information about the long-term effects of excessive stress can motivate students to acquire more effective stress management skills. [13]

A cross-sectional study was conducted among young adults in Ranchi city of India to determine prevalence of current anxiety, and stress-related symptoms. 500 students were selected to be representative of the city's college going population (n = 50,000) of which 405 were taken up for final analysis. Data were obtained using Anxiety, and Stress Scale to assess symptoms. Comorbid stress level was higher and 87% suffering

from anxiety disorder. Detecting anxiety, and stress-related symptoms in the college population is a critical preventive strategy, which can help in preventing disruption to the learning process. Health policies must integrate young adults' stress, and anxiety as a disorder of public health significance. [14]

NEED FOR THE STUDY

"There is more to life than increasing its speed." - Mohandas K. Gandhi

Stress and anxiety is a natural and inevitable occurrence in college life. Exposure to new experiences demands on ones time and a variety of new choices to make all combine and create stress and anxiety for the student, even to the one who may be excited at the prospect of being independent for the first time. [2]

Education programs can generate a considerable amount of stress and anxiety among the students. As a result, there are stressors associated with education as the students develop critical thinking and complex psychomotor skills and progress through a competitive and often grueling education program. Several potentially stressful times are during the process of acquiring and demonstrating skill competence and passing written examinations with the application of critical thinking skills. [12] Dailey (1994) uncovered a pervasive pattern of stress that not only affected examination results and the health of the students, but wove its way throughout the fabric of the experience and caused a disruption of the design of the entire program.

College students confront many challenges in pursuit of their educational goals. When such experiences are perceived as negative, they can have an adverse effect on students' motivation and performance. Moreover, if prolonged and perceived unmanageable stressors, these experiences have been shown to elicit anxiety and stress. These will be influencing patterns of growth and development as opposed to the onset of a host of psychological and somatic problems. [10]

Main sources of stressors for adolescents includes negative thoughts and feelings about themselves, college demands and frustrations, changes in their bodies, problems with friends and/or peers at school, taking on too many activities or having too high

expectations, family financial problems (American Academy of Adolescent Psychiatry) 2001.[4]

Stress is basically defined as an applied force or system of forces that tends to strain or deform a body. It is usually caused by something that is out of the ordinary from everyday life, things like tests, family problems and pressure of subjects. [2] Today students have a lot of stress because of a lot of reasons. There are many things that cause stress for college students; school-related issues, relationships, and peer pressure. Studies-related issues also cause stress and anxiety for students. It can be caused by them doing so badly in college that they gave up all hope of doing something worthwhile with their lives, or it could be caused by just not living up to their own standards. Stress also creates the way people fall in to things like smoking and drinking. [3] In Karnataka, statistics shows that 93 to 100% of the adolescents showed medium to moderate stress while 1.9% shows severe stress. Only 1.79% came under normal group.[2]

In the present study, Stress management program gives direction to the students, so that the students will be empowered to use strategies that help in reduction of stress, facilitate self control and enhanced concentration. The teachers can also assist their students to establish a positive internal locus of control; arrest negatives thoughts, build confidence and self worth clarity of mind and ultimately lead to positive outcomes. [15]

As the stress levels of the students decrease with the help of stress management program, their life will be much better. They may invest much more energy in their studies, and life as they may know how to deal with stress related problems in the group. This program increases the awareness of the students. They may become aware of how they are feeling, how they perform academically and socially. After that, with the help of group sessions, they may learn how they can solve their problems. They may understand how their way of thinking affects their behaviours and feelings. Also, in a group setting, they will see that they are not the only person having these problems or troubles. They might in a way form a new social support group for themselves. [13]

Therefore, assessment of stress levels in college students is a topic widely examined by the researchers. [2] For example, Towbes and Cohen (1996) created the College

Chronic Life Stress Survey in which they focused on the frequency of chronic stress in the lives of college students. Similar studies have examined sources of stress between undergraduate (Ross, Niebling, & Heckert, 1999) and graduate students (Rocha-Singh, 1994). [15] Cahir and Morris (1991) found that college students may experience stress based on the occurrence of several variables, including; demands on time, perceived lack of support from faculty, financial pressure, competition, fear of failure and parental or interpersonal conflicts. As stress is present and continues, a student may become less confident in his/her abilities or fearful of his or her circumstances. [16]

Some studies, especially in Sweden, indicate that psychosomatic symptoms are common in students with stress, the most frequent being: tiredness, stomach ache, headache, and psychological problems that can be triggered by different day to day situations in their life, like demands and administration of time for homework (Brobeck.et.al, 2007). [17]

The study conducted to examine differences in the perception of stressors and reactions to stressors between male and female Jordanian students, and to identify the best predictors of stressors among them shown that there were statistical differences between male and female students regarding their perception and reactions to stressors. Female students reported a higher perception of stressors in frustrations, conflict, pressures and changes, as well as emotional reactions to stressors. Male students reported higher behavioral and cognitive reactions to stressors than female students. Participation in stress workshops, perception of general health, and perception of stress level in general were found to predict stressors among male students, perception of general health, and perception of stress level in general were found to predict stressors among female students. [18]

Hancock (2001) investigated the effects of students' test anxiety and teacher's evaluation practices on students' achievement and motivation at the secondary level**.** He found statistically significant results which revealed that all students, especially students with high anxiety level**,** performed poorly and were less motivated to learn. Thus he concluded that that when students who are particularly test-anxious are exposed to a highly evaluative assessment environment in their educational institution, they perform poorly and are less motivated to perform. [19]

A research study conducted by Cassady & Johnson (2002) "to investigate the effect of cognitive test anxiety on students' academic performance and found that cognitive test anxiety exerts a significant stable and negative impact on academic performance". [20]

Albero, Brown, Eliason & Wind (1997), on the basis of their research study, concluded that students having high test anxiety had significantly lower scores. [21] Oludipe (2009) conducted a study to explore how test anxiety affects students' performance levels in the sciences, especially in Physics, and concluded that "low test- anxious students performed better than high test-anxious students on both numerical and non-numerical tasks in Physics". On the other hand, Schonwetter, (1995) by relating this phenomenon to classroom instruction, the researchers further discussed "how high test- anxious students were unable to benefit directly from organized instruction, which ultimately affected their performance in class". [22]

The study conducted in Turkey, was to investigate the effects of Stress management training program on perceived stress and coping among pre- university college students in Middle East. Pre-posttest experimental control group design was used to investigate the effectiveness of Stress Management Training Program. Three hundred and sixty six students (154 females and 212 males) contributed the main study. Among them, sixteen students were randomly assigned in the experimental and control group. The program continued for six weeks, once a week for 90 minutes. The program concluded the effective coping with stress, emotions and thoughts by relaxation training, problem solving and assertiveness training. [23]

Researcher has experienced academic stress and anxiety in college days. By reviewing various studies and articles it was evident that college students experience variety of stressors. And there were some studies shown the relation of stress and anxiety with subjective well being. The present study is selected to evaluate the effectiveness of stress management programme to reduce stress and anxiety among adolescents in selected pre- university (PU) colleges.

2. OBJECTIVES

This chapter deals with the objectives, operational definitions, assumptions, hypotheses, conceptual framework and delimitations of the present study. These provide the researcher with clear criteria against which the proposed research methods can be assessed.

STATEMENT OF THE PROBLEM

A Study to Evaluate the Effectiveness of Stress Management Programme (SMP) on Stress and Anxiety reduction among Adolescents in Selected Pre- University (PU) Colleges , Kolar.

OBJECTIVES

1. To assess the stress and anxiety among adolescents in experimental and control group.

2. To develop and validate Stress Management Programme (SMP).

3. To evaluate the effectiveness of SMP (Stress Management Programme) on stress and anxiety reduction by comparing the posttest scores between experimental and control group subjects.

4. To compare pre and posttest scores among adolescents in the experimental and control group subjects.

5. To find out the association between pretest stress and anxiety scores with selected demographic and educational variables.

OPERATIONAL DEFINITION

EFFECTIVENESS

Effectiveness is a measure of the extent to which a specific intervention, procedure, or service deployed in the field of routine circumstances, for a specified population. In the present study, effectiveness is evidenced by the effect of stress management programme to reduce stress and anxiety among adolescent group in selected PU colleges.

STRESS MANAGEMENT PROGRAMME (SMP)

Stress Management Programme is an organized method of controlling factors that require a response or change within a person by identifying the stressors, eliminating negative stressors, and developing effective coping mechanisms to counteract the response constructively. In the present study SMP is used to reduce the stress and anxiety among adolescents in selected PU colleges.

ANXIETY

Anxiety is characterized by a state of apprehension or uneasiness arising out of anticipation danger. In the present study anxiety is assessed by using Beck Anxiety Inventory (AaronT.Beck, 1993).

STRESS

Stress is the body's reaction to a change that requires physical mental or emotional adjustment or response. In the present study stress is assessed by using Students Stress Rating Scale (SSRS) 2008.

ADOLESCENT

Adolescent is a transitional stage of physical and mental development generally occurring between puberty and legal adulthood. In the present study, subject selected is between 16 to 19 years of age group and studying in selected PU colleges

ASSUMPTIONS

The study assumes that,

1. Stress is a part of every student's life.
2. Stress Management Programme (SMP) can be effective in reducing stress.
3. Reduction of stress enhances the concentration and improves academic outcome.

HYPOTHESES

The following hypotheses are tested

H_1- The mean posttest stress scores among adolescents who undergoing stress management programme (SMP) is significantly lower than the mean stress scores among adolescents who are not undergone stress management programme.

H_2- The mean posttest anxiety scores among adolescents who undergoing stress management programme (SMP) is significantly lower than the mean anxiety scores among adolescents who are not undergone stress management programme.

H_3- There will be significant statistical association between stress scores with selected socio demographic variable (age, gender, type of family, area of residence, father occupation, mother occupation).

H_4- There will be significant statistical association between anxiety scores with selected socio demographic variable (age, gender, type of family, area of residence, father occupation, mother occupation).

H_5- There will be significant statistical association between stress scores with selected educational variable (percentage of marks in 10 std, number of homework hours, distance to school from house, relationship with friend, doing while having problem).

H_6- There will be significant statistical association between anxiety scores with selected educational variable (percentage of marks in 10 std, number of homework hours, distance to school from house, relationship with friend, doing while having problem).

Conceptual Frame work of the study

A conceptual framework refers to interrelated concepts or abstractions that are assembled together in some rational scheme by virtue of their relevance to a common theme.

The present study aimed to evaluate the effectiveness of Stress Management Programme (SMP) to reduce stress and anxiety among pre-university college students.

General system theory is utilized in this study. General system theory was first introduced by Von Bertalanify in 1968. He defines system as an organized whole unit that produces an effect or product when independent components interact with the environment. All living systems are open systems, which promote the exchange of matter, energy, and information with other system (subsystem), and environment (supra system).

The exchange with in open system, between open system and their supra system is continuous. The dynamic balance within and between the system, the subsystem and the supra system helps to create and maintain internal stability. The change in one part of the system creates change in other parts.[24]

The openness of human system made the investigator to assess stress and anxiety among pre-university college students.

The basic concepts applied to this study were:

INPUT: Input refers to energy, matter and information which enter the system. All systems must receive varying type and amount of information from the environment.

In this study, pre-university (PU) college student is a system and has input within system itself (subsystem) and acquired from environment (supra system). These inputs includes demographic and educational variables such as age, gender, type of family, area of residence, father occupation, mother occupation, percentage of marks in 10 std, number of homework hours, distance to school from house, relationship with friend, doing while having problem. Assessment of stress and anxiety using standardized tools.

THROUGHPUT: Throughput refers to the process by which the system process input and releases an output**.** The action needed to accomplish the desired task to achieve the desired output.

In this study, it refers to the development and validation of Stress Management Programme (SMP), administration of SMP, description about stress and anxiety, breathing and visualization exercises, progressive muscle relaxation exercises and coping strategies.

OUTPUT: Output refers to matter, energy and information that leave a system. It is the result or product of the system.

In this study, it refers to the result of effectiveness of Stress Management Programme (SMP) by evaluating stress and anxiety among pre- university (PU) college students.

FEED BACK: Feedback refers to the output that is returned to the system that allows it to monitor itself overtime in an attempt to move closer to a steady state known as equilibrium or homeostasis. Feedback may be positive, negative or neutral. The feedback circuits helps in the maintenance of intact system.

In this study, it refers to evaluating reduction of stress and anxiety among pre-university college students.

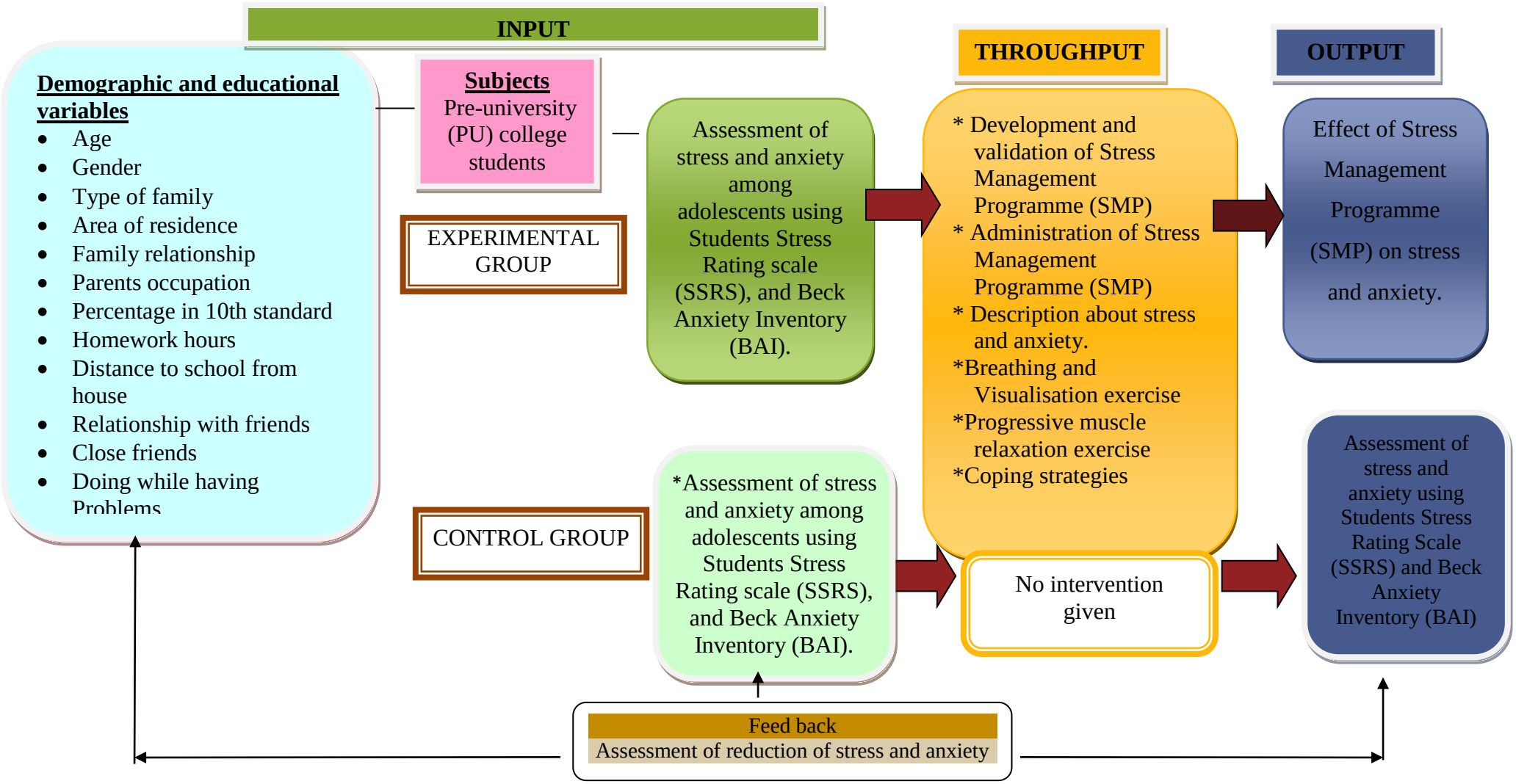


Figure 1: Conceptual framework based on Ludwig von Bertanlanffy General Systems Model, 1968

DELIMITATIONS

Study is delimited to:

a. Students from selected pre- university colleges such as Mahila samajam and Vidhya jyothi.

b. Sample size of 60 students only.

SCOPE OF THE STUDY

a. The findings of the study would reveal the effectiveness of Stress Management Programme by reducing stress and anxiety.

b. The Stress Management Programme (SMP) will help students to identify, realise, sort out coping strategies to deal with stressors and have a better life.

c. Practicing breathing and progressive muscle relaxation exercises regularly will release tensions to a greater extent.

d. Findings of the study will help the professionals to modify the educational system by including stress management programmes in the curriculum.

Summary

This chapter has dealt with the objectives of the study, operational definitions, assumption, hypotheses, and conceptual framework adopted for this study, delimitations and scope of the study. The next chapter explains the review of literature undertaken to lay a strong foundation for this study.

3. REVIEW OF LITERATURE

Review of literature is a systematic enquiry and appraisal of the relevant scholarly about a research problem. The literature for the present study was reviewed from textbooks, journals, electronic resources and articles.

Literature for the present study organized under following headings.

1. Studies related to stress among college students.
2. Studies related to anxiety among college students.
3. Studies related to effectiveness of stress management programme for college students.

1. Studies related to stress among college students

The Student Stress Survey done in London to determine the major sources of stress among college students. The scale consisted of 40 potentially stressful situations. The scale addressed interpersonal, intrapersonal, academic, and environmental sources of stress. The items in the scale were also classified as either daily hassles or major life events. Participants were 100 students at a mid-sized, Midwestern university and varied in year in school, age, and gender. Overall, daily hassles were reported more often than major life events, with intrapersonal sources of stress being the most frequently reported source. The top five sources of stress were; change in sleeping habits, vacations/breaks, and change in eating habits, increased work load, and new responsibilities. The findings from this study can be further used to examine which sources of stress cause the highest levels of stress among college students, and may be helpful in creating stress management programs. [25]

A cross-sectional study conducted on school students in urban area of Chandigarh city. It was conducted to find out stress and psychological health in school students and to find out any correlation between these variables. Data was collected from 2402 students in XI and XII classes on socio-demographic scale, 12-item general health questionnaire, and stress assessment rating scale. Out of 2402 students, 1078 (45.8%) had psychological problems, half (1201 students) perceived problems in their role as students, 930 (45%) reported academic decline, 310 (12.9%) students reported that life was a burden. The findings suggests that there was significant correlation between

student's perception of life as a burden and class they were studying, mother's working status, psychological problems students experienced in relation to study, peers, future planning and with parents.[26]

A study was conducted in USA, about the relationship among young college students' stress depression, anxiety, demographics, life satisfaction, and coping styles. A total of 508 adolescents aged 16-20 years completed the study measures and a short demographics information questionnaire. Coping strategies and life satisfaction were assessed using the Brief COPE Inventory and an adapted version of the Brief Students' Multidimensional Life Satisfaction Scale. Depression, anxiety, and stress were measured using the Depression Anxiety and Stress Scale-21 (DASS-21). Multiple regression analyses were used to examine the relative influence of each of the independent variables on depression, anxiety, and stress. The finding suggests that maladaptive coping was the main predictor of stress, depression, and anxiety. [27]

A survey was conducted in Nepal, among pre university students in two separate classes for the incidence and prevalence of stress and its related symptoms. A sample of 180 students was randomly selected. Data was collected through questionnaire regarding social isolation, dissatisfaction in academic performance, conflicts with relatives and friends. Result shows that majority of student suffered from stress and its related symptoms which affect them significantly in their academic performance and absenteeism. And also 76 percent of the students were found to be stressed. They presented stress related symptoms such as 20 percent had fatigue, 30 percent had back pain and 30 percent had head ache. [28]

The study of coping with stress during childhood and adolescence are reviewed. Coping patterns are considered and the relationship between coping and other aspects of responses to stress (eg.Temperament and stress reactivity) is described. Questionnaire, interview, and observation measures of child and adolescent coping are evaluated with regard to reliability and validity. Studies of the association of coping with symptoms of psychopathology and social and academic competence are reviewed. Initial progress has been made in the conceptualization and measurement of coping, and substantial evidence has accumulated on the association between coping and adjustment. Problems still remain in the conceptualization and measurement of

coping in young people, however, and aspects of the development and correlates of coping remain to be identified. [29]

A study was conducted in Viennese, investigated the interrelationship among academic stress, anxiety, time management and leisure satisfaction among 249 university graduates by age and gender. Time management behaviors had a greater buffering effect on academic stress than leisure satisfaction activities. The finding suggests that females had more effective time management than males, but also experienced higher academic stress and anxiety. Males benefited more than females from leisure activities. And also they found out that anxiety, time management and leisure satisfaction were all predictors of academic stress in multivariate analysis. [30]

An experimental study was conducted to compare male and female pre university students on stressful life events. A sample of 416 pre university students, comprising of 199 male 217 female students was selected randomly. Stressful life events schedule was used to collect data. The study results revealed that male students of pre-university courses experienced more stressors in peer relations, academic and overall stress compared to female students. [31]

A study titled "Appraisal of stress and coping behaviors in college students". 258 male and female undergraduates were enrolled for the study. Stressors in academic and interpersonal domain were presented in the form of situation vignettes; both situations were perceived as a challenge, majority of the students appraised the academic stressor as being within control, and the interpersonal stressor as being beyond their control. For both stressors the coping responses reported were a combination of problem and emotion focused strategies, including support utilisation. Female preferred distress reducing strategies and social support utilization, while males reported active behavioural methods including high risk coping behaviours. [32]

The study was conducted in Tamilnadu, to examine the level of academic stress and overall adjustment among Public and Government higher secondary students and also to see relationship between the two variables (academic stress and adjustment). For that purpose 100 students of class XI were selected randomly from two different schools out of which 50 were taken from Public and the remaining 50 were taken from Government school. Sinha scale for measuring academic stress was used to see the magnitude of stress and Singh Adjustment Inventory for students was used to

examine level of adjustment among the students. Results indicated that magnitude of academic stress was significantly higher among the Public school students where as Government school students were significantly better in terms of their level of adjustment. However, inverse but significant relationships between academic stress and adjustment were found for both the group of students and for each type of school.[33]

A study was conducted in Bidar city, to know the status of stressful life events among female students of pre-university courses. The investigators selected 217 female students (PUCI-112 and PUCII-105) of PUC randomly from five colleges. Stressful life events schedule was used in the study. The collected data was subjected to frequency and percentage analysis. Results revealed that, 14 per cent, 23 per cent, 21 per cent, 7 per cent, and 8 per cent of the female students had always been influenced by family related, peer related, academic, physical health and psychological stressors, respectively. Majority of the female students had not been always experienced stress always from family relations, peer relations, academic, physical health, psychological aspects. [34]

A study conducted in the rural region of Tennessee, identifies stressful events in the lives of high school students. Data was collected from 240 high school students (144 female and 96 male) by using questionnaires. It includes 19 statements to which the participants respond concerning their belief about the stressfulness of the situation described and also participants were asked about their coping skills and with whom they discussed school-related problems. The majority of students reported the following stressors such as academic class work, concern about grades, feelings about personal appearance, pressures to succeed and achieve, test-taking, feelings about self-worth, personal respect, peer acceptance, relationships with friends, and problems at school. The majority of males found school rules, outside employment, concern about financial obligations, and involvement in co-curricular activities to be stressful. Participants identified with most likely discuss a school problem. The males and females choose same persons whom they would like to discuss school problem such as friends, parents, teachers, and the school principal. More females than males indicated that they did not cope well with stress. [35]

The study was conducted to compare academic stressors and reactions to stressors between Americans and international students using Gadzella's Life Stress Inventory (B. M. Gadzella, 1991). Five categories of academic stressors (i.e., frustrations, conflicts, pressures, changes, and self-imposed) and four categories describing reactions to these stressors (i.e., physiological, emotional, behavioral, and cognitive) were examined. The sample consisted of 392 students from 2 Midwestern universities. American students reported higher self-imposed stressors and greater behavioral reactions to stressors than international students. The study finalized that respondent's status and stressors emerged as the 2 strongest predictors of their behavioral, emotional, physiological, and cognitive reaction to stressors. [36]

A cross- sectional study was carried out to determine the prevalence of stress in pre university students. The sample consisted of 545 students. Data was collected by using Students Stress Scale (SSS-42).The results showed that majority of symptoms were mild to moderate in severity. The scores for stress were positively significant. Among this 35.5 percent of boys and 52.5 percent of girls suffered from stress. Among these 52.5 percent suffered from stress at least once a week and 25 percent seemed to be stressed always. [37]

2. Studies related to anxiety among college students.

The study done in North Texas, in adolescents and examined associations between adolescents' social anxiety (SA) and their peer relations, friendships, and social functioning. Boys *(n* = 101) and girls *(n* = 149) were selected for the study. Factor analysis of the SAS-A confirmed a three-factor structure, it includes fear of negative evaluation, social avoidance and distress in general, and social avoidance specific to new situations or unfamiliar peers. Girls reported social anxiety more than boys, and was more strongly linked to girls' social functioning than boys'. Specifically, adolescents with higher levels of social anxiety reported poorer social functioning and girls with higher levels of social anxiety reported fewer friendships, and less intimacy, companionship, and support in their close friendships. [38]

A study was conducted in Kolkata city, to understand anxiety among adolescents. It compared anxiety across gender, school type, socio-economic background and mothers' employment status. The study also examined adolescents' perceptions of quality time with their parents. A group of 460 adolescents (220 boys and 240 girls),

aged 13-17 years were recruited to participate in the study via a multi-stage sampling technique. The data were collected using a self-report semi-structured questionnaire and a standardized psychological test, the State-Trait Anxiety Inventory. Results show that anxiety was prevalent in the sample with 20.1% of boys and 17.9% of girls found to be suffering from high anxiety. More boys were anxious than girls ($p<0.01$). Results also show that a substantial proportion of the adolescents perceived they did not receive quality time from fathers (32.1%) and mothers (21.3%). A large number of them also did not feel comfortable to share their personal issues with their parents.[39]

A cross-sectional study was conducted in the boy's school, Saudi Arabia. The systematic sampling method was used to select a class in the school. The Arabic version of Anxiety and Stress Scale was used to establish school-boy levels of anxiety and stress. The results depicts that of 1723 male students recruited for the study, 59.4% had at least one of the two disorders, 40.7% had at least one and 22.6% had both disorders. Moreover, while 68% had anxiety and 54.6% had stress. Anxiety and stress were strongly, positively, and significantly correlated. [40]

A study investigated to assess the differences in statistics anxiety levels based on students' gender and age. Using the statistics, anxiety scores of 246 college students, a 2×3 between-subjects factorial multivariate analysis of covariance was performed on the six dependent variables (worth of statistics, interpretation anxiety, test and class anxiety, computational self-concept, fear of asking for help, and fear of statistics teachers) that were hypothesized to be six dimensions of statistics anxiety. Independent variables were gender and age. Previous mathematics experience (PME) was entered as a covariate. The results showed that PME was significant and accounted for 17% of the variance in the combined dependent variables. There was no significant interaction effect and no significant main effect for gender. After adjusting for the effects of the covariate, a significant main effect for age was found. Older students showed significantly higher statistics test and class anxiety than younger students, even though older students showed the most positive attitudes toward the usefulness of statistics. [41]

A descriptive study was conducted in Bangalore to assess the level of anxiety during examination in a randomly selected sample of 60 students using a structured

knowledge questionnaire. The study findings revealed that first year PU college students was in the level of severe anxiety. In that 73 percent gradually decreased in the level of anxiety, 27 percent remain the same after the examination. The study concluded that the students in first year were experiencing higher anxiety than other level of students. [42]

An experiential approach was conducted among professional college students to reduce their anxiety level. For this purpose, a random sample of thirty-one boy-students and equal number of girl students was drawn and administered SCAT (Sinha's Comprehensive Anxiety Test1995) and the scores obtained were treated as pretest scores on anxiety. Following this, they were given placement training in experiential learning settings. At the end of this training and experiential learning, they were all administered SCAT once again. These scores on anxiety were treated as posttest scores. The anxiety test scores before and after the training and experiential workshops were compared and the results showed significant reduction in anxiety level. [43]

A correlation study was conducted in Hong Kong to assess the degree of anxiety and the relationship between anxiety and academic achievement of secondary school students. A sample of 384 students was selected using convenience sampling and anxiety was measured by Manifest Anxiety Scale (MAS). The study findings revealed that the anxiety level of students were relatively high (mean=31.11) and also students with low debilitating anxiety (mean=23.63) performed better than those with high anxiety. The study concluded that the moderate anxiety (mean=27.6) had less direct relevance to academic performance. [44]

3. Studies related effectiveness of stress management programme for college students

A study was conducted in Uttarpradesh, to know the effects of a wellness-oriented stress management educational program in on the knowledge, attitude, behaviors, and stress levels of college students. A 2-week stress management program was designed and presented to the treatment group. Subjects in the treatment group and the no-treatment control group completed a matched pre-test, posttest, and 4-week delayed posttest. Results revealed a significant increase in knowledge of stress arid coping, attitude of self-efficacy in coping, and frequency of coping behaviors within the

treatment group. Gains were maintained at a 4-week follow-up. Stress levels of students in both groups did not change significantly. [45]

The study aimed to investigate the effectiveness of a college-based universal preventive stress management training program for adolescents in comparison with a no-treatment control group. The study examined the intervention effects of age and gender on perceived stress, interpersonal coping, and self-efficacy prior, immediately after as well as 3 months after the intervention. Three hundred and twenty adolescents participated in the study. Whereas both experimental conditions did not differ substantially in baseline scores, the experimental group scored higher on perceived self-efficacy compared to the control group at the follow-up assessment. Additionally, the experimental group showed less perceived stress and more adaptive coping at the post and follow-up assessment. Age-dependent intervention effects suggested that adolescents primarily benefited from the treatment. Although the effects must be replicated using a randomized design, the current findings reveal that the program does strengthen important protective factors for the psychosocial development of adolescents. [46]

A study was conducted on effectiveness of stress management programme on psychological and stress related disorders in students. A convenience sample of 46 students was randomly assigned to experimental 21 and control groups 25. Proper training was given by a skilled teacher and a 30-minute practice of breathing and relaxation exercise daily resulted in 68 percent decrease in anger, anxiety and sadness. Also the benefits such as well being, mood, attention, mental focus, and stress were maximized. [47]

An experimental study was done to reveal the effectiveness on stress management programme on physical and mental stress. Sample size was 59 consisting of 27 males and 32 females. Practice of relaxation exercises was done for 2 months, 1 hour/day for 5 days. The stress questionnaire was put and the autonomic function tests were done before and after the practice of exercises. The results obtained were analyzed using SPSS software. The stress level has reduced after practicing relaxation exercises as evident by decrease in total stress score which is highly significant. [48]

The study was conducted on adolescents studying in class 11 in Government schools of Chandigarh. A seminar followed by workshop was conducted to train them in

relaxation techniques of stress management. The Bisht Battery of Stress Scale (2002) was used to measure the level of stress. The post test was administered to the same students after twenty days of regular practice. The results showed the relaxation techniques to be highly effective in reducing the academic and social stress of adolescents. They concluded that the techniques were equally effective for the boys as well as girls. [49]

A study was conducted to assess the effect of relaxation exercises on academic performance in relation to stress. Sample consisted of 800 adolescent students; 159 high-stress students and 142 low-stress students were selected on the basis of scores obtained through Bisht Battery of Stress Scale (BBSS). Experimental group consists of 400 samples and control group consists of 400 samples were given pre test in three subjects (Mathematics, Science, and Social Studies). Experimental group was given breathing and relaxation exercises for 7 weeks. The experimental and control groups were post-tested for their performance on the above three subjects. The results show that the students, who practiced breathing and relaxation exercises performed better in academics. The study further shows that low-stress students performed better than high-stress students, meaning thereby that stress affects the students' performance. [50]

A study was conducted in Hiroshima university, examined the effects of a stress management program for university students related to their stressors, problem-solving abilities (problem-solving confidence, approach-avoidance style, and personal control), knowledge of stress, and stress responses. Participants (n = 27) were randomly assigned to either an intervention or control group. The program, including small group discussions, completion of a workbook, and follow-up interviews, was conducted for the intervention group for three weeks. Participants (n = 8 and n = 12 for the intervention and control groups, respectively) responded to two ways of questionnaires (pre and post). The results showed significant favorable intervention effects for knowledge of stress, problem-solving confidence, and stress responses on the post-tests.[51]

A study was conducted in the Middle East, to investigate the effects of stress management training program on perceived stress among PUC students. Pre-posttest experimental control group design was used to investigate the effectiveness of stress management training program. Three hundred and sixty six students (154 females and

212 males) contributed the main study. Before the main study, reliability and validity studies of Perceived Stress Scale (PSS10), Student Coping Instrument (SCOPE) were carried out with one hundred and forty one students. Among them, sixteen students were randomly assigned in the experimental and control group. The program continued for six weeks, once a week for 90 minutes. The program concluded the effective coping with stress, emotions, relaxation training, problem solving.[52]

The study was conducted in a private school in Karachi, Pakistan on 305 students with increased stress and low academic performance. Results show that students scoring low grades had a mean of 55 + 2.8 and post intervention score of 56 + 2.6. The stress reduction intervention package significantly created a difference in reducing the stress level and identifying the stressors and the reason of students receiving low grades. Qualitative analysis showed that study participants had enhanced confidence levels, positive attitudes towards learning, improved time management and decision-making skills.[53]

Summary

Review of literature has enabled the researcher to establish the need for the study, develop the conceptual framework, selection of the tool and the data collection technique. The review of literatures for the present study included studies related to stress among college students, studies related to anxiety among college students and studies related effectiveness of stress management programme for college students.

4. METHODOLOGY

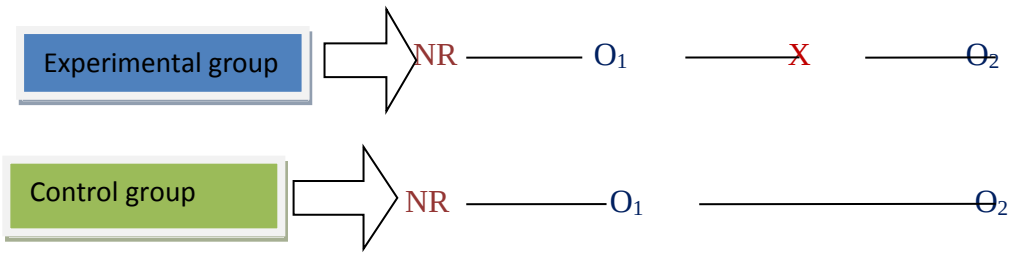
In a research study, the evaluative approach is often more fruitful than a descriptive approach. Research methodology is the framework for conducting the study. The present study was aimed at evaluating the effectiveness of Stress Management Programme (SMP) on stress and anxiety reduction among adolescents in selected Pre-University (PU) colleges, Kolar."

RESEARCH APPROACH

Research approach indicates the basic procedure for conducting the study. In the present study with quantitative data experimental research approach was adopted to evaluate the effectiveness of Stress Management Programme (SMP) on reducing stress and anxiety among adolescents in Pre- University (PU) colleges.

RESEARCH DESIGN

A research design is an investigator's overall plan for obtaining answers for the research questions (polit and Hungler, 1999).[54]For the present study, Non equivalent control group pretest posttest design was adopted to evaluate the effectiveness of stress management programme (SMP) on reducing stress and anxiety among adolescents in selected pre- university colleges, Kolar.



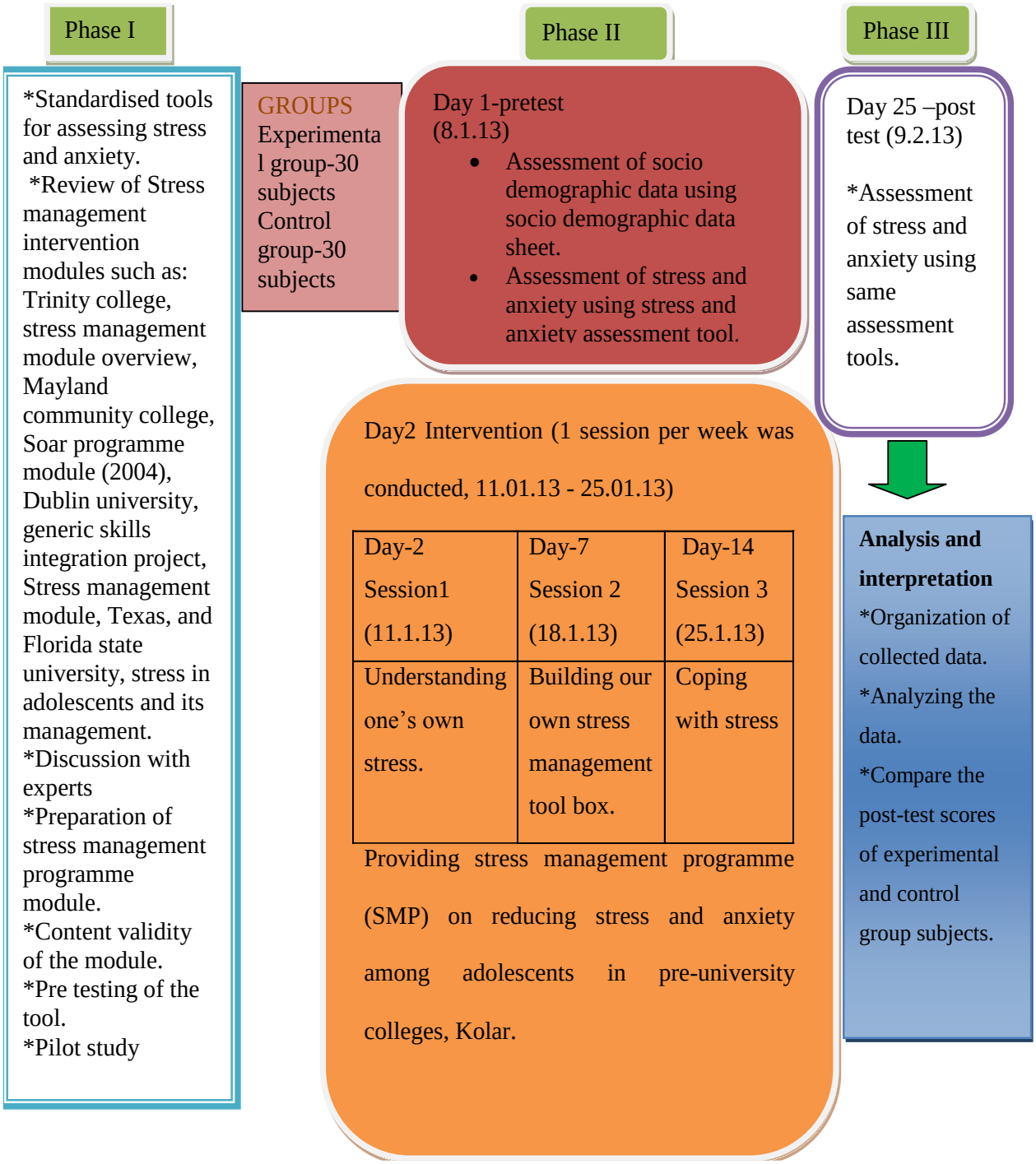


Figure 2: Schematic Representation of Research Design

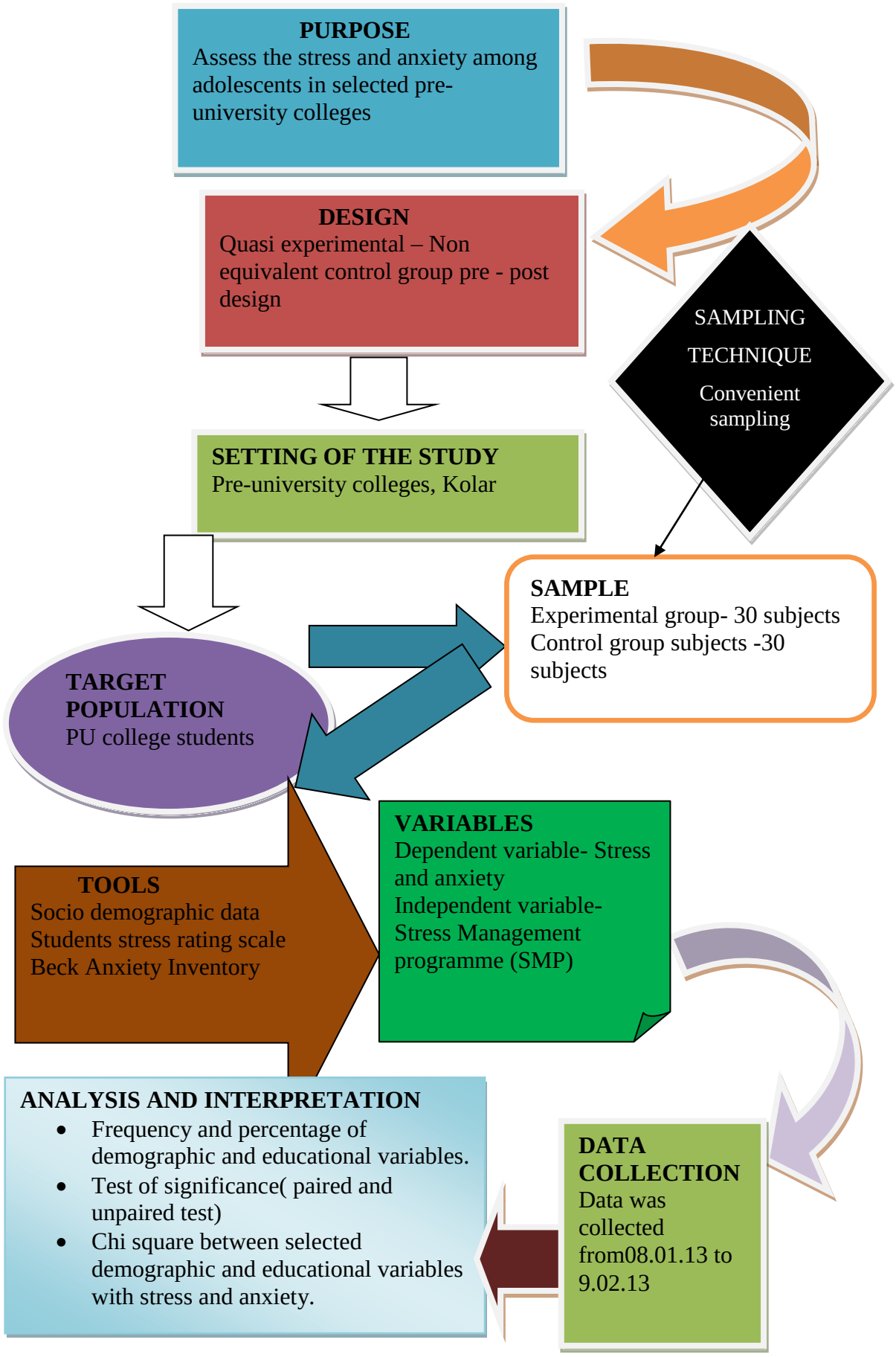


Figure 3: Schematic Representation of Research Study

VARIABLE

Variable is a quantifiable concept that change or vary. They are qualities, properties, characteristics of persons, things, and situation

Dependent Variable

The dependent variable is the outcome or response due to the effect of independent variable, which the researcher wants to predict or explain. In this study, it refers to the stress and anxiety among adolescents in selected Pre- university colleges.

Independent Variable

Independent variable is a stimulus or activity that is manipulated or varied by the researcher to create the effect on the dependent variable. In this study, stress management programme was the independent variable.

Extraneous Variable

A variable that confounds the relationship between the independent and dependent variables and that needs to be controlled in the research design.

In this study it refers to the selected variables like age, gender, type of family, area of residence, father occupation, mother occupation, percentage of marks in 10 std, number of homework hours, distance to school from house, relationship with friend, doing while having problem.

Setting of the study

The setting is where the population or the portion of it that is being studied is located and where the study is carried out. In the present, study was conducted in Mahila samajam and Vidhya jyothi Pre-university colleges, Kolar.

Population

Population is any group of individuals that have one or more characteristics in common that are of interest to the researcher.

In the present study, population comprises of Pre- university (PU) college students, who were from Mahila samajam and Vidhya jyothi colleges at the time of data collection.

Sample

Sample is the proportion or the subject of the population. It is a subset of the population that is selected for a particular study and the members of samples are subjects. In the present study, the sample comprises of selected Pre- university (PU) college students.

Sample Size

For the present study, sample size comprised of 60 PU college students (30 subjects in experimental and 30 in control group respectively).

Sampling Technique

Sampling technique is the process of selecting a portion of the population to represent the entire population. In the present study convenient sampling technique was used and based on the convenience, students were assigned to experimental and control group subjects.

CRITERIA FOR SELECTION OF SAMPLES

Inclusion Criteria

- Students between 16-19 years of age.
- Students, who are able to read, write and understand English.
- Students who are in science group.
- Students who are willing to participate.

Exclusion criteria

- Students who are married.
- Students who are suffering with chronic medical illness.
- Students who are suffering with any psychiatric disorder.
- Students who are absent during data collection.

DATA COLLECTION TOOL

Data collection tools are the procedures or instruments used by the researcher to observe or measure the key variables in the research problem.

Based on the objectives of the study following tools were used to collected data:

Tool 1: Socio demographic data

Tool 2: Students stress rating scale (SSRS) 2008

Tool 3: Beck Anxiety Inventory (BAI) 1993

Tool 1: Socio demographic data – It includes Age, Gender, type of family, area of residence, father occupation, mother occupation, Percentage of marks in 10 std, number of homework hours, distance to school from house, relationship with friend, doing while having problem.

Tool 2: STUDENT'S STRESS RATING SCALE (SSRS)

Students' Stress Rating Scale (SSRS), 2008 is a seven-point scale with 35 items. The students were requested to give responses based on the frequency of experiencing a particular stress against seven options given namely, 1) Everyday 2) Once in 2/3 days 3) Once in a week 4) Once in fortnight 5) Once in a month 6) Rarely and 7)Never. The items are given under five factors: Physiological, Emotional, Social, Examination and Behavioral Stress. These factors comprised 11, 7, 7, 6 and 4 items respectively.

The scoring ranges from 0-210, in which it is categorized as follows.

0 - 105 - No stress

106- 140 - Low stress

141- 175 - Moderate stress

176- 210 - Severe stress

The Cronbach alpha coefficient calculated was 0.87. The reliability coefficients, found to be 0.93. Thus from these two coefficients it can be inferred that the tool was highly reliable and valid.(Annexure-11)

Tool 3: **Beck Anxiety Inventory (BAI)**

Beck Anxiety Inventory was developed by Aaron T. Beck in 1993. It was a 4 point likert scale designed to assess the symptoms of anxiety. Each question has a set of four possible answer choices, ranging in intensity. When the key is scored the value ranges from 0 to 3 for each answer and then the total score is compared with the standardized category. The minimum score is 0 and the maximum score is 63.

The standard category cut off scores are as follows.

0-7 = Minimal Anxiety

8-15 = Mild Anxiety.

16-25 = Moderate Anxiety

26-63 = Severe Anxiety.

The internal consistency (Cronbach's alpha) ranged from .92 to .94. The BAI is significantly correlated with Gadzella's stress inventory and the tool was highly reliable. (Annexure-11).

STRESSMANAGEMENTPROGRAMME (SMP) on Pre-University (PU) college students

The Stress Management Programme (SMP) intervention module on PU college students was developed as follows:

- An extensive review of literature was done through the use of text books, journals and internet to obtain information regarding stress and anxiety, various ways of finding stress, solving stress, and sorting coping strategies to deal with stress and anxiety.

- Discussion with nursing experts, psychiatrists, psychologists, teachers, personal experience and discussion with colleagues, helps in the development of this programme.

- The preparation of content of modified Stress Management Programme (SMP) involved preparation, editing, re-editing and modification to achieve its present state from Trinity College Stress Management Module Overview, Mayland Community College, Soar Programme Module (2004), Dublin University, generic skills integration project, stress management module, Texas, and Florida state university, stress in adolescents and its management. The initially prepared content consisted of study habits, memory enhancement, problem solving techniques, time planning management. The final version consisted of three sessions, each session last for fourty five minutes. Session details are as follows;

Content of Stress Management Programme (SMP)

Session	Content
SESSION I – Understanding one's own stress	1. Rewriting your mental script 2. How do I respond to stress? 3. Stress test 4. Take action 5. Stress prescription 6. Stress diary 7. Identifying life stressors 8. Stress questionnaire
SESSION 2-Building your own stress management tool box	1. Breathing and visualization exercises. 2. Planning balanced life style. 3. Progressive muscle relaxation exercises. 4. Creating affirmations.
SESSION-3 Coping with stress	1. Coping strategies 2. Sorting exercises 3. Social timetable and to do list

Validation of Stress Management Programme (SMP)

Stress management programme (SMP) was validated by using criteria checklist. It includes very relevant, relevant, needs modification, not relevant and remarks. The prepared content along with problem statement, objectives, assumptions, hypotheses, operational definitions and criteria check list were submitted to 5 experts for the content validity. The content validity of the stress management programme (SMP) was ascertained in consultation with 01 psychiatrist, 2 psychologists, and 2 nursing experts.

The experts were given their opinion regarding relevance, appropriateness and agreement in each session of intervention module has been modified. Suggestions and recommendations given by the experts were accepted.

METHODS OF DATA COLLECTION:

The data was collected from 08/01/13 to 09/02/13

PHASE I:

1. **The formal permission was obtained from authorities of Pre- university colleges, Kolar.**

- To conduct the research study written permission was obtained from the college authorities prior to data collection.

2. **Screening of subjects based on sampling criteria.**

- Subjects were selected based on inclusion criteria using convenient sampling technique

3. **Informed consent was obtained from all study subjects before proceeding with the study and was provided information about the kind of participation required.**

- Prior to the data collection the researcher made herself clear with the subjects and explained the purpose of the study to them.
- The researcher requested the participants for their full cooperation and assured them the confidentiality of their response.
- Informed consent was taken from the subjects.

4. **Eligible subject were assessed by the following**

    - **S**ocio-demographic data
    - Students stress rating scale (SSRS)
    - Beck anxiety inventory (BAI)

By using above tools pre-test was conducted to 60 PU college students (30 experimental and 30 control group subjects). The average time taken for pre-test was 45 minutes.

PHASE-II

Experimental group subjects were undergone Stress management programme. It includes 3 group sessions.

Session I: Understanding one's own stress

Session 1- This mainly focuses on how to identify stressors, what are the signs and symptoms of stress and some stress relieving exercises. This session includes the following exercises. They are:

1.1 Rewriting your mental script

1.2 How do I respond to stress?

1.3 Stress test

1.4 Take action

1.5 Stress prescription

1.6 Stress diary

1.7 Identifying life stressors

1.8 Stress questionnaire

Session II: Building your own stress management tool box

Session 2- This mainly emphasizes stress management strategies. These are as follows

2.1 Breathing and visualization exercises.

2.2 Planning balanced life style.

2. 3 Progressive muscle relaxation exercises.

2.4 Creating affirmations.

Session III- Coping with stress

Here participants will understand various adaptive coping strategies to implement in real life situations. These are as follows.

3.1 Coping strategies

3.2 Sorting exercises

3.3 Social timetable and to do list (Annexure-12)

PHASE-III

Post assessment was done for both experimental and control group after 15 days of stress management programme (SMP) by using the same tools.

ETHICAL CONSIDERATIONS

- Permission was obtained from the institutional ethical committee to carry out the study. (Annexure-1)
- The subjects were explained about the purpose and nature of the study
- Written informed consent was obtained from the subjects before proceeding the study

PILOT STUDY

Pilot study is a small scale version or trial run, done in preparation for the major study. It is designed to acquaint the researcher with the problems to be encountered in preparation for the major study. The function of pilot study is to obtain information for assessing its feasibility in the present setting. The same subjects will not be considered for the main study. Analysis was done by using descriptive and inferential statistics.

The pilot study was conducted from 11-01-13 to 02-02-13 in Suguna and Samaikya PU colleges, Kolar. The tool was administered to 10 PU college students (experimental-5 and control-5). Pre-test was conducted by administering the tools for both the groups. For experimental group after the pretest, three sessions was

conducted with an interval of 1 week each. After 15 days of intervention posttest was conducted for both the groups. The purpose of the pilot study was to assess the feasibility of the study in the present setting. The students who participated in the pilot study were not considered for the main study. The data analyzed using descriptive and inferential statistics.

PLAN FOR DATA ANALYSIS

The data obtained was planned to analyze in terms of objectives of the study using descriptive and inferential statistics. It involves the use of statistical procedures to give organization and meaning to data.

Descriptive statistics (frequency, percentage, mean, median, standard deviation) and inferential statistics (paired and unpaired‘t’ test and the chi-square test) was used for analysis and interpretation of data.

ORGANIZATION OF DATA

Based on the objectives of the study the data collected were organized, analyzed, tabulated and presented under the following sections:

Section 1: Description of demographic variables, educational variables, stress and anxiety scores of the subjects.

Section-2: Pre- Intervention comparison of stress and anxiety scores between experimental and control group subjects.

Section 3: Comparison of post test stress and anxiety scores between experimental and control group subjects.

Section 4: Within the group comparison of stress and anxiety scores.

Section 5: Association between pretest stress and anxiety scores with selected demographic variables.

Section 6: Association between pretest stress and anxiety scores with selected educational variables.

SUMMARY

Research methodology gives a bird's-eye view of the entire process of tackling a research problem in a scientific and systematic manner. The chapter presented the research approach, design, population, sample, sampling techniques, development of Stress Management Programme (SMP), methods of data collection and plan for data analysis. This chapter is very much important in the development of analysis and interpretation which follows.

5. RESULTS

This chapter deals with the description of the sample characteristics, analysis and interpretation of the data collected from 60 pre – university (PU) college students (30 experimental and 30 control group subjects). The data were processed and analysed according to the objectives and hypotheses formulated for the purpose of the study.

Interpreting the findings is the most challenging and least structural step in the research findings which requires the investigator to be creative. In order to interpret the data in an intelligible form the data were analysed based on the objectives and hypotheses of the study.

OBJECTIVES

1. To assess the stress and anxiety among adolescents in experimental and control group.
2. To develop and validate Stress Management Programme (SMP).
3. To evaluate the effectiveness of SMP (Stress Management Programme) on stress and anxiety reduction by comparing the posttest scores between experimental and control group subjects.
4. To compare pre and posttest scores among adolescents in the experimental and control group subjects.
5. To find out the association between pretest stress and anxiety scores with selected demographic and educational variables.

ORGANISATION OF FINDINGS

The data collected were organized under the following sections:

Section 1: Description of demographic variables, educational variables, stress and anxiety scores of the subjects.

Section 2: Pre intervention comparison of stress and anxiety scores between experimental and control group subjects.

Section 3: Comparison of posttest stress and anxiety scores between experimental and control group subjects.

Section 4: Within the group comparison of stress and anxiety scores.

Section 5: Association between pretest stress and anxiety scores with selected demographic variables.

Section 6: Association between pretest stress and anxiety scores with selected educational variables.

SECTION–I: DESCRIPTION OF DEMOGRAPHIC VARIABLES, EDUCATIONAL VARIABLES, STRESS AND ANXIETY SCORES OF THE SUBJECTS

Table-1: Group wise distribution of subjects based on their demographic variables

N=60

Sl. No	Demographic variables	Total N=60		Experimental group n_1=30		Control group n_2=30	
		F	%	f	%	f	%
1.	**Age in years**						
	a) 14-16yrs	30	50	24	80	6	20
	b) 17-19yrs	30	50	6	20	24	80
2.	**Gender**						
	a) Boys	33	55	18	60	15	50
	b) Girls	27	45	12	40	15	50
3.	**Type of family**						
	a) Nuclear	39	65	21	70	18	60
	b) joint	21	35	9	30	12	40
4.	**Area of residence**						
	a) Rural	9	15	3	10	6	20
	b) Urban	51	85	27	90	24	80
5.	**Father occupation**						
	a) Employed	42	70	24	80	18	60
	b) Business	18	30	6	20	12	40
6.	**Mother Occupation**						
	a) Employed	45	75	24	80	21	70
	b) Housewife	15	25	6	20	9	30

DEMOGRAPHIC VARIABLES OF PRE-UNIVERSITY (PU) COLLEGE STUDENTS

This section deals with data pertaining to demographic variables of Pre- University (PU) college students, the figures are presented from 4-9

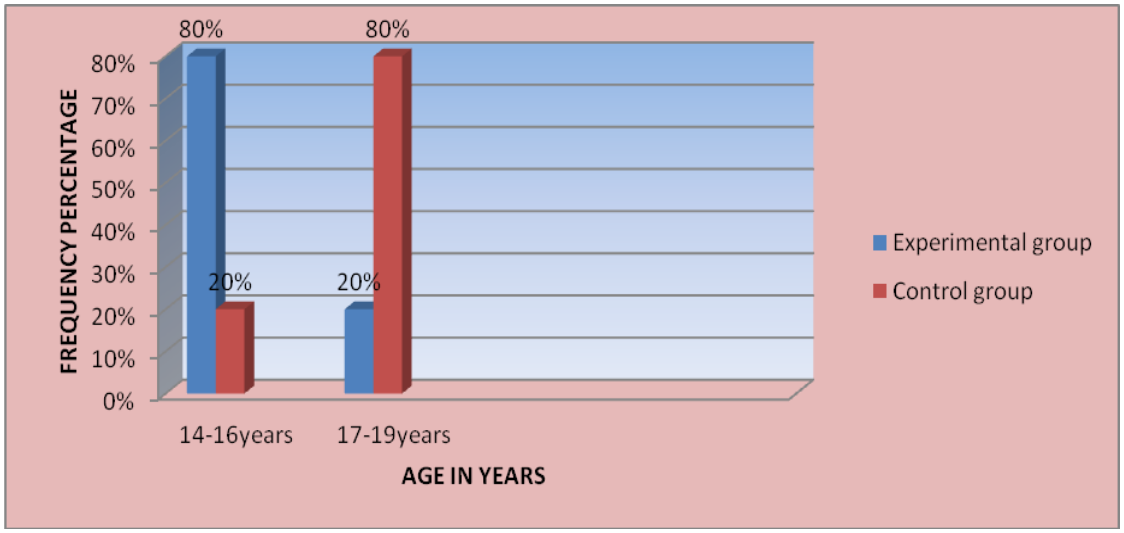


Figure 4: Bar diagram showing distribution of subjects based on their age

Table 1 and Figure 4 shows that majority 24 (80%) of the subjects were in the age group between 14-16 years in the experimental group and 6(20%) subjects in the control group. Whereas 24 subjects (80%) in experimental group and 6 subjects (20%) in the control group were in the age group between 17-19 years.

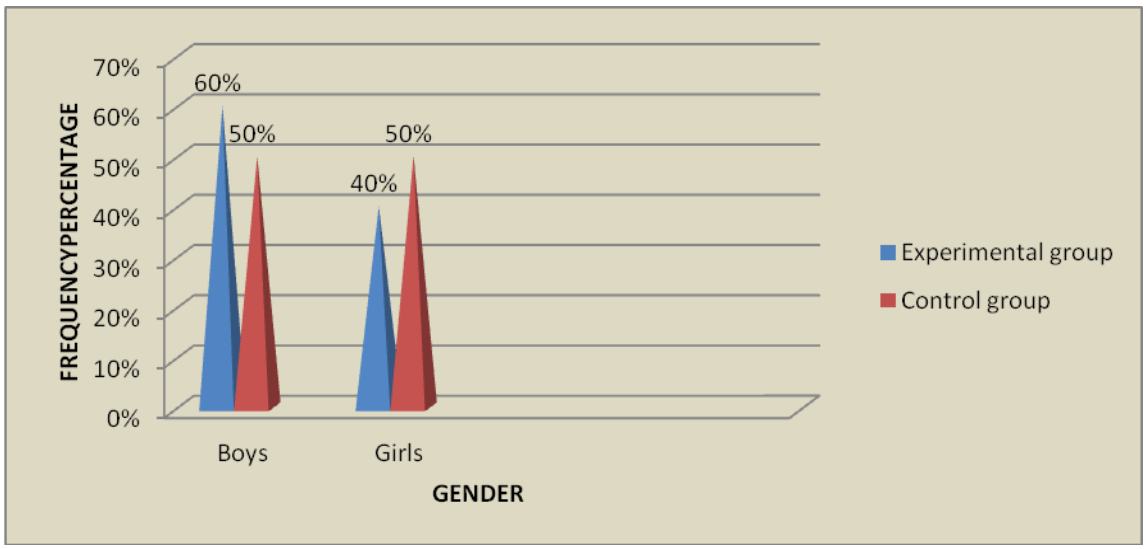


Figure 5: Pyramidal diagram showing distribution of subjects based on their gender

Table 1 and figure 5 depicts that 18(60%) subjects were boys and 12(40%) subjects were girls in the experimental group. Whereas in the control group 15(50%) subjects were boys and 15(50%) subjects were girls.

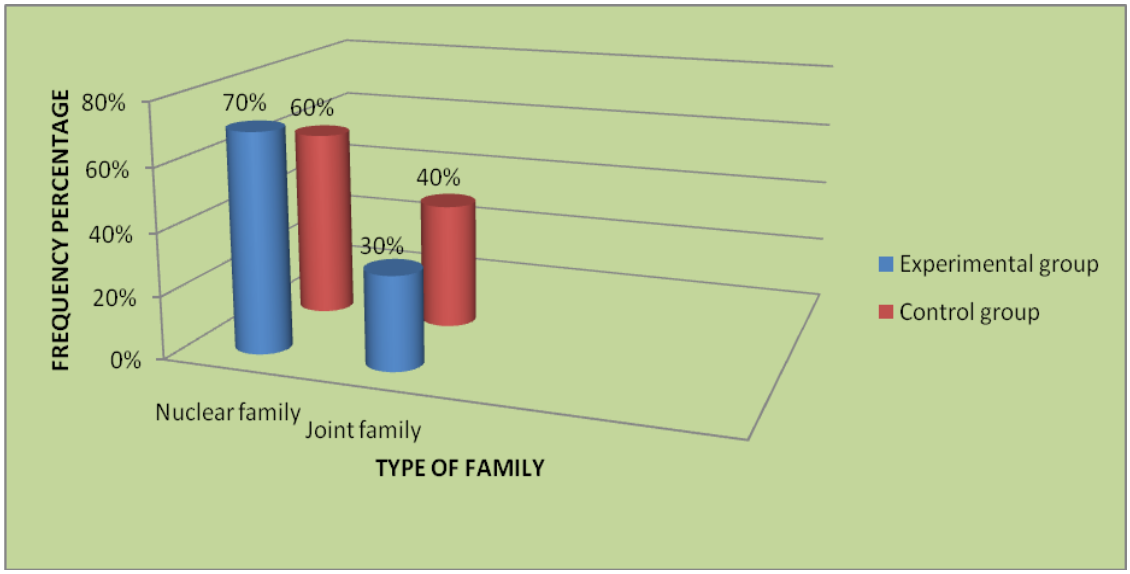


Figure 6: Cylinder diagram showing distribution of subjects based on their type of family

Table 1 and figure 6 shows that 21(70%) of the subjects were from nuclear family and 9(30%) of the subjects in the experimental group were from joint family. Whereas in the control group 18 subjects (60%) were from nuclear family and 12 subjects (40%) were from joint family.

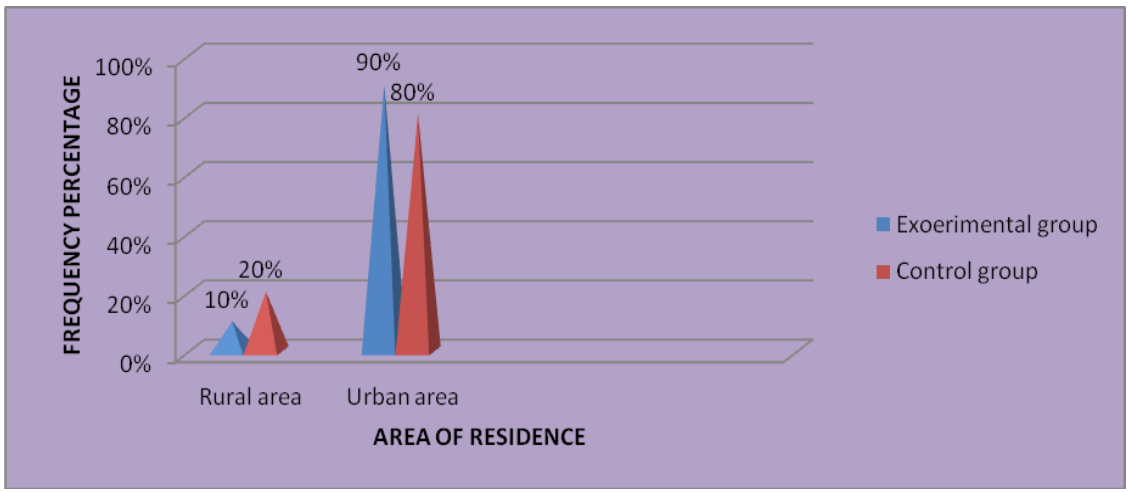


Figure 7: Pyramidal diagram showing distribution of subjects based on their area of residence

Table 1 and figure 7 depicts that the majority, 27(90%) of the subjects in experimental group and 24(80%) of the subjects in the control group were residing in urban area. Whereas 3(10%) subjects in experimental group and 6(20%) subjects in the control group were residing in rural area.

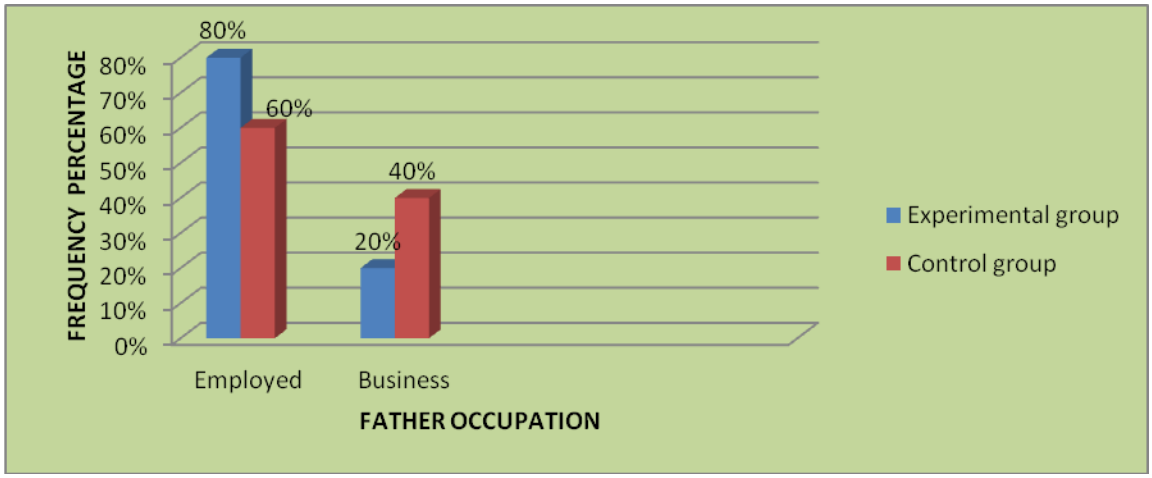


Figure 8: Bar diagram showing distribution of subjects based on their father occupation

Table 1 and figure 8 shows that the majority 24 (80%), of the subjects in the experimental group and 18 (60%) of the subjects father's in the control group were employed. Whereas 6(20%) subjects in the experimental group and 12(40%), subjects father's in the control group were doing business.

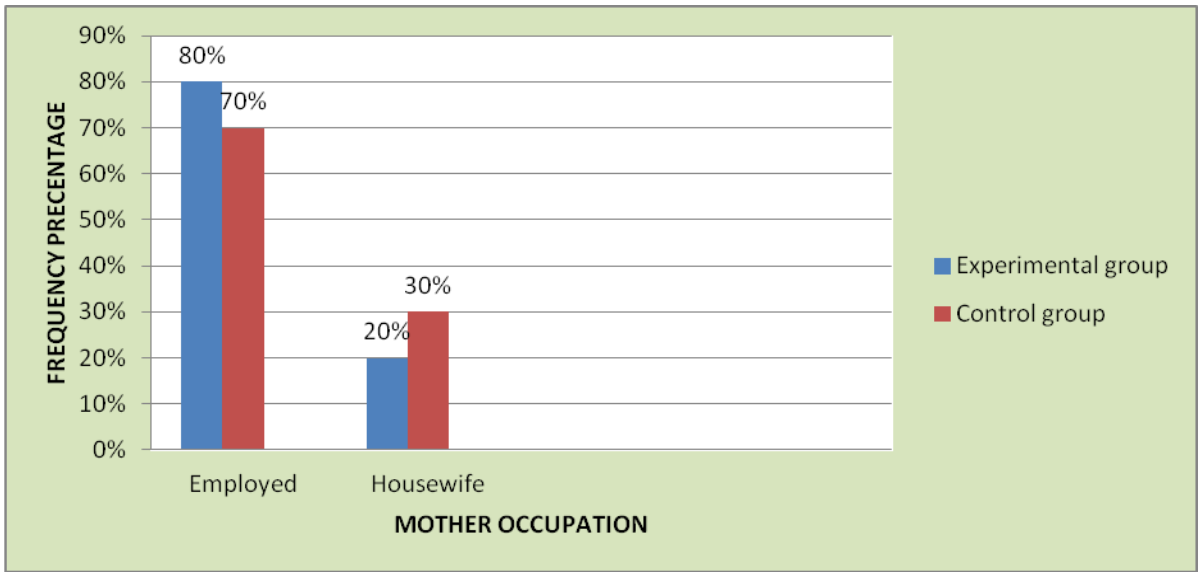


Figure 9: Bar diagram showing distribution of subjects based on their mother's occupation

Table 1 and figure 9 depicts that about 80% in experimental group and 70% in the control group subjects mother's were employed. Whereas 20% in the experimental group and 30% in the control group subjects mothers were housewives.

Table-2: Group wise distribution of subjects based on their educational variables

N=60

Sl. No	Education variables	Total N=60		Experimental group n_1=30		Control group n_2=30	
		F	%	f	%	f	%
1.	**Percentage of marks in tenth standard**	39	65	30	100	9	30
	a. 70% and above	12	20	0	0	12	40
	b. 60-70%	9	15	0	0	9	30
	c. 50-60%						
2.	**Number of homework hours**						
	a. More than two hours	27	45	18	60	9	30
	b. 1-2 hours	30	50	9	30	21	70
	c. Lesser than one hour	3	5	3	10	0	0
3.	**Distance to school from house**						
	a. More than 15kms	27	45	9	30	18	60
	b. 10-15kms	3	5	0	0	3	10
	c. 5-10kms	15	25	6	20	9	30
	d. Below 5kms	15	25	15	50	0	0
4.	**Relationship with friends**	27	45	12	40	15	50
	a. Very satisfied	27	45	12	40	15	50
	b. Satisfied	6	10	6	20	0	0
	c. Not satisfied						
5.	**Have close friends**						
	a. Yes	30	50	24	80	6	20
	b. No	30	50	6	20	24	80
6.	**Doing while having problem**						
	a. Talking with parents	27	45	18	60	9	30
	b. Talking with friends	33	55	12	40	21	70

EDUCATIONAL VARIABLES OF PRE-UNIVERSITY (PU) COLLEGE STUDENTS

This section deals with data pertaining to educational variables of Pre- University (PU) college students, the figures are presented from 10-15

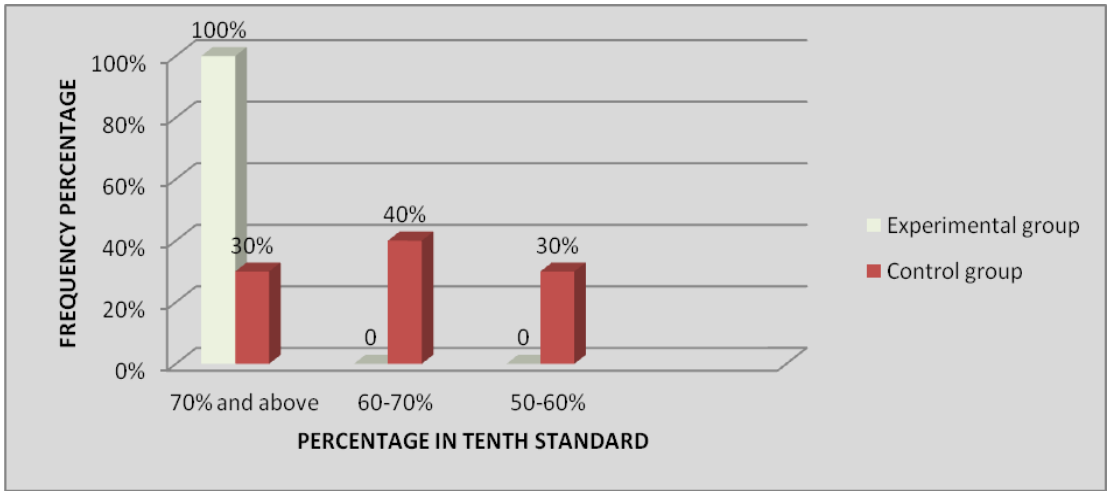


Figure 10: Bar diagram showing distribution of subjects based on their percentage of marks in tenth standard

Table 2 and figure 10 shows that all (100%) subjects from experimental group and 9(30%) of the subjects from control group pursued above 70% marks. Whereas in the control group 40% of the subjects scored between 60-70% marks and 30% of the subjects scored between 50-60% marks in tenth standard.

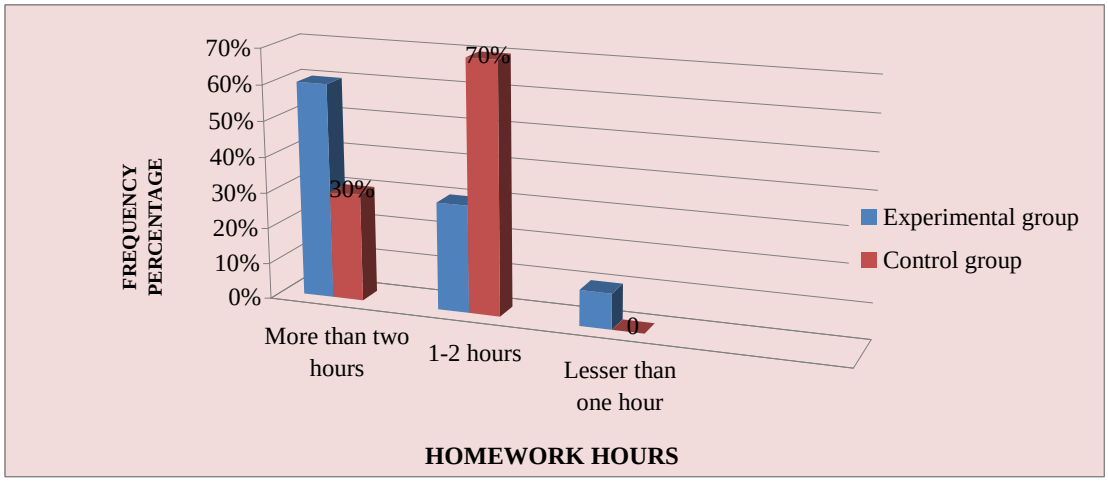


Figure 11: Bar diagram showing distribution of subjects based on their homework hours

Table 2 and figure 11 depicts that 60% of the subjects in the experimental group and 30% of the subjects in the control group had taken more than two hours to do their homework. However 70% of the subjects in the control group and 30% of the subjects in the experimental group had taken one to two hours to do their homework. In the experimental group only 10% of subjects had taken less than an hour to do their homework.

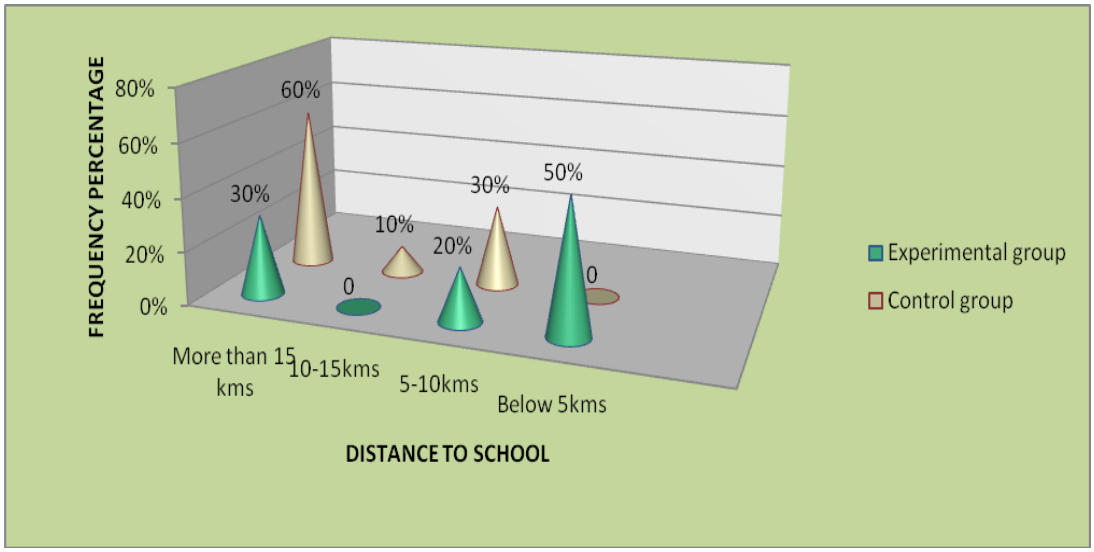


Figure 12: Cone diagram showing distribution of subjects based on their distance to school from house

Table 2 and figure 12 shows that out of 60 subjects, 30% of the subjects in the experimental group and 60% of the subjects in the control group had distance more than 15 kms. About 10% of the subjects in the control group had distance between 10-15 kms. Whereas, 20% of the subjects in the experimental group and 30% of the subjects in the control group had distance between 5-10kms. Only 50% of the subjects in the experimental group had distance less than 5kms to school from house.

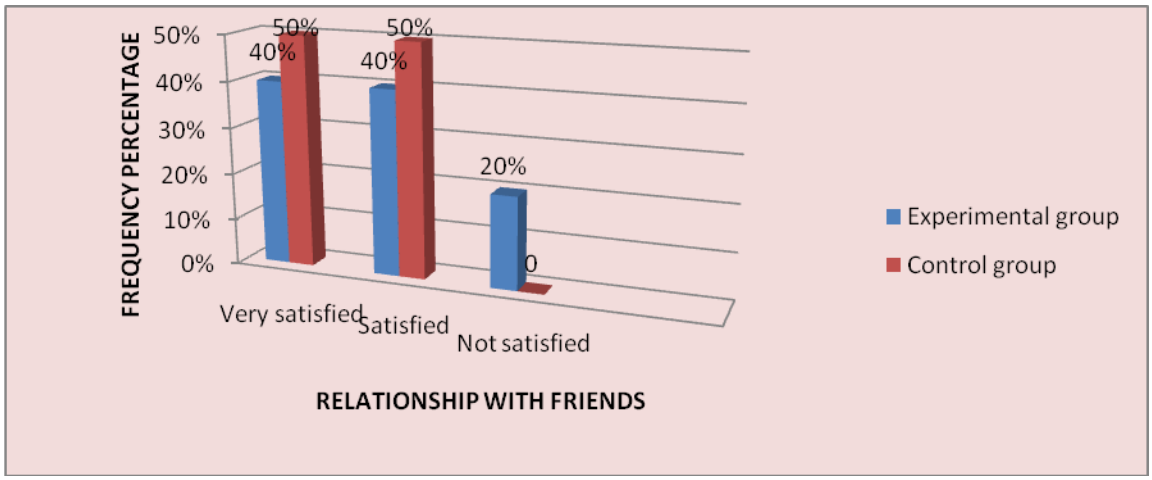


Figure 13: Bar diagram showing distribution of subjects based on their relationship with friends

Table 2 and figure 13 depicts that 80% of the subjects (40% each) were very satisfied and satisfied with their relationship with friends in the experimental group. Whereas in the control group all subjects (50% each) were very satisfied and satisfied in their relationship with friends. Only 20% of subjects were not satisfied in their relationship with friends in the experimental group.

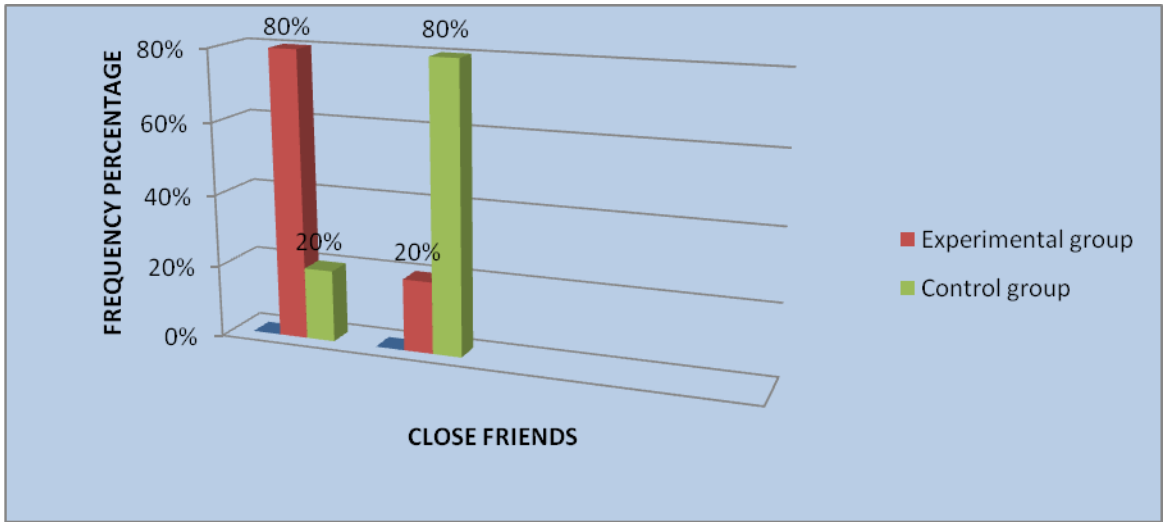


Figure 14: Bar diagram showing distribution of subjects based on their close friends

Table 2 and figure 14 shows that majority 24(80%) of the subjects in the experimental group and 6(20%) of the subjects in the control group had close friends. Whereas 6 of the subjects (20%) in the experimental group and 24 of the subjects (80%) in the control group had no close friends.

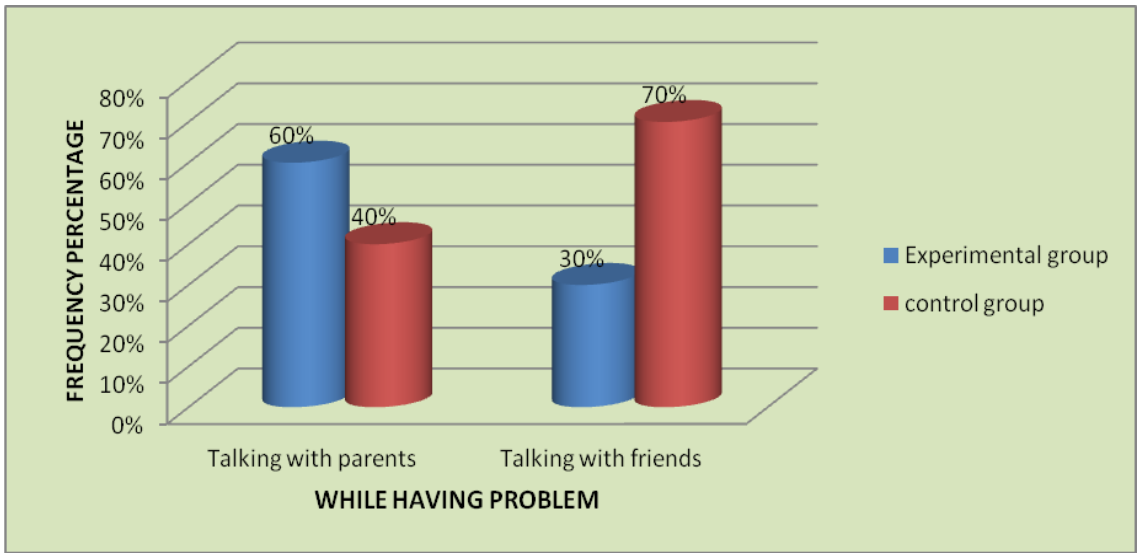


Figure 15: Cylinder diagram showing distribution of subjects based on their problems.

Table 2 and figure 15 depicts that 60% of the subjects in the experimental group and 30% of the subjects in the control group talk with their parents while having problems. Whereas 40% of the subjects in the experimental group and 70% of the subjects in the control group talk with their friends while having problems.

Table 3: Group wise distribution of subjects based on their level of pretest stress in experimental and control group

N=60

Sl. no	LEVEL OF STRESS	Total N=60		Experimental group (n=30)		Control group (n=30)	
		F	%	F	%	f	%
1.	No stress (0-105)	14	23.33	5	16.66	9	30.00
2.	Low stress (106-140)	27	45	19	63.33	8	26.66
3.	Moderate stress (141-175)	60	100	6	20	10	33.33
4.	Severe stress (176-210)	3	5	0	0	3	10

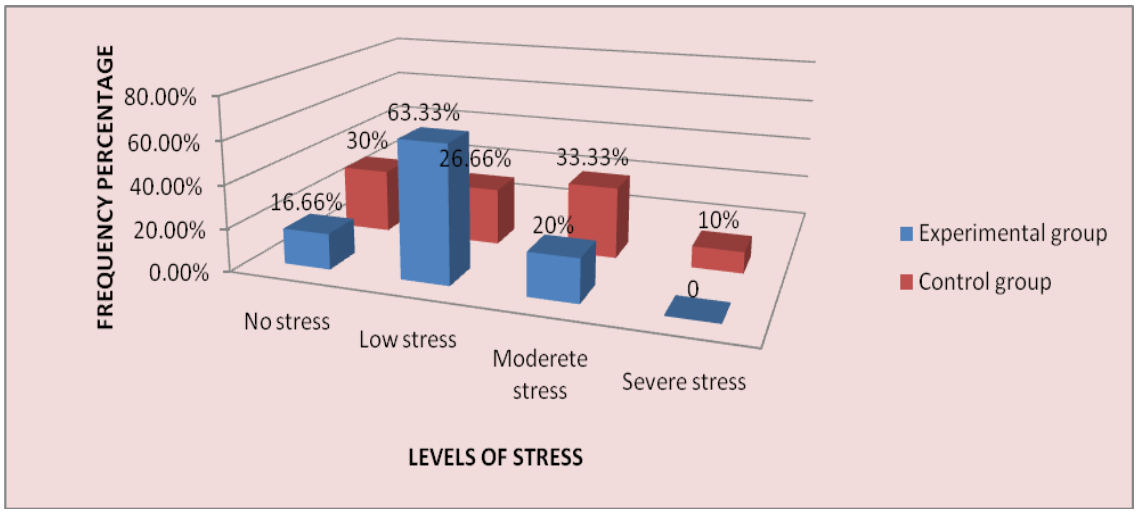


Figure 16: Bar diagram showing the distribution of subjects based on their pretest level of stress scores in experimental and control group

Table 3 and figure 16 depicts the pretest level of stress in the experimental and control group subjects. It was found that majority, 19(63.33%) of the subjects from experimental group had low stress, only few, 6(20%) subjects had moderate stress and 5(16.66%) subjects had no stress. Whereas in the control group 10(33.33%) of the subjects had moderate stress, 8(26.66%) subjects had low stress and 3(10%) subjects had severe stress. Only few 3(10%) subjects had no stress.

Table 4: Group wise distribution of subjects based on their level of pretest anxiety in experimental and control group

N=60

Sl. no	LEVEL OF ANXIETY	Total N=60		Experimental group (n=30)		Control group (n=30)	
		F	%	f	%	f	%
1.	Minimal level of anxiety(0-7)	9	15	3	10	6	20
2.	Mild anxiety(8-15)	11	18.3	3	10	8	26.66
3.	Moderate anxiety(16-25)	27	45	15	50	12	40
4.	Severe anxiety(26-63)	13	21.6	9	30	4	13.33

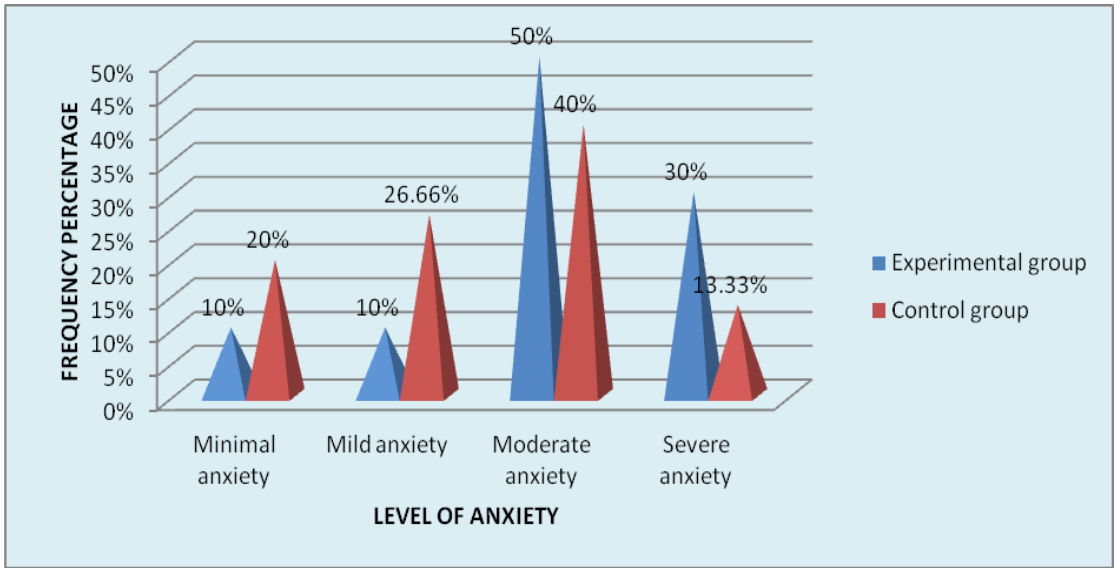


Figure 17: Pyramidal diagram showing the distribution of subjects based on their pretest level of anxiety in experimental and control group

Table 4 and figure 17 shows the pretest level of anxiety in experimental and control group subjects. It was found that majority, 50% and 40% of the subjects from experimental and control group had moderate anxiety. However 30% of subjects in the experimental and 13.33% in the control group had severe anxiety. It was found that 26.66% and 20% of the subjects in the control group had mild and minimal level of anxiety. Whereas in the experimental group 10% of the subjects had mild anxiety and 10% of the subjects had minimal level of anxiety.

Table 5: Group wise distribution of subjects based on their level of posttest stress in experimental and control group

N=60

Sl.no	LEVEL OF STRESS	Total N=60		Experimental group (n=30)		Control group (n=30)	
		F	%	f	%	f	%
1.	No stress (0-105)	19	31	12	40	7	23
2.	Low stress(106-140)	25	41.6	14	46.2	11	36
3.	Moderate stress(141-175)	12	20	4	13.3	8	26
4.	Severe stress(176-210)	4	6.6	0	0	4	13

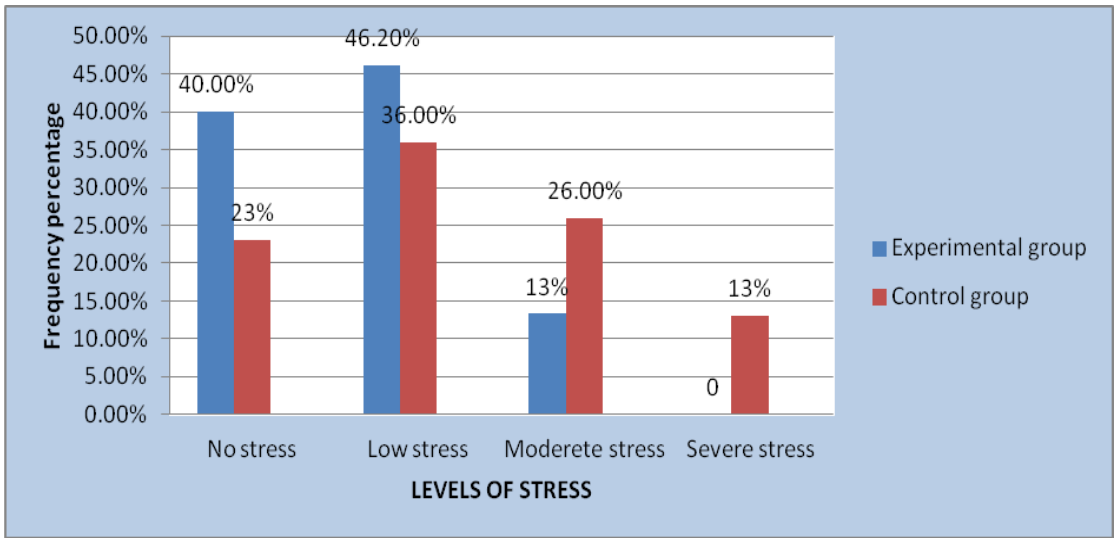


Figure 18: Bar diagram showing the distribution of subjects based on their posttest levels of stress in experimental and control group

Table 5 and figure 18 depicts the posttest level of stress in experimental and control group subjects.It was found that majority, 14 (46.2%) of the subjects from experimental group had low stress, only few 4(13.3%) subjects had moderate stress and 12(40%) had no stress. Whereas in the control group 11(36%)of the subjects had low stress, 8(26%) subjects had moderate stress and 4(13%) of the subjects had severe stress. Only few 7(23%) had no stress.

Table 6: Group wise distribution of subjects based on their level of posttest anxiety in experimental and control group

N=60

Sl. no	LEVEL OF ANXIETY	Total N= 60		Experimental group n=30		Control group n=30	
		F	%	f	%	f	%
1.	Minimal level of anxiety (0-7)	11	18.3	4	13	7	23
2.	Mild level of anxiety (8-15)	16	26.6	13	43	3	10
3.	Moderate level of anxiety (16-25)	26	43.3	10	33	16	53
4.	Severe level of anxiety (26-63)	7	11.6	3	10	4	13

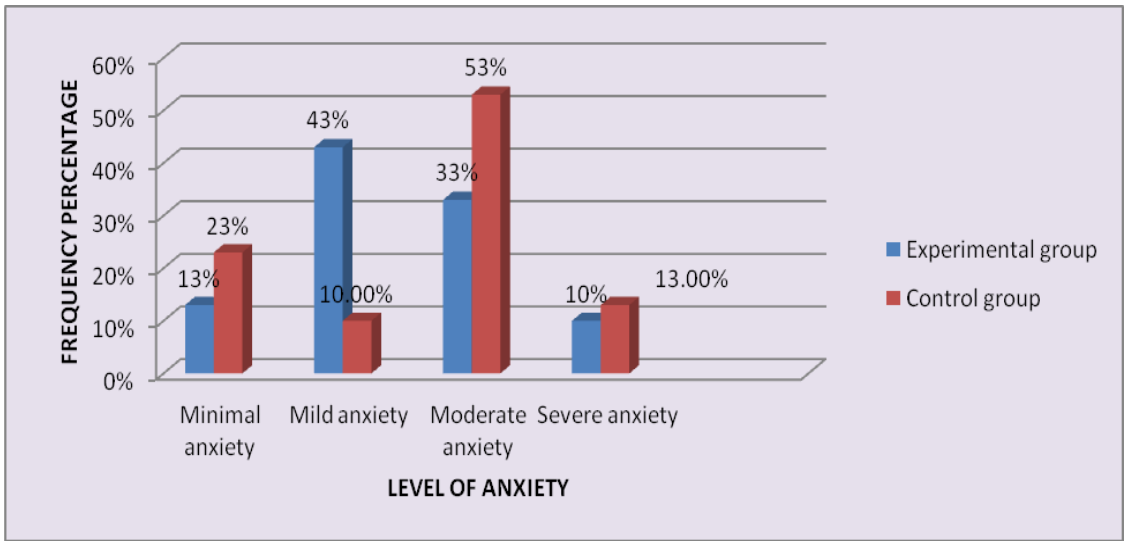


Figure 19: Bar diagram showing the distribution of subjects based on their posttest level of anxiety in experimental and control group

Table 6 and figure 19 depicts the posttest level of anxiety in the experimental and control group subjects. It was found that majority 43% and 53% of the subjects from experimental and control group had mild and moderate anxiety. However 10% of the subjects in the experimental and 33% in the control group had mild and moderate anxiety. Whereas, 10% of the subjects in the experimental group and 13% of the subjects in the control group had severe anxiety. Only few 13% and 23% of the subjects had minimal level of anxiety in both experimental and control group respectively.

SECTION 2: PRE INTERVENTION COMPARISON OF STRESS AND ANXIETY SCORES BETWEEN EXPERIMENTAL AND CONTROL GROUP SUBJECTS.

Table 7: Comparison of Pretest stress and anxiety scores between experimental and control group subjects

N=60

Sl. no	Variables	Experimental group(n=30)		Control group (n=30)		't' value	P value
		Mean	SD	Mean	SD		
1.	Stress	117.23	31.45	131.53	36.95	1.60	0.11 NS
2.	Anxiety	20.96	10.07	16.96	7.82	1.71	0.09 NS

df=58, NS- non significant at 0.05 level

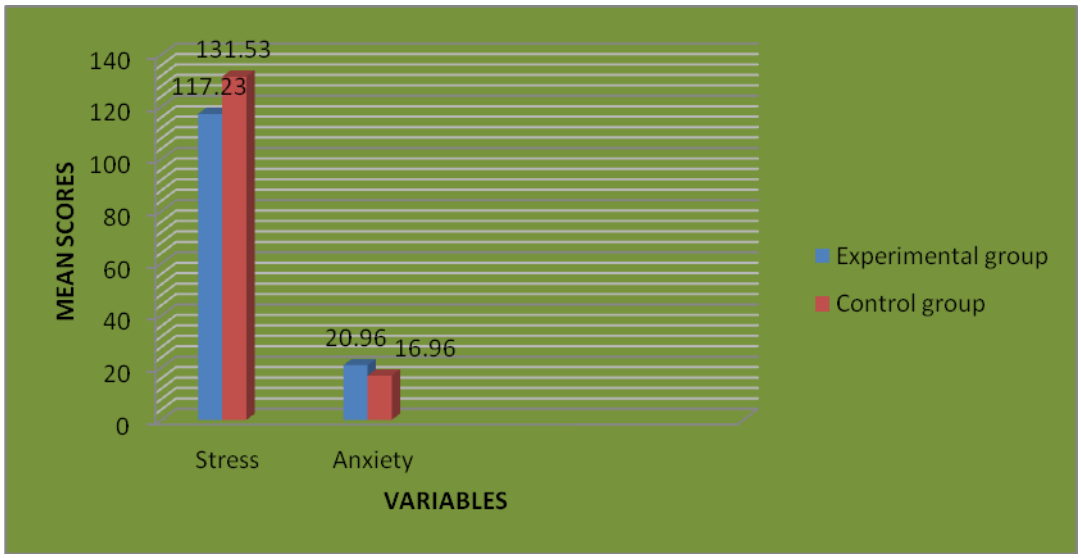


Figure 20: Bar diagram showing pre-intervention mean scores of subjects based on their stress and anxiety scores between experimental and control group

Table 7 and figure 20 reveals that there was no statistical significant difference between pretest mean stress and anxiety scores of experimental and control group subjects.

The pretest mean stress scores of experimental group was 117.23 with SD of 31.45 and control group was 131.53 with SD of 36.95, and't' value was 1.60 which was less

than the table value at 0.05 level indicating that there was no statistical significant difference between mean pretest stress scores of experimental and control group subjects.

The mean pretest anxiety scores of experimental group was 20.96 with SD of 10.07 and control group was 16.96 with SD of 7.82, and ‘t’ value was 1.71 which was less than the table value at 0.05 level indicating that there was no statistical significant difference between mean pretest anxiety scores of experimental and control group subjects.

Hence, showing that both the groups are equal in their mean stress and anxiety scores at pretest level.

SECTION 3: COMPARISON OF POST TEST STRESS AND ANXIETY SCORES BETWEEN EXPERIMENTAL AND CONTROL GROUP SUBJECTS.

Table 8: Comparison of Posttest stress and anxiety scores between experimental and control group subjects

N=60

Sl. no	Variables	Experimental group(n=30)		Control group (n=30)		t value	P value
		Mean	SD	Mean	SD		
1.	Stress	111.76	30.53	130.23	35.51	2.16	0.03*
2.	Anxiety	15.4	8.80	17.86	7.36	1.17	0.24NS

df=58, * Significant at 0.05 level, NS- non significant at 0.05 level

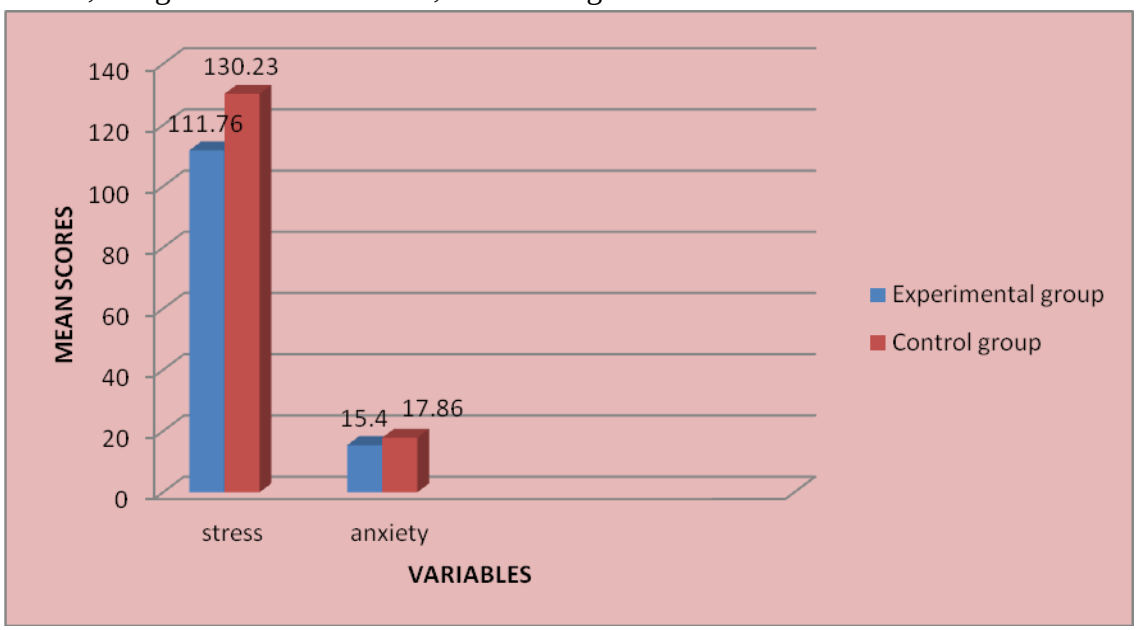


Figure 21: Bar diagram showing posttest stress and anxiety scores between experimental and control group subjects

Table 8 and figure 21 reveals that there was a statistical significant difference between posttest stress scores of experimental and control group subjects.

The posttest stress score of experimental group was 111.76 with SD of 30.53 and control group was 130.23 with SD of 35.51, and 't' value was 2.16 which was greater

than the table value at 0.05 level indicating that there was a significant difference between mean posttest stress scores of experimental and control group subjects. Hence H_1 was accepted.

The posttest mean anxiety scores of experimental group was 15.4 with SD of 8.80 and control group was 17.86 with SD of 7.36, and 't' value was 1.17 which was lesser than the table value at 0.05 level indicating that there was no significant difference between posttest anxiety scores of experimental and control group subjects. Hence H_2 was rejected.

Overall it shows that Stress Management Programme (SMP) was effective in reducing stress in experimental group as compared to control group. Whereas, anxiety was not reduced.

Table 9: Areawise comparison of posttest stress scores of experimental and control group subjects

N=60

Sl. no	**Variables**	**Total N=60**		**Experimental group(n=30)**		**Control group(n=30)**		**'t' value**	**p value**
		Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**		
1.	Physiological stress(0-66)	27.89	2.72	25.63	8.36	30.16	13.80	1.54	0.12 NS
2.	Emotional stress(0-42)	27.13	1.66	24.63	7.29	29.63	10.62	2.13	0.03*
3.	Social stress(0-42)	21.81	1.09	19.16	6.61	24.46	8.80	2.65	0.01*
4.	Examination stress(0-36)	27.46	0.84	25.93	7.25	29	5.57	1.84	0.07 NS
5.	Behavioural stress(0-24)	16.68	0.99	16.40	6.37	16.96	4.39	0.28	0.78 NS

df=58, * significant at 0.05 level, NS- non significant at 0.05 level

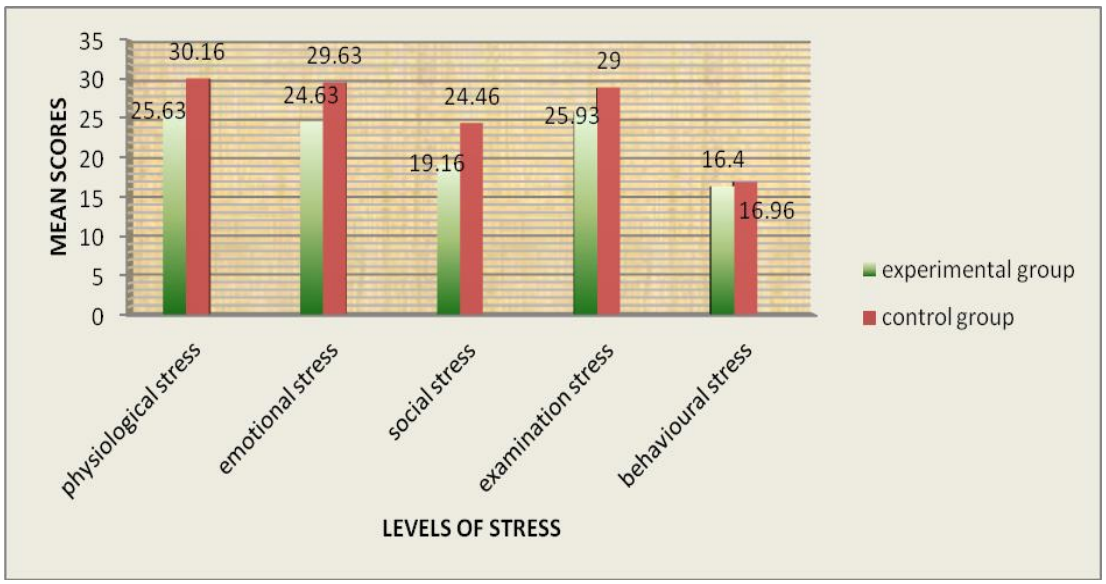


Figure 22: Bar diagram showing area wise posttest mean stress scores of subjects in the experimental and control group.

Table 9 and figure 22 reveals that there was a statistical significant difference between posttest stress scores of experimental and control group areas.

Related to physiological stress, posttest mean stress scores of the experimental group was 25.63 with SD of 8.36 and control group was 30.16 with SD of 13.80, 't' value was 1.54 which was lesser than the table value at 0.05 level indicating that there was no significant difference between posttest stress scores of experimental and control group subjects.

In the area of emotional stress, posttest mean stress scores of the experimental group was 24.63 with SD of 7.29 and control group was 29.63 with SD of 10.62, 't' value was 2.13 which was greater than the table value at 0.05 level indicating that there was significant difference between posttest stress scores of experimental and control group subjects.

Mean posttest social stress scores explains that posttest mean stress scores of the experimental group was 19.16 with SD of 6.61 and control group was 24.46 with SD of 8.80, 't' value was 2.65, which was greater than the table value at 0.05 level indicating that there was significant difference between posttest mean stress scores of experimental and control group subjects.

Related to the examination stress, posttest mean stress scores of the experimental group was 25.93 with SD of 7.25 and control group was 29 with SD of 5.57, ‘t’ value was 1.84 which was lesser than the table value at 0.05 level indicating that there was no significant difference between posttest stress scores of experimental and control group subjects.

In the area of behavioural stress, posttest mean stress scores of the experimental group was 16.40 with SD of 6.37 and control group was 16.96 with SD of 4.39, ‘t’ value was 0.28 which was lesser than the table value at 0.05 level indicating that there was no significant difference between posttest stress scores of experimental and control group subjects.

Overall results shows that the experimental group subjects decreased their stress scores in areas such as emotional and social compared to control group subjects. It was showing that there was a statistical significant difference at 0.05 level between posttest stress scores in these areas of experimental and control group subjects.

SECTION 4: WITH IN THE GROUP COMPARISON OF STRESS AND ANXIETY SCORES

Table 10: Comparison of pre and posttest stress and anxiety scores among experimental group subjects.

N=30

Sl. no	Variables	Pretest		Posttest		't' value	p value
		Mean	SD	Mean	SD		
1.	Stress	117.23	31.45	111.76	30.53	.68	0.5NS
2.	Anxiety	20.96	9.90	15.4	8.80	2.30	0.02*

df=29, * significant at 0.05 level, NS- non significant at 0.05 level

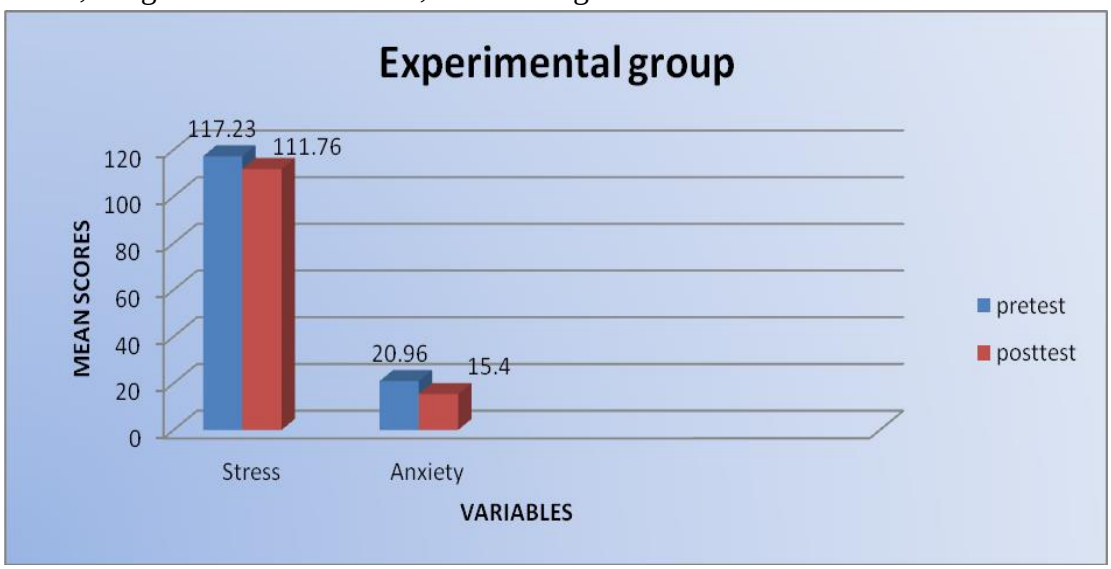


Figure 23: Bar diagram showing comparison of pre and post test stress and anxiety scores among experimental group subjects

Table 10 and figure 23 depicts that there was a statistical significant difference between pretest and posttest anxiety scores of experimental group subjects.

Related to pre and posttest stress scores, pretest mean stress score was 117.23 with SD of 31.45 and posttest was 111.76 with SD of 30.53, and 't' value was .68 which was lesser than the table value at 0.05 level indicating that there was no statistical significant difference between mean pretest and posttest stress scores of experimental group subjects.

In case of pre and posttest anxiety score, the mean pretest anxiety score was 20.96 with SD of 9.90 and posttest was15.4 with SD of 8.80, and 't' value was 2.30, which was greater than the table value at 0.05 level, indicating that there was statistical significant difference between mean pretest and posttest anxiety scores of experimental group subjects.

Table 11: Comparison of pre and posttest stress and anxiety scores among stress and anxiety scores among control group subjects

N=30

Sl. no	Variables	Pretest		Posttest		't' value	p value
		Mean	SD	Mean	SD		
1.	Stress	131.53	36.95	130.23	35.51	0.13	0.89 NS
2.	Anxiety	17.96	7.82	17.86	7.36	.05	0.96 NS

df=29, NS- non significant at 0.05 level

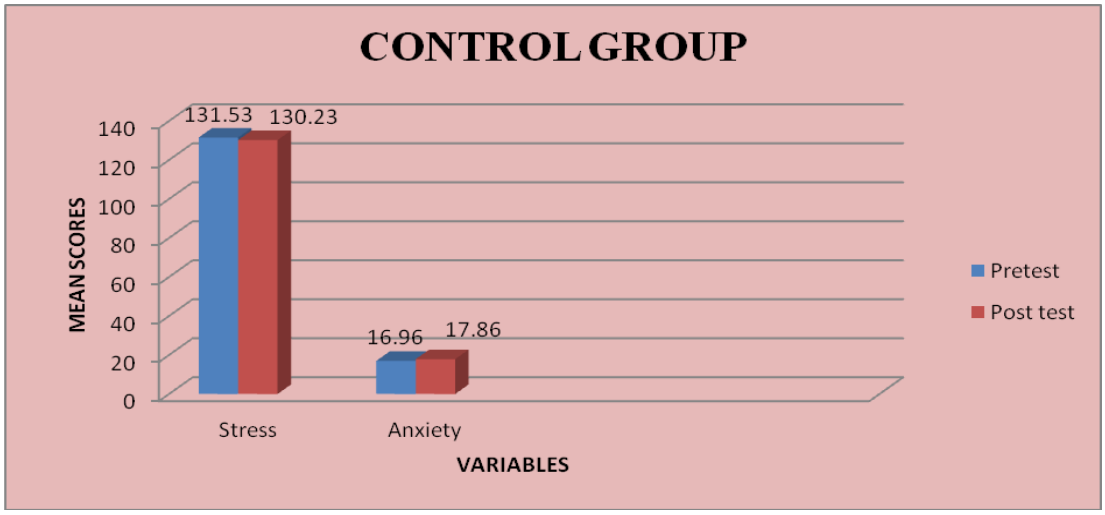


Figure 24: Bar diagram showing comparison of pre and post test stress and anxiety scores among control group subjects

Table 11 and figure 24 depicts that there was no statistical significant difference between pretest and posttest stress and anxiety scores of control group subjects.

Related to pre and posttest stress scores, pretest mean stress score was 131.53 with SD of 36.95 and posttest was 130.23 with SD of 35.51, and 't' value was .13 which was lesser than the table value at 0.05 level indicating that there was no statistical significant difference between mean pretest and posttest stress scores of control group subjects.

In case of pre and posttest anxiety score, the mean pretest anxiety score was 17.96 with SD of 7.82 and posttest was17.86 with SD of 7.36, and 't' value was .05, which was lesser than the table value at 0.05 level, indicating that there was no statistical significant difference between mean pretest and posttest anxiety scores of control group subjects.

SECTION 5: ASSOCIATION BETWEEN PRE TEST STRESS AND ANXIETY SCORES WITH SELECTED DEMOGRAPHIC VARIABLES

Table 12: Association between pre test stress scores with selected demographic variables

N=60

SI No	Demographic variables &Educational variables	Stress scores		calculated value ($x^{2)}$	df	P value	Inference
		_ < median	> median				
1	**Age in years** a. 14-16yrs b. 17-19yrs	 21 18	 13 7	0.38	1	0.53	NS
2	**Gender** a. Male b. Female	 14 13	 19 14	0.03	1	0.85	NS
3	**Type of family** a. Nuclear b. joint	 19 8	 20 13	0.26	1	0.60	NS
4	**Area of residence** a. Rural b. Urban	 3 32	 3 12	0.44	1	0.50	NS
5	**Father occupation** a. Employed b. Business	 24 10	 18 8	0.013	1	0.090	NS
6	**Mother Occupation** a. employed b. Housewife	 31 6	 14 9	2.84	1	0.09	NS

NS-non significant at 0.05 level (p>0.05)

Table 12 shows the association between the pre-test stress scores with selected demographic variables.

The chi square values of demographic variables such as age, gender, type of family, area of residence, father occupation, mother occupation were not having significant association with pretest stress scores at 0.05 level. Hence H_3 was rejected.

Table 13: Association between pretest anxiety scores with selected demographic variables among pre- university (PU) college students

N=60

SI No	Demographic variables	Anxiety scores		calculated value ($x^{2)}$	df	P value	Inference
		– < median	>median				
1	**Age in years** a. 14-16yrs b. 17-19yrs	 15 15	 15 15	0.00	1	1.00	NS
2	**Gender** a. Male b. Female	 23 16	 10 11	0.32	1	0.56	NS
3	**Type of family** a. Nuclear b. joint	 23 13	 15 11	0.05	1	0.81	NS
4	**Area of residence** a. Rural b. Urban	 2 26	 4 28	0.47	1	0.49	NS
5	**Father occupation** a. Employed b. Business	 25 7	 17 5	0.005	1	0.94	NS
6	**Mother Occupation** a. employed b. Housewife	 27 11	 18 4	0.38	1	0.53	NS

NS-non significant at 0.05 level (p>0.05)

Table 13 shows the association between pre-test anxiety scores with selected demographic variables.

The chi square values of demographic variables such as age, gender, type of family, area of residence, father occupation, mother occupation were not having significant association with pretest anxiety scores at 0.05 level. Hence H_4 was rejected.

SECTION 6: ASSOCIATION BETWEEN PRE TEST STRESS AND ANXIETY SCORES WITH SELECTED EDUCATIONAL VARIABLES

Table 14: Association between pre test stress scores with selected educational variables

N=60

SI No	Demographic variables &Educational variables	Stress scores		calculated value ($x^{2)}$	df	P value	Inference
		– < median	> median				
1.	**Percentage of marks in tenth standard** a. 70% and above b. 60-70% c. 50-60%	 19 7 4	 20 5 5	0.47	2	0.79	NS
2.	**Number of homework hours** a. More than two hours b. 1-2 hours c .Lesser than one hour	13 15 2	14 15 0	2.021	2	0.36	NS
3.	**Distance to school from house** a. More than 15kms b. 10-15kms c. 5-10kms d. Below 5kms	10 3 5 12	17 0 4 12	4.79	3	0.18	NS
4.	**Relationship with friends** a. Very satisfied b. Satisfied c. Not satisfied	13 17 2	14 10 4	2.26	2	0.32	NS
5.	**Have close friends** a. Yes b. No	17 9	13 21	3.326	1	0.06	NS
6.	**Doing while having problem** a. Talking with parents b. Talking with friends	13 12	14 21	0.43	1	0.51	NS

NS-non significant at 0.05 level (p>0.05)

Table 14 showed the association between pretest stress scores with selected educational variables among pre-university (PU) college students.

The chi square values of educational variables such as percentage of marks in 10th standard, number of homework hours, distance to school from house, relationship with friend, doing while having problem were not having significant association with pretest stress scores at 0.05 level. Hence H_5 was rejected.

Table 15: Association between pre test anxiety scores with selected educational variables

N=60

SI No.	Educational variables	Anxiety scores		calculated value ($x^{2)}$	df	P value	Inference
		_ < median	> median				
1	**Percentage of marks in tenth standard**						
	a. 70% and above	21	18				
	b. 60-70%	6	6	1.23	2	0.54	NS
	c. 50-60%	3	6				
2	**Number of homework hours**						
	a. More than two hours	21	6	5.29	2	0.07	NS
	b. 1-2 hours	15	14				
	c. Lesser than one hour	2	0				
3	**Distance to school from house**						
	a. More than 15kms	15	12	2.98	2	0.22	
	b. 10-15kms	0	0				NS
	c. 5-10kms	3	6				
	d. Below 5kms	16	6				
4	**Relationship with friends**						
	a. Very satisfied	20	7				
	b. Satisfied	20	7	4.26	2	0.11	NS
	c. Not satisfied	2	4				
5	**Have close friends**						
	a. Yes	15	15	0.00	1	1.00	NS
	b. No	15	15				
6	**Doing while having problem**						
	a. Talking with parents	17	10	0			
	b. Talking with friends	17	10	0	1	1.0	NS

NS-non significant at 0.05 level (p>0.05)

Table 15 showed the association between pre-test anxiety scores with selected educational variables among pre-university (PU) college students.

The chi square values of educational variables such as percentage of marks in 10 std, number of homework hours, distance to school from house, relationship with friend, doing while having problem were not having significant association with pretest anxiety scores at 0.05 level. Hence H_6 was rejected.

SUMMARY

The data analysis chapter dealt with analysis and interpretation of data gathered to evaluate the effectiveness of Stress Management Programme (SMP) to reduce stress and anxiety among adolescents in selected pre-university (PU) colleges, Kolar. The data was collected using socio demographic data sheet and standardized tools. The hypotheses was tested for its significance and it was found that mean posttest stress scores among adolescents who had undergone Stress Management Programme (SMP) is significantly lower than the mean stress scores among adolescents who had not undergone stress management programme. And there was no association found between pretest stress and anxiety scores with selected demographic and educational variables.

6. DISCUSSION

This chapter presents the major findings of the study and discusses them in relation to similar studies conducted by other researchers.

The main aim of this study was to evaluate the effectiveness of Stress management programme (SMP) on stress and anxiety reduction among adolescents in selected pre-university (PU) colleges, Kolar.

Quasi experimental non equivalent control group pretest posttest design was used. Total 60 subjects were participated in the study, 30 subjects in experimental group and 30 subjects in control group. Based on convenience, one college students were taken for experimental and other college students were taken for control group. All the subjects were assessed on socio demographic characteristics, educational characteristics, stress and anxiety.

After pretest experimental group subjects underwent Stress Management Programme (SMP) for 3 weeks (3 sessions), one session per week. Each session sparing for 45 minutes. Posttest was conducted for both groups after 15 days interval from last session of the programme.

Data was analysed using inferential and descriptive statistics.

Objectives of the study

1. To assess the stress and anxiety among adolescents in experimental and control group.
2. To develop and validate Stress Management Programme (SMP).
3. To evaluate the effectiveness of SMP (Stress Management Programme) on stress and anxiety reduction by comparing the posttest scores between experimental and control group subjects.
4. To compare pre and posttest scores among adolescents in the experimental and control group subjects.
5. To find out the association between pretest stress and anxiety scores with selected demographic and educational variables.

Hypotheses

H_1- The mean posttest stress scores among adolescents who undergoing stress management programme (SMP) is significantly lower than the mean stress scores among adolescents who are not undergone stress management programme.

H_{2-} The mean posttest anxiety scores among adolescents who undergoing stress management programme (SMP) is significantly lower than the mean anxiety scores among adolescents who are not undergone stress management programme.

H_{3-} There will be significant statistical association between stress scores with selected socio demographic variable (age, gender, type of family, area of residence, father occupation, mother occupation).

H_{4-} There will be significant statistical association between anxiety scores with selected socio demographic variable (age, gender, type of family, area of residence, father occupation, mother occupation).

H_{5-} There will be significant statistical association between stress scores with selected educational variable (percentage of marks in 10 std, number of homework hours, distance to school from house, relationship with friend, doing while having problem).

H_6- There will be significant statistical association between anxiety scores with selected educational variable (percentage of marks in 10 std, number of homework hours, distance to school from house, relationship with friend, doing while having problem).

The major findings of the study are discussed under the following sections:

The findings of the data has been organized and finalized according to the plan for data analysis and are presented under the following sections.

Section 1: Description of demographic variables, educational variables, stress and anxiety scores of the subjects.

Section 2: Pre intervention comparison of stress and anxiety scores between experimental and control group subjects.

Section 3: Comparison of posttest stress and anxiety scores between experimental and control group subjects.

Section 4: Within the group comparison of stress and anxiety scores.

Section 5: Association between pretest stress and anxiety scores with selected demographic variables.

Section 6: Association between pretest stress and anxiety scores with selected educational variables.

Major findings of the study

SESSION 1: Description of demographic Variables, educational variables, stress and anxiety scores of the subjects

Majority, 24 (80%) of the subjects in the experimental group were in the age group between 14-16 years, and 24 of the subjects (80%) in the control group were in the age group between 17-19 years.

Majority, 60% of the subjects in the experimental group were boys and 50% of the subjects in the control group were girls.

Majority, 70% of the subjects in the experimental group were from nuclear family and 40% of the subjects in the control group were from joint family.

Majority, 27(90%) of the subjects in experimental group were residing in urban area and 6(20%) of the subjects in the control group were residing in rural area.

Majority, 24 of the subjects (80%), father's in the experimental group were employed and 12 of the subjects (40%), father's in the control group were doing business.

About 80% of the subjects mother's in the experimental group were employed whereas 30% of the subjects mother's in the control group were housewives.

All the subjects in the experimental group scored above 70% marks in 10th standard, whereas majority of the subjects in the control group scored between 60-70% marks in 10th standard.

Majority, 60% of the subjects in the experimental group had taken more than two hours to do their homework, 70% of the subjects in the control group had taken one to two hours to do their homework and only 10% of subjects in the experimental group had taken less than an hour to do their homework.

Majority, 60% of the subjects had distance more than 15 kms and about 10% of the subjects had distance between 10-15 kms and 30% of the subjects had distance between 5-10kms to school from house in the control group. Only 50% of the subjects in the experimental group had distance less than 5kms to school from house.

Majority of the subjects in the control group were very satisfied and satisfied in their relationship with friends. Only 20% of subjects in the experimental group were not satisfied in their relationship with friends.

Majority of the subjects in the experimental group had close friends, whereas 80% of the subjects in the control group don't have close friends.

About 60% of the subjects in the experimental group were talking with parents while having problem. At the same time, 70% of the subjects in the control group were talking with their friends while having problem.

The present study findings showed that, in experimental group mean and SD in pretest stress was 117.23± 31.45 and mean and SD in pretest anxiety was 20.96 ±10.07 respectively. Whereas in the control group, mean and SD in pretest stress was 131.53 ±36.95 and mean and SD in pretest anxiety was 16.96± 7.82.

The study findings revealed that, at pretest level majority, 19(63.33%) of the subjects from experimental group had low stress, only few, 6(20%) subjects had moderate stress and 5(16.66%) subjects had no stress. Whereas in the control group 10(33.33%) of the subject s had moderate stress, 8(26.66%) subjects had low stress and 3(10%) subjects had severe stress. Only few 3(10%) subjects had no stress.

A study conducted in Kerala, on assessing stress and coping behaviour among female pre-university students revealed that majority (54%) had moderate stress, only few (5%) had severe stress and another 5% students had mild stress. [55]

In the present study, at pretest, majority, 50% and 40% of the subjects from experimental and control group had moderate anxiety. However 30% of subjects in

the experimental and 13.33% in the control group had severe anxiety. It was found that 26.66% and 20% of the subjects in the control group had mild and minimal level of anxiety. Whereas in the experimental group 10% of the subjects had mild anxiety and 10% of the subjects had minimal level of anxiety.

A similar study conducted in Mangalore, on assessing levels of anxiety and academic performance revealed that majority (48.3%) had mild anxiety, 14(23.30%) subjects had moderate anxiety, 9(15%) had severe anxiety. Whereas only 7(11.60%) had minimal level of anxiety.[56]

In the present study, at post test, majority 14 (46.2%) of the subjects from experimental group had low stress, only few 4(13.3%) subjects had moderate stress and 12(40%) had no stress. Whereas in the control group 11(36%)of the subjects had low stress, 8(26%) subjects had moderate stress and 4(13%) of the subjects had severe stress. Only few 7(23%) had no stress.

The study findings reveals that, at posttest majority of the subjects 43% and 53% of the subjects from experimental and control group had mild and moderate anxiety. However 10% of the subjects in the experimental and 33% in the control group had mild and moderate anxiety. Whereas, 10% of the subjects in the experimental group and 13% of the subjects in the control group had severe anxiety. Only few 13% and 23% of the subjects had minimal level of anxiety in both experimental and control group respectively.

Section 2: Pre intervention comparison of stress and anxiety scores between experimental and control group subjects

At pretest level both the groups had similar mean stress and anxiety scores. Experimental and control group subjects had no significant differences in their mean scores of stress and anxiety (pretest mean scores for stress was 117.23 with SD of 31.45 for experimental group and mean stress scores for control group was 131.53 with SD of 36.95 and its 't' value was 1.60, which was not significant at 0.05 level and pretest mean score for anxiety was 20.96 with SD of 36.95 for experimental group and pretest mean score for anxiety was 16.96 with SD of 7.82 for control group and its 't' value was 1.71, which was not significant at 0.05 level). Hence, showing that both the groups are equal in their mean stress and anxiety scores at pretest level.

Section 3: Comparison of posttest stress and anxiety scores between experimental and control group subjects

At posttest level experimental group and control group subjects had significant differences in mean stress scores. Stress levels were reduced among experimental group subjects compared to control group subjects.

The posttest stress score of experimental group was 111.76 with SD of 30.53 and control group was 130.23 with SD of 35.51, and't' value was 2.16 which was greater than the table value at 0.05 level indicating that there was a significant difference between mean posttest stress scores of experimental and control group subjects.

The posttest mean anxiety scores of experimental group was 15.4 with SD of 8.80 and control group was 17.86 with SD of 7.36, and 't' value was 1.17 which was lesser than the table value at 0.05 level indicating that there was no significant difference between posttest anxiety scores of experimental and control group subjects.

Overall it shows that Stress Management Programme (SMP) was effective only for reducing stress in experimental group as compared to control group.

This finding is supported by a study conducted to assess the effectiveness of stress management workshop on college students in Turkey. A sample of 108 students was selected using convenience sampling and a self-administered questionnaire was administered. The study findings revealed that the students reported significantly more reduction in stress ($p<0.008$) and also reported more positive coping strategies. The study concluded that the stress management workshop was the important factor in reducing stress.[57]

The area wise stress scores of experimental and control group in the posttest revealed that stress was reduced only in certain areas such as emotional and social. The mean and SD of stress scores in various areas such as physiological stress 25.63 ± 8.36, emotional stress 24.63 ± 7.29, social stress 19.16 ± 6.61, examination stress 25.93 ± 7.25, and behavioural stress 16.40 ± 6.37. However in the control group mean and SD of stress scores in areas such as physiological stress 30.16 ± 13.80, emotional stress 29.63 ± 10.62, social stress 24.46 ± 8.80, examination stress 29 ± 5.57, and behavioural stress 16.96 ± 4.39.

A similar study conducted in Bangalore to evaluate effectiveness of stress management module on higher secondary students also reveals same findings during posttest stress was reduced only in certain areas such as emotional and social stress. The mean and SD of emotional stress was 21.14 ± 5.54 and social stress was 10 ± 3.15.[58]

Another study which was conducted in Shillong on 149 college students to assess the effectiveness of relaxation exercises also revealed similar results during posttest. In that physiological, social and emotional areas of stress was reduced with relaxation exercises. [59]

Section 4: Within the group comparison of stress and anxiety scores

While comparing pre and posttest, mean anxiety scores had significant differences in the experimental group. Anxiety scores were reduced in the experimental group subjects.

In experimental group pretest mean stress score was 117.23 with SD of 31.45 and posttest mean stress score was 111.76 with SD of 30.53, and‘t’ value was .68 which was lesser than the table value at 0.05 level indicating that there was no statistical significant difference between mean pretest and posttest stress scores of experimental group subjects.

Whereas in case of pre and posttest anxiety score, the mean pretest anxiety score was 20.96 with SD of 9.90 and posttest was15.4 with SD of 8.80, and ‘t’ value was 2.30, which was greater than the table value at 0.05 level, indicating that there was statistical significant difference between mean pretest and posttest anxiety scores of experimental group subjects.

Whereas in control group there was no significant difference between mean pre and post stress and anxiety scores.

Section 5: Association between pretest stress and anxiety scores with selected demographic variables

Association between pre test stress scores with selected demographic variables among pre- university (PU) college students

There was no significant association found between age, gender, type of family, area of residence, father occupation, mother occupation with pretest stress scores of experimental and control group subjects.

Association between pretest anxiety scores with selected demographic variables among pre- university (PU) college students

There was no significant association found between age, gender, type of family, area of residence, father occupation, mother occupation with pretest anxiety scores of experimental and control group subjects.

Section 6: Association between pretest stress and anxiety scores with selected educational variables

Association between pre test stress scores with selected educational variables among pre- university (PU) college students

There was no significant association found between percentage of marks in 10th standard, number of homework hours, distance to school from house, relationship with friend, doing while having problem with pretest stress scores of experimental and control group subjects.

Association between pre test anxiety scores with selected educational variables among pre-university (PU) college students

There was no significant association found between percentage of marks in 10th standard, number of homework hours, distance to school from house, relationship with friend, doing while having problem with pretest anxiety scores of experimental and control group subjects.

Testing of hypotheses

H_1- The mean posttest stress scores among adolescents who undergoing Stress Management Programme (SMP) is significantly lower than the mean stress scores among adolescents who are not undergone stress management programme.

The unpaired 't' test was used to find out the difference in the posttest stress scores between experimental and control group subjects. A significant difference was found at 0.05 level. The posttest stress scores among adolescents who had undergone Stress Management Programme (SMP) was significantly lower than those who had not undergone stress management programme. Hence hypotheses 1 was accepted since there was a significant difference between posttest mean stress scores of experimental and control group subjects.

H_2- The mean posttest anxiety scores among adolescents who undergoing stress management programme (SMP) is significantly lower than the mean anxiety scores among adolescents who are not undergone stress management programme.

The unpaired't' test was used to find out the difference in the posttest anxiety scores between experimental and control group subjects. There was no significant difference found between the groups and the calculated value was lesser than the table value at 0.05 level. Hence hypotheses 2 was rejected.

H_3- There will be significant statistical association between stress scores with selected socio demographic variable (age, gender, type of family, area of residence, father occupation, mother occupation).

The chi- square test was used to find out statistical significant association between stress scores with selected socio demographic variable such as age, gender, type of family, area of residence, father occupation, mother occupation. The χ^2 values of selected demographic variables are lesser than the table value at 0.05 level. Hence the hypotheses 3 was rejected.

H_4- There will be significant statistical association between anxiety scores with selected socio demographic variable (age, gender, type of family, area of residence, father occupation, mother occupation).

The chi- square test was used to find out statistical significant association between anxiety scores with selected socio demographic variable such as age, gender, type of family, area of residence, father occupation, mother occupation. The χ^2 values of selected demographic variables are lesser than the table value at 0.05 level. Hence the hypotheses 4 was rejected.

H_5- There will be significant statistical association between stress scores with selected educational variable (percentage of marks in 10 std, number of homework hours, distance to school from house, relationship with friend, doing while having problem).

The chi- square test was used to find out statistical significant association between stress scores with selected educational variable such as percentage of marks in 10 std, number of homework hours, distance to school from house, relationship with friend, doing while having problem. The χ^2 values of selected educational variables are lesser than the table value at 0.05 level. Hence the hypotheses 5 was rejected.

H_6- There will be significant statistical association between anxiety scores with selected educational variable (percentage of marks in 10 std, number of homework hours, distance to school from house, relationship with friend, doing while having problem).

The chi- square test was used to find out statistical significant association between anxiety scores with selected educational variable such as percentage of marks in 10 std, number of homework hours, distance to school from house, relationship with friend, doing while having problem. The χ^2 values of selected educational variables are lesser than the table value at 0.05 level. Hence the hypotheses 6 was rejected.

Summary

This discussion chapter dealt with statistical analysis regarding effectiveness of Stress Management Programme (SMP) by comparing posttest stress and anxiety scores between experimental and control group subjects. This chapter also described that there was a significant reduction of stress among pre-university (PU) college students in experimental group when compared to control group and there is no association between pretest stress and anxiety scores with selected demographic and educational variables.

7. CONCLUSION

This chapter deals with the nursing implications, limitations, suggestions and recommendations of the present study. The main aim of the study was to evaluate the effectiveness of Stress Management Programme (SMP) on stress and anxiety reduction among adolescents in selected pre-university (PU) colleges, Kolar. This chapter deals with the major conclusions drawn on the basis of the findings of the study. From the present study, it was evident that the Stress Management Programme (SMP) brought about a significant reduction in the stress scores of adolescents in the experimental group.

The following conclusions were drawn on the basis of the findings of the study:

- There was no significant difference between the mean pretest stress and anxiety scores in both experimental and control group. Thus it indicated that stress and anxiety scores were equal at the pre- intervention level.

- There was a significant difference between the mean posttest stress scores of experimental and control group subjects. Thus it indicated that Stress Management Programme (SMP) was effective in reducing the stress level in experimental group as compared to control group. Whereas anxiety level was not reduced.

- There was a significant difference between pretest and posttest anxiety scores of experimental group subjects. Whereas control group had no difference.

- There was no association between pretest stress and anxiety scores with selected demographic and educational variables.

Implications of the study

The present study enabled to evaluate the effectiveness of Stress Management Programme (SMP) on stress and anxiety reduction among adolescents in pre-university (PU) colleges. The findings of the study have implication for nursing practice, nursing education, nursing administration and nursing research.

Nursing practice

Nurses play a key role in enhancing stress management programme for reducing stress and anxiety through identifying stressors, practicing breathing and visualisation exercises, progressive muscle relaxation techniques and learning coping strategies. Hence nursing professionals should be prepared and update their knowledge to provide stress management programme to reduce stress and anxiety levels of students and helping them to have a balanced lifestyle.

Nursing education

Nurses in the role as educators and information providers have the potential to improve the quality of life of students. They should encourage and educate students and enhance knowledge and skills in identifying and managing stress and anxiety successfully. Stress management techniques can be taught to the students, provide it in a calm and quiet environment and emphasis significance of practicing stress management programmes and evaluate its effectiveness.

Nursing administration

The nurse administrators play a pivotal role in planning and organising various programmes for students. The findings of the present study will help the nurse administrator to utilise these findings to improve the quality of students. He/ she can take up leadership roles in controlling stress and anxiety of students by providing stress management programme cost effectively. They will take up active role in providing special care for the students and creates new changes in the educational programmes.

Nursing research

There is a good scope for nurses to conduct research in various aspects of stress and anxiety and its management. The findings of the study serve as a basis for assessing the effectiveness of stress management programme in reducing stress and anxiety. And also it will provide nurse researcher to develop an insight about the occurrence of stress and anxiety and how it will affect both positively and negatively.

Limitations of the study

1. Small number of subjects limited the generalisation of the study
2. The study is conducted to the selected pre-university colleges.
3. The present study was limited only to assess stress and anxiety among pre-university college students.

On the basis of findings of the study the following recommendations have been made:

1. The study can be replicated on a large sample, spread over a longer period of time which might yield more reliable results.
2. The similar study can be conducted with modified intervention module.
3. A co-relational study can be conducted between stress and anxiety among professional students.
4. The study can be carried to assess the effectiveness of stress management programme on the stress behaviors and activities among adolescents.

Summary

The researcher felt a deep sense of satisfaction and fulfillment for having undertaken this study. This chapter dealt clearly about the implications of this study and also have provided limitations, suggestions, and recommendations for future studies.

8. SUMMARY

This chapter presents a summary of the study. The study was quasi experimental non equivalent control group pretest posttest research design aimed to evaluate the "Effectiveness of Stress Management Programme (SMP) on stress and anxiety reduction among adolescents in selected pre- university (PU) colleges, Kolar." The standardized tools such as Students Stress Rating Scale (SSRS) and Beck Anxiety Inventory (BAI) were used to assess the stress and anxiety among adolescents in selected pre- university (PU) colleges. The data was analyzed by using descriptive and inferential statistics.

Objectives of the study

1. To assess the stress and anxiety among adolescents in experimental and control group.

2. To develop and validate Stress Management Programme (SMP).

3. To evaluate the effectiveness of SMP (Stress Management Programme) on stress and anxiety reduction by comparing the posttest scores between experimental and control group subjects.

4. To compare pre and posttest scores among adolescents in the experimental and control group subjects.

5. To find out the association between pretest stress and anxiety scores with selected demographic and educational variables.

HYPOTHESES

The following hypotheses are tested

H_1- The mean posttest stress scores among adolescents who undergoing stress management programme (SMP) is significantly lower than the mean stress scores among adolescents who are not undergone stress management programme.

H_2- The mean posttest anxiety scores among adolescents who undergoing stress management programme (SMP) is significantly lower than the mean anxiety scores among adolescents who are not undergone stress management programme.

H_3- There will be significant statistical association between stress scores with selected socio demographic variable (age, gender, type of family, area of residence, father occupation, mother occupation).

H_4- There will be significant statistical association between anxiety scores with selected socio demographic variable (age, gender, type of family, area of residence, father occupation, mother occupation).

H_5- There will be significant statistical association between stress scores with selected educational variable (percentage of marks in 10 std, number of homework hours, distance to school from house, relationship with friend, doing while having problem).

H_6- There will be significant statistical association between anxiety scores with selected educational variable (percentage of marks in 10 std, number of homework hours, distance to school from house, relationship with friend, doing while having problem).

ASSUMPTIONS

The study assumes that,

1. Stress is a part of every student's life.

2. Stress Management Programme (SMP) can be effective in reducing stress.

3. Reduction of stress enhances the concentration and improves academic outcome.

CONCEPTUAL FRAME WORK

Conceptual frame work of this study was based on General system theory by Von Bertalanify in 1968. The inputs include demographic, educational variables and assessment of stress and anxiety. Throughput includes development and validation of Stress Management Programme (SMP), administration of SMP, description about stress and anxiety, breathing and visualization exercises, progressive muscle relaxation exercises and coping strategies. Output refers to the result of effectiveness of Stress Management Programme (SMP) by assessing stress and anxiety among pre-university (PU) college students. Feedback refers by assessing reduction of stress and anxiety.

METHODOLOGY

For the present study, non equivalent control group pretest posttest design was adopted. The independent variable was Stress Management Programme (SMP) and dependent variable was stress and anxiety of pre-university (PU) college students.

The sample consisted of 60 students from selected colleges at Kolar by convenient sampling technique. Based on the convenience, 2 schools were selected. Students who are studying in Mahila samajam PU college were taken as experimental group and students who are studying in Vidhya jyothi PU college was taken as control group.

Standardised tools such as Students stress rating scale (SSRS) and Beck Anxiety inventory (BAI) was used to collect the data on assessing stress and anxiety among Pre-university(PU) college students. The Stress Management Program (SMP) was developed and given for validation to 5 experts.

Pilot study was conducted on 5 pre-university (PU) college students and the data were analyzed using descriptive and inferential statistics. This gave a basis for the investigator to conduct the main study. The pretest was conducted on the 1stday for experimental and control group subjects. The actual study was conducted on 60 pre-university (PU) college students (30 experimental group and 30 control group) from 08-1-2013 to 09-02-2013. Pre-test was done by administering standardised tools to 60 pre-university (PU) college students and followed by Stress Management Programme (SMP) was given only to experimental group subjects. Stress Management Programme (SMP) was administered in 3 sessions each session lasting for 45 minutes at an interval of one week each.

The three sessions are as follows

Session I: Understanding one's own stress

Session II: Building your own stress management tool box

Session III- Coping with stress

Post-test was conducted 15 days after the intervention for both the groups. The obtained data was analysed in terms of the objectives and hypotheses using descriptive and inferential statistics.

MAJOR FINDINGS OF THE STUDY

- Majority, 24 (80%) of the subjects in the experimental group were in the age group between 14-16 years, and 24 of the subjects (80%) in the control group were in the age group between 17-19 years and 60% of the subjects in the experimental group were boys and 50% of the subjects in the control group were girls. About 70% of the subjects in the experimental group were from nuclear family and 40% of the subjects in the control group were from joint family.

- Majority, 27(90%) of the subjects in experimental group were residing in urban area and 6(20%) of the subjects in the control group were residing in rural area and 24 of the subjects (80%), father's in the experimental group were employed and 12 of the subjects (40%), father's in the control group were doing business. About 80% of the subjects mother's in the experimental group were employed whereas 30% of the subjects mother's in the control group were housewives.

- All the subjects in the experimental group scored above 70% marks in 10th standard, whereas majority of the subjects in the control group scored between 60-70% marks in 10th standard, whereas, 60% of the subjects in the experimental group had taken more than two hours to do their homework, 70% of the subjects in the control group had taken one to two hours to do their homework and only 10% of subjects in the experimental group had taken less than an hour to do their homework.

- Majority, 60% of the subjects had distance more than 15 kms and about 10% of the subjects had distance between 10-15 kms and 30% of the subjects had distance between 5-10kms to school from house in the control group. Only 50% of the subjects in the experimental group had distance less than 5kms to school from house. Majority of the subjects in the control group were very satisfied and satisfied in their relationship with friends. Only 20% of subjects in the experimental group were not satisfied in their relationship with friends.

- Majority of the subjects in the experimental group had close friends, whereas 80% of the subjects in the control group don't have close friends and about

60% of the subjects in the experimental group were talking with parents while having problem. At the same time, 70% of the subjects in the control group were talking with their friends while having problem.

- During pretest both the groups had similar mean stress and anxiety scores. Experimental and control group subjects had no significant differences in their mean scores of stress ('t' = 1.60), which was not significant at 0.05 level and anxiety ('t'= 1.71) which was not significant at 0.05 level.

- At posttest level experimental group and control group subjects had significant differences in mean stress scores ('t' = 2.16), significant at 0.05 level. Whereas in both groups mean anxiety scores ('t' = 1.17), not significant at 0.05 level. Stress levels were reduced among experimental group subjects compared to control group subjects. Hence H_1 was accepted and H_2 not accepted.

- While comparing pre and posttest stress and anxiety score in experimental group there was a significant difference between anxiety scores of experimental group subjects. Whereas control group had no difference.

- The association between pretest stress and anxiety scores with selected demographic variables was found that there was no significant association between stress and anxiety scores with selected socio-demographic variables. Hence H_3 and H_4 were rejected.

- The association between pretest stress and anxiety scores with selected educational variables was found that there was no significant association between stress and anxiety scores with selected educational variables. Hence H_5 and H_6 were rejected.

Interpretation and conclusion

The study findings showed that the mean posttest stress score of experimental group and control group subjects had significant differences. Thus it can be concluded that the Stress Management Programme (SMP) was effective in reducing the stress among adolescents in pre-university (PU) colleges.

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10. ANNEXURES

ANNEXURE –A

ETHICAL COMMITTEE CLEARANCE CERTIFICATE

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Fax : 08152-243006, 243008
E-mail : sducon_son@yahoo.in
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Sri Devaraj Urs College of Nursing

(A unit of Sri Devaraj Urs Educational Trust)

Post Box No.7, Tamaka, KOLAR-563101, Karnataka.

(Affiliated to RGUHS, Bangalore and Recognised by KNC, Bangalore & INC, New Delhi)

ISO : 9001-2008 Certified

,Ref:No.SDUCON/EC.Cer/324M/2011-12 Date: 28-01-2012.

ETHICAL CLEARANCE CERTIFICATE

This is to certify that the Ethical Committee of Sri Devaraj Urs College of Nursing, Tamaka, Kolar, has examined and unanimously approved and granted **Ethical Clearance** to Ms. Jyothi Jagadish, I M.Sc.(N) Psychiatric Nursing speciality student of this institution for the Research Topic - ***'A Study to Evaluate the Effectiveness of Stress Management Programme(SMP) on Stress and Anxiety Reduction among Adolescents in selected Pre-University (PU) Colleges, Kolar.'***

S. Sridhar
Chairman 28/1/12

Secretary 28/01/12

28/01/12
Principal.

PRINCIPAL
Sri Devaraj Urs College of Nursing
Tamaka, KOLAR-563101.

ANNEXURE –B

PERMISSION LETTER FOR CONDUCTING RESEARCH STUDY

LETTER REQUESTING PERMISSION FOR CONDUCTING RESEARCH STUDY

From,

Ms Jyothi Jagadish
II Year M.Sc (N) Student
Sri Devaraj Urs College of Nursing
Tamaka, Kolar-563101.

To,

The Principal
Pre-university colleges
Tamaka, Kolar

Forwarded through:
The Principal
Sri Devaraj Urs College of Nursing
Tamaka, Kolar-563101.

Respected sir,

Sub: Granting permission to M.Sc (N) Student for conducting research study.

I, **Ms Jyothi Jagadish** postgraduate student of Sri Devaraj Urs College of Nursing, Tamaka, Kolar has selected the below mentioned topic for research study to be submitted to Rajiv Gandhi University of Health Sciences, Bangalore as a partial fulfillment for Masters of Nursing Degree.

Title of the Topic:

"A Study to Evaluate the Effectiveness of Stress Management Programme (SMP) on Stress and Anxiety reduction among Adolescents in Selected PU Colleges, Kolar."

With regard to above may I kindly request you to grant me permission to conduct a research study in pre-university colleges, Kolar. I am enclosing the research topic along with the objectives herewith for your kind persual and needful. I will be conducting the pilot and final study in this Institution and my data collection period will be from 01-10-2012 to 17-11-2012

I will be collecting the data required for my study from the participants by taking informed consent without disturbing their studies and college routines.

I would be highly obliged and remain thankful for your great help.

Thanking you,

Yours Sincerely,

Ms Jyothi Jagadish

Date: 3.10.12

Place: Kolar

Forwarded to Principals of Pre-Degree colleges for the needful

03/10/12

ANNEXURE –C

PERMISSION LETTER GRANTED TO CONDUCT RESEARCH

LETTER REQUESTING PERMISSION FOR CONDUCTING RESEARCH STUDY

From

Ms.Jyothi Jagadish
II Year M.Sc (N) Student
Sri Devaraj Urs College of Nursing
Tamaka, Kolar-563101

To,

MRS.NAVEENA
The Principal
MAHILA SAMAJA PU COLLEGE
KOLAR

Forwarded through:

The Principal
Sri Devaraj Urs College of Nursing
Tamaka, Kolar-563101

Respected sir,

Sub: Granting permission to M.Sc (N) Student for conducting research study

I, **Ms. Jyothi Jagadish** postgraduate student of Sri Devaraj Urs College of Nursing, Tamaka, Kolar has selected the below mentioned topic for research study to be submitted to Rajiv Gandhi University of Health Sciences, Bangalore as a partial fulfillment for Masters of Nursing Degree.

Title of the Topic:

"A Study to Evaluate the Effectiveness of Stress Management Programme (SMP) on Stress and Anxiety reduction among Adolescents in Selected PU Colleges, Kolar."

With regard to above may I kindly request you to grant me permission to conduct a research study in pre-university colleges, Kolar. I am enclosing the research topic along with the objectives herewith for your kind persual and needful. I will be conducting final study in this Institution and my data collection period will be from 11-01-2013 to 02-02-2013

I will be collecting the data required for my study from the participants by taking informed consent without disturbing their studies and college routines.

I would be highly obliged and remain thankful for your great help.

Thanking you,

Yours Sincerely,

Ms. Jyothi Jagadish

Date: 19.1.13

Place: Kolar

PRINCIPAL
Smt. Danamma Channabasaviah
Mahila Samaja P.U. College
New Extension, KOLAR

LETTER REQUESTING PERMISSION FOR CONDUCTING RESEARCH STUDY

From

Ms.Jyothi Jagadish
II Year M.Sc (N) Student
Sri Devaraj Urs College of Nursing
Tamaka, Kolar-563101

To,

The Principal
VIDYA JYOTHI PU COLLEGE
KOLAR

Forwarded through:

The Principal
Sri Devaraj Urs College of Nursing
Tamaka, Kolar-563101

Respected sir,

Sub: Granting permission to M.Sc (N) Student for conducting research study

I, **Ms. Jyothi Jagadish** postgraduate student of Sri Devaraj Urs College of Nursing, Tamaka, Kolar has selected the below mentioned topic for research study to be submitted to Rajiv Gandhi University of Health Sciences, Bangalore as a partial fulfillment for Masters of Nursing Degree.

Title of the Topic:

"A Study to Evaluate the Effectiveness of Stress Management Programme (SMP) on Stress and Anxiety reduction among Adolescents in Selected PU Colleges, Kolar."

With regard to above may I kindly request you to grant me permission to conduct a research study in pre-university colleges, Kolar. I am enclosing the research topic along with the objectives herewith for your kind persual and needful. I will be conducting final study in this Institution and my data collection period will be from 11-01-2013 to 02-02-2013

I will be collecting the data required for my study from the participants by taking informed consent without disturbing their studies and college routines.

I would be highly obliged and remain thankful for your great help.

Thanking you,

Yours Sincerely,
Jyothi
Ms. Jyothi Jagadish

Date: 2.02.13

Place: Kolar

PRINCIPAL
Vidya Jyothi Pre-University College
Basavanatha, Kolar-563101.

ANNEXURE –D

LETTER FOR ESTABLISHING CONTENT VALIDITY OF STRESS MANAGEMENT PROGRAMME MODULE

LETTER SEEKING EXPERT OPINION AND SUGGESTIONS FOR

THE CONTENT VALIDITY OF THE STRESS MANAGEMENT PROGRAMME MODULE

From,
Ms Jyothi Jagadish
IIyrM.sc (N)
Sri Devaraj Urs College of nursing
Tamaka, Kolar.

To,

.....

.....

.....

SUB: Letter requesting to provide opinion and suggestions of experts for establishing content validity of the stress management programme module.

Respected madam/Sir,

I am a postgraduate student in mental health nursing at Sri Devaraj Urs College of nursing. I have selected the following topic for research study.

"A Study to Evaluate the Effectiveness of Stress Management Programme (SMP) on Stress and Anxiety reduction among Adolescents in Selected PU Colleges , Kolar."

Here I have enclosed,

1. Problem statement and objectives
2. Hypothesis
3. Data collection tool
4. Stress management programme module
5. Criteria check lists

With regards to this, I would like to request you kindly give me your valuable suggestions regarding the appropriateness of stress management programme module. I shall be grateful to you for your valuable remarks and suggestions.

Your expert opinion and kind co-operation will be highly appreciated.

Thanking you.

Yours sincerely,

Place: Kolar

Date: 4-10-12

(Jyothi Jagadish)

ANNEXURE –E

CONTENT VALIDITY CERTIFICATE

I hereby certify that, I have validated the content of Ms. Jyothi Jagadish, Post graduate student of Sri Devaraj Urs College of Nursing, Tamaka, Kolar, who is undertaking Research Study on "A Study to Evaluate the Effectiveness of Stress Management Programme (SMP) on Reducing Stress and Anxiety among Adolescents in Selected Pre-University (PU) Colleges, Kolar" as a partial fulfillment of Master of Science in Nursing Degree.

Signature of the Expert

Name and Designation

Date :

Place :

ANNEXURE –F

LIST OF EXPERTS

1. Dr. Manjunath . MD
   Psychiatrist
   SNR district hospital
   Kolar -563101

2. Mrs. Savitha. MA M.Phil
   Psychologist
   K C General hospital
   Bangalore

3. Mrs. Geetha A. MA M.Phil
   Psychologist
   K C General hospital
   Bangalore

4. Mrs. Radha MS. Msc (N)
   HOD and Asso. Professor
   Dept. Pediatric nursing
   S D U C O N
   Tamaka, Kolar-563101
5. Mrs. Jairakini Aruna. MSc (N)
   Assi. Professor
   Dept. Psychiatric nursing
   S D U C O N
   Tamaka, Kolar-56310

ANNEXURE –G

CERTIFICATE FROM STATISTICIAN

ANNEXURE

CERTIFICATE FROM STATISTICIAN

I hereby certify that I have provided the statistical guidance in analysis to **Ms. Jyothi Jagadish** II year M.Sc (N) student, Sri Devaraj Urs College of Nursing Tamaka, Kolar for her study titled as **"A Study to Evaluate the Effectiveness of Stress Management Programme (SMP) on Stress and Anxiety reduction among Adolescents in Selected Pre- University (PU) Colleges , Kolar."**

SIGNATURE OF EXPERT

Prof. Ravi Shankar (Statistician)
Dept. of Community Medicine
Sri Devaraj Urs Medical College
Tamaka, Kolar-563101

S. RAVISHANKAR
Lect./Assit. Professor,
Dept. of Community Medicine,
Sri Devaraj Urs Medical College,
Tamaka, Kolar-563101

Place : Kolar
Date : 16/7/13

ANNEXURE -H

ENGLISH EDITING CERTIFICATE

I hereby certify that I have edited the content of dissertation titled as **"A Study to Evaluate the Effectiveness of Stress Management Programme (SMP) on Reducing Stress and Anxiety among Adolescents in Selected Pre-University (PU) Colleges, Kolar."**

II nd M.Sc. Nursing student, Sri Devaraj Urs College of Nursing, Tamaka, Kolar

Name and Designation

PRINCIPAL
Seventh Day Adventists English
High School, KOLAR.

Place : Kolar

Date :

ANNEXURE –I

PARTICIPANT'S ACCEPTANCE FORM

Dear participant

I Jyothi Jagadish studying M.Sc Nursing in Sri Devaraj Urs College of Nursing have undertaken the research project titled, **"A Study to Evaluate the Effectiveness of Stress Management Programme (SMP) on Reducing Stress and Anxiety among Adolescents in Selected Pre-University (PU) Colleges, Kolar."** as a partial fulfillment of the requirement for Master's Degree from Rajiv Gandhi University of Health Sciences, Bangalore. I therefore kindly request you to cooperate and answer all the questions with appropriate responses. Kindly do not leave any questions unanswered. I ensure that all information provided by you will be kept strictly confidential.

Yours faithfully

Jyothi Jagadish

CONSENT FORM

I ---------- give my consent for the above mentioned study knowing that all information provided by me will be treated with confidentiality by the investigator.

Signature of the participant

Place :

Date : **Name and Address:**

ANNEXURE –J

DEMOGRAPHIC VARIABLES

1. Age in years-

2. Gender-

3. Type of family- Nuclear / Joint

4. Area of residence - Urban / Rural

5. Feeling about relationship with family-Very satisfied/ Satisfied/ Not satisfied

6. Father occupation- Unemployed/ Business

7. Mother occupation-Housewife/ Employed

EDUCATION VARIABLES

1. Percentage of marks in tenth standard- 70% and above/ 60%-70% / 50%-60%

2. Number of homework hours- More than two hours/ 1-2 hours/ lesser than one hour

3. Distance to school from house- More than 15kms/ 10-15kms/ 5-10kms/ below 5kms

4. Relationship with friends- Very satisfied/ Satisfied/ Not satisfied

5. Have close friends-Yes/ No

6. Doing while having problem- Talking with parents/ talking with friends

ANNEXURE –K
STUDENTS STRESS RATING SCALE

ED= Every day, **OT**= once in 2/3 days, **OW**= once in a week, **OF**= once in fortnight (15 days), **OM**= once in a month, **R**= rarely, **N**= Never

SN	FACTOR	STATEMENTS	ED	OT	OW	OF	OM	R	N
1	FV	I get angry							
2	FV	I do not take proper rest							
3	F III	I get irritated							
4	FI	I do not share my misgivings (failures) with others							
5	FII	I complain about the past							
6	FIII	I rush through the day							
7	FI	I feel lonely							
8	FI	I have problem of constipation							
9	FI	I get jealous of others							
10	FI	I get viral infections							
11	FI	I suffer from headaches							
12	FI	I take long time to recover from illness							
13	FI	I suffer from diarrhea							
14	FI	I find it difficult to sleep							
15	FII	I have difficulty in concentrating on my studies							
16	FV	I eat fast							
17	FII	I worry about my future							
18	FIII	I can’t find time to have fun to enjoy myself							
19	FIII	I cry or feel like crying							
20	FIV	I feel restless when I have to take surprise test/exam							
21	FV	I talk fast							
22	FIV	I get nervous when I forget points that I really know							
23	FIV	I get depressed after taking an examination							
24	FIV	My heartbeat increases during examination							
25	FII	I feel tired even though I had enough sleep							
26	FIV	I do not maintain my body weight							
27	FII	I feel stiffness or pain in my neck							
28	FII	I have difficulty in remembering things							
29	FIV	I become tensed with delays or interruptions							
30	FIII	I enjoy games only when I win							
31	FIII	No one understands me							
32	FII	My parents scold me							
33	FI	Me teachers scold me							
34	FI	I find myself thinking of consequences of failing in my examination							
35	FI	I fail to see the humor in situation where others find funny							

Note: Factor I-Physiological stress, Factor II- Emotional stress, Factor III- Social stress, Factor IV- Examination stress, and Factor V- Behavioral stress

BECK ANXIETY INVENTORY (1983)

INSTRUCTION: Listed below are number of problems when you experience anxiety. For each problem choose the best, describes you by putting a () in the given space. It explains how much you agree with the scale. [Not at all (0 points), Mildly: it did not bother me much (1 points), Moderately: It was very unpleasant, but I could stand it. (2 points), Severely: I could barely stand it. (3 points)].

SL.NO	ITEM	0	1	2	3
1	Numbness or tingling				
2	Feeling hot				
3	Wobbliness in legs				
4	Unable to relax				
5	Fear of worst happening				
6	Dizzy or light headedness				
7	Heart pounding or racing				
8	Unsteady				
9	Terrified				
10	Nervous				
11	Feeling of choking				
12	Hands trembling				
13	Shaky				
14	Fear of losing control				
15	Difficult breathing				
16	Fear of dying				
17	Scared				
18	Indigestion or discomfort				
19	Faint				
20	Face flushed				
21	Sweating (not due to heat)				
TOTAL					

The BAI total score is the sum of the ratings for the 21 symptoms. Each symptom is rated on a 4-point scale ranging from 0-3. The maximum score is 63 points.

0-7 – Minimal level of anxiety

8-15 – Mild anxiety

16-25 – Moderate anxiety

26-63 – Severe anxiety

ANNEXURE – L

Stress Management Programme

OBJECTIVES OF STRESS MANAGEMENT PROGRAMME

Session I: Understanding One's Own Stress

1. Help the participants to analyze their own stress.
2. Enable the participants to understand causes for their own stress.
3. Encourage participants to identify stressful situations.

Session 2: Building Your Own Stress Management Tool Box

1. Demonstrate deep breathing exercise.
2. Enable the participant to plan a balanced life style.
3. Demonstrate progressive muscle relaxation exercises.
4. Enable participant to create affirmations.

Session 3 Coping with Stress

1. Enable the participant to develop adaptive coping strategies
2. Encourage participants to support themselves by planning social time table.

TIME SCHEDULE

SL.NO	ACTIVITY	TIME ALLOTED
I	Introduction about Stress	2 minutes
a.	Definition of Stress	1 minute
b.	Brief description about Stress management programme	5 minutes
I.0	**SESSION I –Understanding one's own stress**	2 minutes
I.I	Rewriting your mental script	5 minutes
I.2	How do I respond to stress	6 minutes
I.3	Stress test	10 minutes
I.4	Take action	6 minutes
I.5	Stress prescription	5minutes
I.6	Stress diary	6 minutes
I.7	Identifying life stresses	3 minutes

I.8	Stress questionnaire	6 minutes
I.9	Summary of first session	3 minutes
2.0	**SESSION 2-Building your own stress management tool box**	5minutes
2.I	Breathing and visualization exercise	10minutes
2.2	A balanced life style	10 minutes
2.3	Progressive muscle relaxation	20 minutes
2.4	Creating affirmations	10 minutes
2.5	Summary of second session	5 minutes
3.0	**SESSION-3 Coping with stress**	3 minutes
3.I	Coping strategies	10 minutes
3.2	Sorting exercises	20 minutes
3.3	Social time table and to do list	20 minutes
3.4	Summary of third session	2minutes
4.0	Summary –Managing stress successfully	5 minutes

I. Introduction About Stress:

Each and every person is under the grip of stress. Starting from a two-year infant to an adult, stress takes an entry in different forms, but it alter the normal functioning of a person. One cannot eliminate stress, but can reduce stress in their life. Adolescence is transitional periods in which peer relationship deepen, autonomy, decision making grows, and intellectual pursuits and social belongingness are sought and also there is a increased chances for the normatic stressors to occur, it includes appearance, school grades, academic problems etc.

a. Definition Of Stress

"Stress is a non-specific response of the body of any kind of demand made upon it'' (Selye, 1956).

"It is the arousal of mind and body in response to demands made upon it'' (Schafer-2000)

b. Brief Description Of Stress Management Programme

Stress management programme includes creative interactive activities. It mainly emphasis the various ways of finding stress, solving stress, and sorting coping strategies to deal with stress. This stress management programme formulated from, Trinity college, stress management module overview, Mayland community college, SOAR programme module (2004), Dublin university, generic skills integration project, stress management module, Texas, and Florida state university, stress in adolescents and its management.

Stress management programme focuses on ways of assessing stress, and controlling measures to reduce stress. This programme also gives a proper idea about various kinds of situations that causes stress.

Main focus of this stress management programme is the techniques used to reduce stress. It includes breathing and visualization exercises, planning balanced life style, progressive muscle relaxation exercises, and creating affirmations.

Nowadays, students are under more stress, and it leads to various health problems. By this intervention they will know how they can handle stress, and what all coping methods need to be used, and how they can reduce stress by improving their coping abilities.

Brief Description Of Each Sessions:

SESSION I— This session mainly focuses on how to identify stressors, what are the signs and symptoms of stress and some stress relieving exercises. This session includes the following exercises. They are

1. Rewriting your mental script
2. How do I respond to stress?
3. Stress test
4. Take action
5. Stress prescription
6. Stress diary
7. Identifying life stressors
8. Stress questionnaire

SESSION II— This session emphasizes stress management strategies. These are as follows

1.Breathing and visualization exercises.

2. Planning balanced life style.

3. Progressive muscle relaxation exercises.

4. Creating affirmations.

SESSION III--- In this session participants will understand various adaptive coping strategies to implement in real life situations. These are as follows.

1. Coping strategies

2. Sorting exercises

3. Social timetable and to do list

1.0 SESSION-I Understanding One's Own Stress

Introduction

This session will make the participants to know clearly about one's own stress by writing their own negative and positive thoughts and changing from negative to positive. And also they will know how they will be responding to stress and can understand about the action they can implement to deal with worries and also includes formation of a stress diary and stress questionnaire.

Here, I have some exercises to find out the stress level of each one of you; these exercises will help you to identify your own stressors.

1.1 EXERCISE I: Rewriting Your Mental Script

Choose a time, when you think about your self-talk or the mental script that runs through your mind, whether you want it or not. Identify the negative thoughts you are prone to think about yourself.

In the first, column, write down several negative thoughts, you commonly think, particularly the ones that seem to cause you more stress (e.g.: I am not good in math, I will never have friends)

In the second column, write a positive thought, that is the opposite of the one you wrote in column one.

E.g.: I am confident in my ability to do math, I will pass this course)

Negative thoughts related to your studies	Positive thoughts related to your studies
1. This is too hard for me to study. 2. 3. 4. 5. 6. 7.	if I work hard and attend every class, I know i can succeed

How did you feel writing positive statement? Did you notice any change in your attitude or feelings. Write in the following lines given below.

Changing your thought from negative to positive or may be found difficult for the first time. After all, you had a lifetime to develop the negative thoughts and self perceptions. But just think how powerful this practice is. You have the ability to change, any thought in your life about "ANYTHING".

No matter, what has happened in your life, and no matter what is happening now, choosing a positive attitude will always makes the situation better.

1.2 EXERCISE 2: How Do I Respond To Stress?

Instructions: Take a minute to think about past experience of performing under stress. Think about times when you did well and also times when you felt you could have performed better.

Here, are some examples from your life performing under stress, answer the following questions in order to become more aware of your own optimum level of stress.

1. A time when I performed well under stressful situation was

   ---

2. On a scale of 1-10, my stress level was----------

3. A time, when I got irritated and got angry with my classmates was-

   ---

4. A time when I share my failures with others was-

   ---

5. A time when I would like to perform better under stress was-

   ---

6. On the scale 1-10 at time my stress level was----------

7. I tried to manage stress by doing activities such as

   ---

8. During the time of stress, I will undergo certain symptoms such as

---

9. Right now my stress level on scale of 1-10 is----------

10. In order to get to a more optimal level of stress, I need to (get organized, do some exercise, or practice relaxation ----------

1.3 EXERCISE 3: Stress Test

Answer 'Yes' or 'No' to the following questions.

Do you worry about the future?

Do you have trouble in falling asleep?

Do you have irritated over basically insignificant matters?

Do you feel loneliness in your life?

Do you have less energy than you seem to need or would like to have?

Do you have too many things to do and not enough time to do them?

Do you have headache or stomach problems?

Do you feel difficulty in concentrating on your studies?

Do you concerned about being successful?

Do you perform well enough in life to satisfy yourself?

Do you able to relax or have fun?

Do you get satisfaction from simple joys of life?

Scoring: 1 point for each question from 1-9 with a 'yes' response and one point for each question 10-12 with a 'No' response.

If your score is 4 or more you may be under significant stress. You may want to find out more about managing stress

1.4 EXERCISE 4: Take Action

Instructions: Write down all your worries, even small ones put them in one of two categories, those you can influence and those you cannot. Focus only on 'one' of the worries and agree to let others go for now.

Accept there are some situations you cannot change or control. Write down your ideas below about how you can influence the way you choose.

Worry I can influence	Worry I cannot influence
E.g. Study problems	Financial issues

Q. In what ways can you deal with or influence the worry you choose?

Q. What plans do you have for the other worries, both the ones you can influence and the ones you cannot?

Q. How comfortable are you, about the worries you cannot influence?

1.5 EXERCISE 5: Stress Prescription

Identify a stressful situation or demand. These can be academic, personal or family related?

E.g.: Examination time- trying to finishing portions in time

Why do you think, that it is stressful. What are your thoughts, feelings and behaviors about that situations?

What can you do about changing these situations or demands?

Are you able to think about them/appraise them differently?

What resources you have to cope with the demand/ stressors?

This exercise part will be continued by knowing about the signs, symptoms and reactions to stress.

<u>Physical (Physiological and behavioural)</u>

- Racing heart
- Cold, sweaty hands
- Headache

- Shallow or erratic breathing
- Working longer hours
- Losing touch with friends
- Fatigue
- Sleep disturbances
- Weight changes

Cognitive or (Thoughts)

- Forgetting things
- Finding it hard to concentrate
- Worrying about things
- Negative self statement

Emotional

- Increased irritability or anger
- Anxiety
- Fearfulness
- Increased interpersonal conflicts

This will be continued with the next exercise.

EXERCISE-6- MAINTAINING A STRESS DIARY

One good way to learn about your optimal level of stress is to keep a stress dairy. In this diary, you can monitor your stress level and how you feel throughout the day.

Stress diary

Name: Is this a typical Day? Yes/No

Date:
More/less

Circle S/M/T/W/TH/F/S

Time of day	Intensity of stress	Duration of stress	Situation (circumstances, location, people)	Training event (Preceding event)	Signs and symptoms under each headings	Emotional reactions (your feeling)
Eg:9 am	1		Failure in examination Location- classroom People- Teacher and peer.	No organization in studies, inability to concentrate properly.	Physical symptoms, emotional symptoms under each heading.	Need more to be organized.

1.7 EXERCISE7: Identifying Life Stresses

Stress often results from changes in our lives. While change can be difficult, it can also be an opportunity for growth. List below can help you to identify what stressful changes are currently affecting you. All changes, whether positive or negative, have an effect on your life check off the ones you are facing now and put a ( ) there:

1. School- Test/exam, homework, project work, other school/ issues
2. Home life- separation from family, divorced parents, arrival of a new sibling, financial problems, other problems at home
3. Personal-conflicts with friends, stopped addiction, changes in health status, changes in personal goals or awareness, dietary change

NB: Choose one of the changes, you checked and write down your ideas on how you might take action to cope with the stresses it is causing.

Both physical and emotional steps you can take.

Remember to include available resource and people who can help you with your plan.

The issue plan to deal with is

My plan of action involves----------

The resources (people, Service, tools) I can use are ----------

1.8 EXERCISE8: Stress Questionnaire

How do you react to stress in the following situations?

Q. If I fail a test,

- I feel----------
- I say to myself----------
- I react by doing ----------

Q. If I get distracted from something that needs to be done?

- I feel----------
- I say to myself----------
- I react by doing ----------

Q. If I have something to do, that is very difficult for me?

- I feel----------
- I say to myself----------
- I react by doing ----------

Q. If I didn’t do work on time which is very essential at the moment?

- I feel----------
- I say to myself----------
- I react by doing ----------

Q. If I have a boring instructor?

- I feel----------
- I say to myself----------
- I react by doing----------

Q. If I don’t have a particular goal to work towards?

- I feel----------
- I say to myself----------
- I react by doing----------

Review all your answers carefully and discover yourself any changes you may need to make in order to handle stress differently

1.9 SUMMARY:

In this session you had analyzed your own stress and also came to know about the causes of stress.

2.0 SESSION 2: Building Your Own Stress Management Tool Box

INTRODUCTION

This session mainly concentrating on various techniques such as breathing and visualization exercises, planning balanced life style, progressive muscle relaxation exercise, and creating affirmation. These techniques will help the participants to reduce stress and improve in their academic performance.

2.1 **Breathing and visualization exercises**

This exercise will help you manage the stress and anxiety associated with taking exams. It is a good idea to practice the exercise every day. That way your body will began to relax just out of habit when you begin the exercise (this is called as relaxation response).

- Be comfortable, close your eyes, and begin to notice your breathing.

- Try to notice each breath and nothing else, as you inhale, say to yourself "one'' and as you exhale, say to yourself "two''.
- Keep doing this for few minutes when you feel relaxed, turn you attention from your breathing to a situation you find stressful (eg: picturing yourself sitting in the room, just before arriving the exam venue
- Imagine yourself finding the seat number.
- See yourself sitting comfortably.
- See yourself getting questions and reading each question calmly and with confidence.
- Picture yourself selecting questions you will do.
- See yourself writing answer to the questions in a relaxed and efficient manner.
- Know that you answer don't have to be perfect and accept that no one is perfect

- ❖ See yourself finishing the exam and turning it in, knowing that you have been stress full.
- ❖ Sit for a minute with that feeling of accomplishment and relief. Remind yourself that you had experienced stress in the past and that you will experience success again.
- ❖ Spend a few seconds enjoying the feeling of success and then focus on your breathing again when you feel ready, open your eyes and return to whatever you are doing.

Deep breath or Guide release of Tension

Whenever you feel anxious, panicky

- ❖ Be in a comfortable position.
- ❖ Take a slow, gentle breath, breath through nose
- ❖ Hold it for a second or two (count of two)
- ❖ Exhale slowly out through your mouth
- ❖ Repeat it with increasing the time

2.2 A Balanced life style

1) Calculate the number of hours you spend on college/studying (lecture, labs, independent work)?
2) Calculate the number of hours you spend socializing with friends?
3) Calculate the number of hours you spend exercising?
4) Calculate the number of hours you spend for leisure activities?

Now, go back and calculate the same items, this time using the no: of hour you ideally like to give to spend on each item. If you think there is an imbalance between, what is ideal and what you actually do, consider these questions.

1. What needs to change, in your lifestyle?

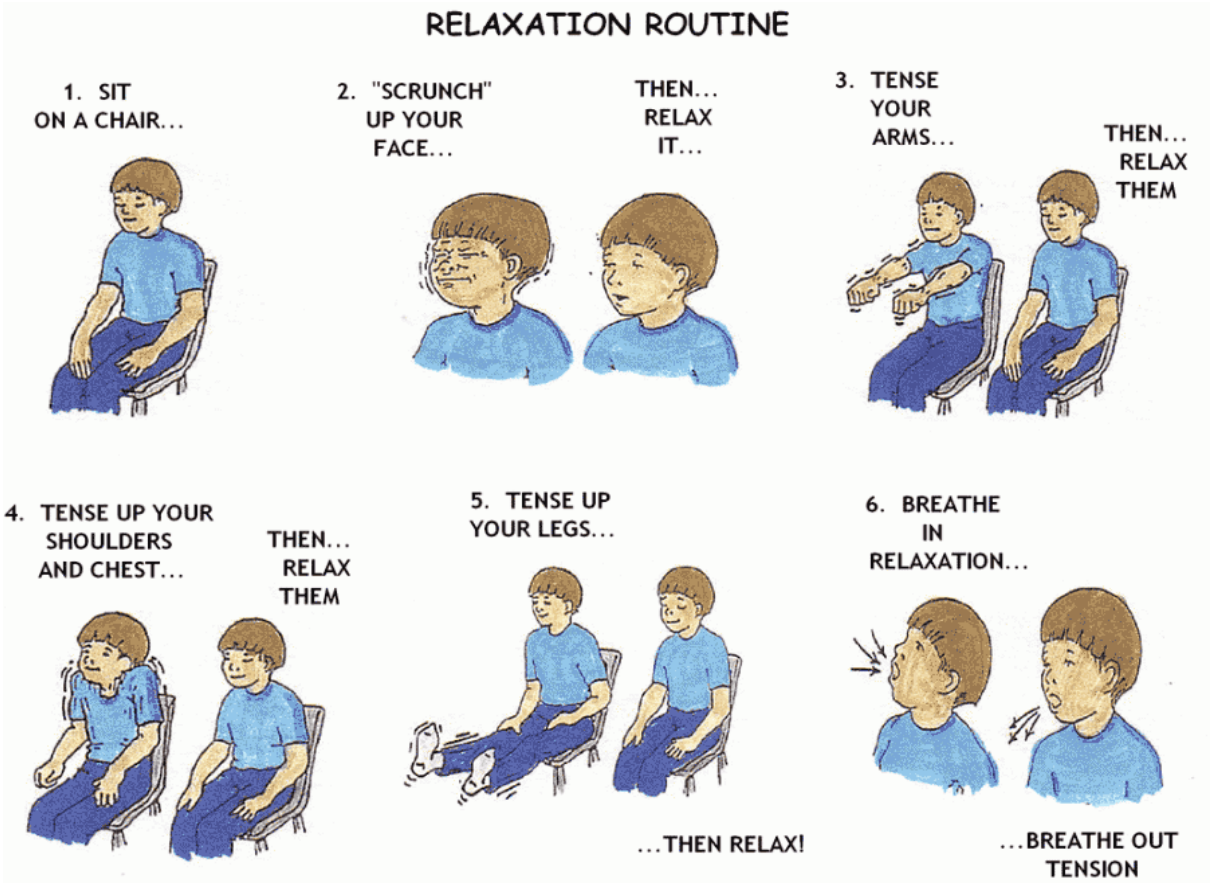
   ---

2. What might be the difficulties in changing?

   ---

3. What help might you need to make changes?

2.3



Instructions: Allow for 20-30 minutes in a day in a comfortable place, wear loose clothing. Advice to remove shoes, practice on empty stomach, close the eyes and have a passive attitude.

Steps

- ❖ Sit in a comfortable position.
- ❖ Close your eyes.
- ❖ Begin by noticing your breathing. Concentrate on your abdomen rise and fall with each breath (give a pause after each breath).
- ❖ Tense the muscles in the face by making a sour face.
- Hold on the face for four seconds and then release the muscle.

- Repeat the process twice (in various group throughout the body).
- Advice to notice the tension washing away with each tense and release cycle, it will become easier to release and relax each muscle group.

❖ Now, you should move your awareness to the shoulder and neck area.

- Tense the muscles in the neck by pressing the shoulders towards the ears and hold and count for four seconds and release.
- Notice the tension release.
- Inhale and exhale the same.

❖ Bring your awareness to the muscles in the arms.

- Tense the arms by curling the arms up towards your biceps and holding them as if you are lifting weight and holding it to your chest for 4 seconds and release.
- Advice to inhale through nose and exhale through mouth and can release residual tension in the arm.

❖ Bring your aware in the muscles in the hands. Tense the hands by clenching it to a fist holding a count of four seconds and release.

- Do the same breathing pattern.

❖ Notice the muscles in the upper back, around the shoulder blades.

- Tense the muscle in upper back by pressing should blades together and holding for a count of four seconds and release.

❖ Now notice on the abdomen and low back

- Advice to tense abdominal muscle by imagining that we are trying to touch the belly button of the spine pressing the low back in the chairs and hold for a count of four seconds and release.

❖ Feet

- Tense the muscles by pointing the toes towards the knees and again holding for 3 sec and then release the calf muscle.
- Remain quiet for some time.
- Mentally scan your body.
- For concluding take a deep breath hold it and say “Iam calm’’
- Open the eyes and give yourself time to be calmed.

2.4 Creating Affirmations

An affirmation is simply a statement of what you want. They are most effective if they are personal positive and in the present tense also they need to be practiced. So, try saying them several times a day, out loud if possible.

Here are some examples

1. Iam healthy.
2. I study well with my friends.
3. I have friends who love me.
4. I worked hard.

Now, you write 3 positive affirmations to yourself

Remember, personal, positive and present tense

1. ----------
2. ----------
3. ----------

2.5 SUMMARY:

In this session, you learned various stress reduction techniques like breathing and visualization exercises, progressive muscle relaxation exercises, and planned a balanced life style and created affirmations.

3.0 SESSION 3: Coping With Stress

INTRODUCTION

This session will make the participant to understand adaptive coping strategies need to implement in real life situations.

Coping resource can broadly be divided in to cognitive coping strategies and physical coping strategies some of these coping strategies will suit some people, others will not.

3.1 Cognitive Coping Strategies

There are good ways to combat stress producing thoughts. It includes strategies such as:-

a. Reframing: - Focus on the good not the bad; think in terms of 'wants instead of shoulders. E.g.: I want to read and understood this chapter in chemistry so I do well in my lab practical, "instead of**''.**"I have to read this difficult chapter in chemistry''

b. Challenging negative thinking:- Stopping the negative thoughts we may have about a situation or ourselves. E.g.: expecting failure, putting yourself down, feeling of inadequacy, a thought such as "Everyone seems to understood this except me". In order to gain control on negative thoughts, you must first became aware of them. Next yell 'stop' when they occur.

c. Positive self talk: Using positive language and statements to ourselves
   E.g.: I can do this, or I can understand this

d. Count to 10:- Allows you to gain control and perhaps, rethink the situation.

e. Keeping perspection: When under stress, it is easy to ask some questions
   1. Is this really a problem?
   2. Is this problem anyone else had?
   3. Does it really matter?

   "**Look on the bright side of life''** Cultivate optimism.

f. Reducing uncertainty: Seek information or clarification you may require to reduce the uncertainty

Behavioural coping strategies

a. Physical exercise- Short walk
b. Relaxation- Progressive muscle relaxation can be practiced
c. Breathing exercises
d. Smile and laugh-relaxes muscle tension.
e. Time management: clarifying priorities
    - Setting goals
    - Evaluating how time is spent
    - Developing an action plan
    - Overcoming distraction
    - Organizing time
    - Nurturing social/support/Friends
f. Seek help: Take support from college tutors or from counselors

3.2 Sorting Exercise

Instruction: Here, there are 24 cards. In that one Stressful situation, symptoms and a method or way of coping with stress will be printed on them. You have to sort these cards in to 3 bundles according to the categories mentioned above.

Stressful situation	Symptoms or reaction	Way of coping
E.g.: Losing best friend Failure in examination Fight with a friend Any delay or interruptions	Increased heartbeat Felt like crying Forgetting matters Getting tensed	Think positively Talk to friend Positive self talk

3.3 Study/ Social Time Table

Plan and organize your own time table during day and evening time, in a week in the table given below.

Daytime

Time	M	T	W	Th	F	S	Su
7.00 8.00 9.00 10.00 11.00 12.pm 1.pm 2.00 3.00 4.00 5.00							

Evening

Time	M	T	W	Th	F	S	Su
6.00 7.00 8.00 9.00 10.00							

Total Study hours	Total social hours	Total Physical/ Recreation hours

To do list

Priority	Item (specific)	Outcome

3.4 SUMMARY:

In this third session you all understood various adaptive coping mechanisms. These can be practiced very well in your daily life, that you can balance life to improve your personal and academic performance.

4.0 Summary: Managing Stress Successfully

Now that you have the tools to manage stress, use then! Allow yourself breaks each day when you can notice of your stress level and relax by practicing deep breathing. Give yourself credit for the times, you are able to achieve a few moments of relaxation in your busy schedule. Set aside a few minutes each day, in the morning and in the night, which you will devote positive thinking the more you practice stress management, the easier it will be to handle the stresses that come along. You will find that everything becomes more manageable when you are in control of stress.

ANNEXURE – M
MASTER DATA SHEET

EXPERIMENTAL GROUP SOCIO-DEMOGRAPHIC DATA

SL.	Age		Gender		Type of family		Area of residence		Father occupation		Mother occupation		Percentage of marks in tenth std			Homework hours			Distance to school from house				Relationship with friends			Close friends		Doing while having problem	
NO	14-16 yrs	17-19 yrs	M	F	N	U	R	U	Empyd	Busins	Emplyd	Hsewfe	70%above	60-70%	50-60%	> 1hr	1-2 hr	< 1hr	> 15 kms	10-15 kms	5-10 kms	<5 kms	VS	S	NS	Yes	No	Talking with parents	Talking with friends
1	0	1	1	0	0	1	0	1	1	0	1	0	0	1	0	0	0	1	0	1	0	1	0	0	1	1	0	1	0
2	1	0	0	1	1	0	0	1	0	1	0	1	1	0	0	1	0	0	0	1	0	1	0	1	1	0	1	1	0
3	0	1	1	0	1	0	0	1	0	1	0	1	1	0	0	1	0	0	1	0	0	1	0	0	1	0	1	1	0
4	0	1	0	1	0	1	0	1	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	1	1	0
5	1	0	0	1	0	1	0	1	0	1	1	0	1	0	0	1	0	0	1	0	0	1	0	1	1	0	1	1	0
6	1	0	0	1	1	0	0	1	0	0	1	0	1	0	0	1	0	0	1	0	0	1	0	1	1	0	1	1	0
7	1	0	1	0	1	0	0	1	0	0	1	0	1	0	0	1	0	0	1	0	0	1	0	1	1	0	1	1	0
8	1	0	1	0	1	0	0	1	0	1	1	0	1	0	0	1	0	0	0	1	0	1	0	1	1	0	1	1	0
9	1	0	0	1	1	0	0	1	0	1	1	0	1	0	0	1	0	0	1	0	0	1	0	1	1	0	1	1	0
10	1	0	0	1	1	0	0	1	0	1	1	0	1	0	0	0	1	0	1	0	0	1	0	1	1	0	1	1	0
11	1	0	0	1	0	1	0	1	0	1	1	0	1	0	0	0	1	0	1	0	0	1	0	1	1	0	1	1	0
12	1	0	0	1	1	0	0	1	0	1	1	0	1	0	0	0	1	0	0	1	1	0	0	1	0	1	0	1	0
13	1	0	0	1	1	0	0	1	0	1	1	0	1	0	0	1	0	0	0	1	0	1	0	1	0	1	0	1	0
14	1	0	0	1	1	0	0	1	0	1	1	0	1	0	0	1	0	0	0	1	1	0	0	1	0	1	0	0	1
15	1	0	0	1	1	0	0	1	0	1	1	0	1	0	0	1	0	0	0	1	1	0	0	1	0	1	0	0	1
16	1	0	1	0	0	1	0	1	0	1	1	0	1	0	0	1	0	0	0	1	1	0	0	1	0	1	0	0	1
17	1	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	0	0	1	1	0	0	1	0	1	0	0	1
18	1	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	0	1	0	0	1	0	1	0	1	0	1	0
19	0	1	1	0	0	1	0	1	0	1	1	0	1	0	0	1	0	0	1	0	0	1	0	1	0	0	1	1	0
20	1	0	1	0	1	0	0	1	0	1	1	0	1	0	0	1	0	0	1	0	0	1	0	1	0	0	1	1	0
21	1	0	1	0	1	0	0	1	0	0	1	0	1	0	0	1	0	0	1	0	0	1	0	1	1	1	0	0	1
22	0	1	1	0	1	0	0	1	0	1	1	0	1	0	0	0	0	0	1	1	0	1	0	1	1	1	0	0	1
23	0	1	1	0	0	1	0	1	0	1	1	0	1	0	0	0	0	0	1	0	0	1	0	1	0	1	0	1	0
24	0	1	1	0	1	0	0	1	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	1	0	1	0	1	0
25	1	0	1	0	1	0	0	1	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	1	0	1	0	1	0
26	1	0	1	0	1	0	0	1	0	1	0	0	1	0	0	1	0	0	1	1	0	1	0	1	0	1	0	1	0
27	1	0	1	0	0	1	0	1	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	1	0	0	1	0	1
28	1	0	1	0	1	0	0	1	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	1	0	1	1	0	1
29	1	0	1	0	1	0	0	1	0	1	0	1	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1
30	1	0	1	0	1	0	0	1	0	0	0	1	1	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1

CONTROL GROUP SOCIO-DEMOGRAPHIC DATA

SL. NO	Age		Gender		Type of family		Area of residence		Father occupation		Mother occupation		Percentage of marks in tenth std			Homework hours			Distance to school from house				Relationship with friends			Close friends		Doing while having problem	
	14-16 yrs	17-19 yrs	M	F	N	U	R	U	Empyd	Busins	Emplyd	Hsewfe	70%above	60-70%	50-60%	> 1hr	1-2 hr	< 1hr	> 15 kms	10-15 kms	5-10 kms	<5 kms	VS	S	NS	Yes	No	Talking with parents	Talking with friends
1	0	1	1	0	1	0	0	1	0	1	0	1	1	0	1	0	0	1	0	0	0	1	0	1	0	1	1	0	1
2	0	1	1	0	1	0	0	1	0	1	0	1	1	0	1	0	0	0	1	0	0	1	0	0	1	0	1	1	0
3	0	0	1	0	1	0	0	1	0	1	0	1	1	0	1	0	0	0	0	1	0	1	0	0	1	0	1	1	0
4	0	0	1	0	1	0	0	1	0	1	0	1	1	0	1	0	0	0	0	1	0	1	0	0	1	0	1	1	0
5	0	1	1	0	1	0	0	1	0	1	0	1	1	0	1	0	0	0	0	1	0	0	1	1	0	0	1	0	1
6	0	1	1	0	1	0	0	1	0	1	0	1	1	0	1	0	0	0	1	0	0	0	1	0	1	0	1	0	1
7	1	0	1	0	1	0	0	1	0	1	0	1	1	0	1	0	0	0	1	0	0	0	1	1	0	0	1	0	1
8	0	1	1	0	1	0	0	0	0	1	0	1	1	0	1	0	0	0	1	0	0	0	1	1	0	0	1	0	1
9	0	1	1	0	1	0	0	0	0	1	0	1	1	0	1	0	0	0	1	0	0	0	1	1	0	0	1	0	1
10	0	1	0	0	1	0	0	1	0	1	0	0	1	0	1	0	0	0	1	0	0	0	1	1	0	0	1	0	1
11	0	1	0	0	1	0	0	1	0	1	0	0	1	0	1	0	0	0	1	0	0	1	0	0	1	0	1	0	1
12	0	1	0	0	1	0	1	1	0	1	0	0	0	0	1	0	0	0	1	0	0	1	0	0	1	0	1	0	0
13	0	1	0	0	1	0	1	0	1	1	0	1	0	0	1	0	0	0	1	0	0	1	0	0	1	0	1	0	0
14	0	1	0	0	1	0	1	0	1	1	0	1	0	0	1	0	0	0	1	0	0	1	0	0	1	0	1	1	1
15	0	1	0	0	1	0	1	0	1	1	0	1	0	0	1	0	0	0	0	0	0	1	1	0	1	0	1	1	1
16	0	1	0	0	1	0	1	1	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	1	0	1
17	0	1	0	0	1	0	1	0	1	1	0	1	0	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	0
18	0	1	0	0	0	0	1	0	1	1	0	1	0	0	1	0	0	1	0	0	0	1	1	0	1	0	0	1	0
19	0	1	0	0	0	0	1	0	1	1	0	1	0	0	1	0	0	1	0	0	0	1	1	0	1	0	0	1	0
20	0	1	0	0	1	0	1	0	0	1	0	1	0	1	1	0	0	1	0	0	0	1	1	0	1	0	0	1	0
21	0	1	0	0	1	0	1	0	0	1	0	1	0	1	1	0	0	1	0	0	1	0	1	1	0	1	0	0	0
22	0	1	0	1	0	0	0	0	0	1	0	1	0	1	1	0	0	1	0	0	1	0	1	0	1	1	0	1	0
23	1	0	1	1	0	1	0	0	0	0	0	1	0	1	1	0	1	1	0	0	1	0	1	0	1	1	0	1	0
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29	0	1	1	0	1	0	0	1	0	0	1	1	0	1	0	0	1	1	0	0	1	1	0	1	0	0	1	0	0
30	0	1	1	0	1	0	0	1	0	0	1	1	0	1	0	0	1	1	0	0	1	1	0	1	0	0	1	0	0

EXPERIMENTAL GROUP PRE – TEST SSRS

Sl. no	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
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2	4	3	5	5	6	6	6	6	5	5	5	5	2	5	5	4	5	4	4	5	5	4	3	3	4	4	5	5	5	5	5	4	4	4	4
3	5	4	5	6	6	3	5	5	6	6	6	6	3	3	5	5	5	3	4	4	3	5	4	4	3	5	4	4	3	5	6	6	4	4	5
4	6	5	4	4	6	3	5	4	6	3	5	5	4	4	6	6	4	4	5	5	5	5	5	5	5	5	5	5	5	5	4	4	2	5	6
5	3	6	4	4	3	3	5	5	6	3	5	4	5	2	5	4	4	2	6	6	6	6	6	6	6	6	6	6	6	6	3	5	3	6	6
6	4	4	3	5	4	5	4	3	3	3	5	5	5	3	4	3	5	3	6	3	5	5	6	3	5	5	6	3	5	5	2	3	4	6	6
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8	6	6	6	6	6		4	4	5	5	3	5	4	2	3	1	4	5	3	3	5	5	3	3	5	5	3	3	5	5	2	2	5	5	4
9	6	3	5	5	4	4	2	5	6	6	4	4	5	3	5	2	2	5	4	5	4	3	4	5	4	3	4	5	4	3	4	5	6	6	5
10	6	3	5	4	3	5	3	6	4	4	2	5	6	4	4	5	3	5	5	5	3	5	5	5	3	5	5	5	3	5	4	3	3	4	6
11	3	3	5	5	2	3	4	6	3	5	3	6	6	5	5	5	4	4	6	6	4	4	6	6	4	4	6	6	4	4	5	5	5	6	4
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13	5	5	3	5	2	2	5	5	1	4	5	4	5	4	6	5	3	6	3	5	3	6	3	5	3	6	3	5	3	6	4	5	6	3	2
14	6	6	4	4	5	3	5	6	2	2	5	5	6	3	4	3	4	6	2	3	4	6	2	3	4	6	2	3	4	6	3	2	6	5	1
15	4	4	2	5	5	4	4	5	4	5	6	6	5	6	5	4	5	4	1	4	5	4	1	4	5	4	1	4	5	4	2	3	6	6	2
16	3	5	3	6	4	2	5	6	4	3	3	4	4	5	6	2	5	5	2	2	5	5	2	2	5	5	2	2	5	5	3	4	6	3	4
17	2	3	4	6	5	3	6	4	5	5	5	6	6	6	4	4	5	6	4	5	6	6	4	5	6	6	4	5	6	6	6	6	4	4	4
18	1	4	5	4	3	4	6	5	6	3	3	4	4	4	2	5	6	4	4	3	3	4	4	3	3	4	4	3	3	4	4	4	2	5	5
19	2	2	5	5	4	5	4	4	4	5	6	3	3	5	3	6	5	5	5	5	5	6	5	5	5	6	5	5	5	6	3	5	3	6	6
20	4	5	6	6	2	5	5	5	3	2	6	5	2	3	4	6	6	3	6	3	3	4	6	3	3	4	6	3	3	4	2	3	4	6	4
21	4	3	3	4	4	4	2	5	2	3	6	6	1	4	5	4	5	4	4	5	6	3	4	5	6	3	4	5	6	3	1	4	5	4	3
22	5	5	5	6	3	5	3	6	3	4	6	3	2	2	5	5	6	2	3	2	6	5	3	2	6	5	3	2	6	5	2	2	5	5	6
23	6	3	3	4	2	3	4	6	4	4	3	5	4	5	6	6	5	5	2	3	6	6	2	3	6	6	2	3	6	6	4	5	6	6	5
24	4	5	6	3	1	4	5	4	5	5	5	5	4	3	3	4	5	3	3	4	6	3	3	4	6	3	3	4	6	3	4	3	3	4	4
25	3	2	6	5	2	2	5	5	6	6	6	6	5	5	5	6	5	5	1	4	5	4	1	4	5	4	1	4	5	4	5	5	5	6	5
26	2	3	6	6	4	5	6	6	6	3	5	5	6	3	3	4	5	3	2	2	5	5	2	2	5	5	2	2	5	5	6	3	3	4	6
27	3	4	6	3	4	3	3	4	6	3	5	4	4	5	6	3	4	5	4	5	6	6	4	5	6	6	4	5	6	6	4	5	6	3	4
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29	2	5	6	6	6	3	3	4	4	5	4	3	2	3	6	6	6	3	5	5	5	6	5	5	5	6	5	5	5	6	2	3	6	6	4
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EXPERIMENTAL GROUP POST – TEST SSRS

Sl. no	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
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2	4	4	5	4	5	6	6	5		5	4	5	4	1	4	5	4	1	4	5	4	5	4	5	6	6	5		5	4	5	4	1	4	5
3	4	5	6	4	3	3	4	4	5	6	2	5	5	2	2	5	5	2	2	5	5	6	4	3	3	4	4	5	6	2	5	5	2	2	5
4	5	6	4	5	5	5	6	6	6	4	4	5	6	4	5	6	6	4	5	6	6	4	5	5	5	6	6	6	4	4	5	6	4	5	6
5	6	6	5	6	3	3	4	4	4	2	5	6	4	4	3	3	4	4	3	3	6	5	6	3	3	4	4	4	2	5	6	4	4	3	3
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7	3	5	5	3	2	6	5	2	3	4	6	6	3	6	3	3	4	6	3	3	5	5	3	2	6	5	2	3	4	6	6	3	6	3	3
8	2	2	5	2	3	6	6	1	4	5	4	5	4	4	5	6	3	4	5	6	2	5	2	3	6	6	1	4	5	4	5	4	4	5	6
9	3	3	6	3	4	6	3	2	2	5	5	6	2	3	2	6	5	3	2	6	3	6	3	4	6	3	2	2	5	5	6	2	3	2	6
10	4	3	3	4	3	4	3	3	3	4	4	3	5	5	5	6	5	5	5	4	4	5	5	5	6	5	5	5	4	4	4	3	3	3	4
11	2	5		2	2	5	5	6	3	4	3	4	6	3	3	4	6	3	3	5	5	6	3	3	4	6	3	3	5	5	2	4	2	3	4
12	4	4	5	4	5	6	6	5		5	4	5	4	1	4	5	4	1	4	5	5	5	5	6	5	5	5	4	4	4	4	3	3	3	4
13	4	5	6	4	3	3	4	4	5	6	2	5	5	2	2	5	5	2	2	5	6	3	3	4	6	3	3	5	5	3	4	6	2	3	4
14	5	6	4	5	5	5	6	6	6	4	4	5	6	4	5	6	6	4	5	6	6	6	5	4	5	4	5	4	1	4	5	4	1	4	5
15	6	6	5	6	3	3	4	4	4	2	5	6	4	4	3	3	4	4	3	3	3	4	4	5	6	2	5	5	2	2	5	5	2	2	5
16	4	4	4	4	5	6	3	3	5	3	6	5	5	5	5	5	6	5	5	5	5	6	6	6	4	4	5	6	4	5	6	6	4	5	6
17	3	5	5	3	2	6	5	2	3	4	6	6	3	6	3	3	4	6	3	3	3	4	4	4	2	5	6	4	4	3	3	4	4	3	3
18	2	2	5	2	3	6	6	1	4	5	4	5	4	4	5	6	3	4	5	6	6	3	3	5	3	6	5	5	5	5	5	6	5	5	5
19	3	3	6	3	4	6	3	2	2	5	5	6	2	3	2	6	5	3	2	6	6	5	2	3	4	6	6	3	6	3	3	4	6	3	3
20	4	4	3	3	3	4	3	0	3	0	1	2	3	4	2	2	2	5	2	3	6	6	1	4	5	4	5	4	4	5	6	3	4	5	6
21	6	2	5	5	2	2	5	5	2	2	5	6	3	5	6	5	3	6	3	4	6	3	2	2	5	5	6	2	3	2	6	5	3	2	6
22	4	4	5	6	4	5	6	6	4	5	6	6	6	3	4	6	3	2	2	2	2	3	3	2	6	2	5	5	2	2	5	5	2	2	5
23	2	5	6	4	4	3	3	4	4	3	3	3	4	6	3	4	2	3	5	4	3	2	2	3	4	4	5	6	4	5	6	6	4	5	6
24	6	2	5	5	2	2	5	5	2	2	5	6	3	3	3	4	4	3	3	3	4	2	3	2	2	5	6	4	4	3	3	4	4	3	3
25	4	4	5	6	4	5	6	6	4	5	6	6	6	6	2	5	5	2	2	5	5	2	2	5	6	3	5	5	6	5	5	5	2	3	3
26	2	5	6	4	4	3	3	4	4	3	3	3	4	4	4	5	6	4	5	6	6	4	5	6	6	6	3	3	4	6	3	3	1	2	3
27	5	5	6	5	5	5	3	4	4	3	3	3	2	2	5	6	4	4	3	3	4	4	3	3	3	4	3	5	6	5	5	1	1	2	3
28	3	3	4	6	3	3	4	5	5	2	2	5	3	6	4	5	5	6	5	5	5	2	3	2		3	3	3	4	6	3	1	3	3	3
29	4	4	5	6	4	0	2	5	6	4	5	6	4	4		3	3	4	6	3	3	3	5	6	5	5	3	4	6	3	3	1	2	2	3
30	2	5	6	4	4	1	1	6	4	4	3	3	3	2	2	3	2	3	2	4	5	3	3	4	6	3	4	3	3	4	5	4	3	3	1

EXPERIMENTAL GROUP PRE – TEST BAI

Sl. no	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
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2	2	1	2	1	2	4	3	0	0	3	2	4	2	3	3	2	2	0	2	3	0
3	3	2	3	0	3	2	2	3	3	2	3	2	1	2	2	1	2	0	1	3	3
4	2	3	3	3	2	3	3	2	2	0	2	3	0	3	2	3	2	3	0	2	2
5	2	3	2	2	1	2	2	1	2	0	1	2	1	2	1	2	2	2	1	2	1
6	1	2	2	1	0	3	2	3	2	3	0	3	2	3	0	3	1	1	2	3	3
7	0	1	3	3	1	2	1	2	2	2	1	2	3	3	3	2	2	2	3	2	2
8	3	1	2	2	2	3	0	3	1	1	2	3	3	2	2	0	3	3	3	3	3
9	2	2	3	1	3	3	3	2	2	2	3	3	2	2	1	0		1	2	2	2
10	1	3	1	3	3	2	2	0	3	3	3	2	1	3	3	3	2	3	1	1	2
11	3	2	2	2	2	2	1	0		1	2	2	1	2	2	2	3	2	1	3	2
12	2	1	3	3	1	3	3	3	2	3	1	3	0	2	1	2	1	2	1	2	2
13	1	2	2	2	1	2	2	2	3	2	1	2	1	3	0	3	0	3	0	3	1
14	3	2	2	0	2	3	1	2	2	3	2	3	2	3	3	3	3	3	3	2	2
15	2	3	0	0	3	1	3	3	3	2	3	1	1	2	2	2	2	2	2	0	3
16	3	3	2	1	2	2	2	2	2	0	2	2	1	2	1	2	1	2	1	0	1
17	1	3	0	3	2	1	3	2	0	0	2	1	3	3	3	3	3	3	3	3	2
18	2	2	1	2	1	2	4	3	0	0	3	2	4	2	2	2	2	2	2	1	3
19	3	3	2	3	0	3	2	2	3	3	2	3	2	3	2	2	3	2	2	2	2
20	2	2	3	3	3	2	3	3	2	2	0	2	3	2	3	3	2	3	3	3	1
21	1	2	3	2	2	1	2	2	1	2	0	1	2	1	2	2	1	2	2	2	0
22	0	1	2	2	1	0	3	2	3	2	3	0	3	0	3	2	0	3	2	1	1
23	1	0	1	3	3	1	2	1	2	2	2	1	2	1	2	1	1	2	1	0	2
24	2	3	1	2	2	2	3	0	3	1	1	2	3	2	3	0	2	3	0	1	3
25	3	2	2	3	1	3	3	3	2	2	2	3	3	3	3	3	3	3	3	2	3
26	3	1	3	1	3	3	2	2	0	3	3	3	2	3	2	2	3	2	2	3	2
27	2	3	2	2	2	2	2	1	0		1	2	2	2	2	1	2	2	1	3	1
28	1	2	1	3	3	1	3	3	3	2	3	1	3	1	3	3	1	3	3	2	1
29	1	1	2	2	2	1	2	2	2	3	2	1	2	1	2	2	1	2	2	1	2
30	2	3	2	2	0	2	3	1	2	2	3	2	3	1	1	2	3	1	1	1	1

EXPERIMENTAL GROUP POST – TEST BAI

Sl. No	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
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2	3	3	2	3	1	3	0	2	1	2	1	2	4	3	0	0	3	2	3	3	3
3	2	2	3	2	1	2	1	3	0	3	0	3	2	2	3	3	2	1	2	2	2
4	1	2	2	3	2	3	2	3	3	3	3	3	3	3	2	2	0	1	2	1	2
5	3	3	3	2	3	1	1	2	2	2	2	2	2	2	1	2	0	3	3	3	3
6	2	2	2	0	2	2	1	2	1	2	1	2	3	2	3	2	3	4	2	2	2
7	3	2	0	0	2	1	3	3	3	3	3	3	2	1	2	2	2	2	3	2	2
8	4	3	0	0	3	2	4	2	2	2	2	2	3	0	3	1	1	3	2	3	3
9	2	2	3	3	2	3	2	3	2	2	3	2	3	3	2	2	2	2	1	2	2
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11	2	2	1	2	0	1	2	1	2	2	1	2	2	1	0	3	1	2	2	0	1
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CONTROL GROUP PRE – TEST SSRS

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CONTROL GROUP PRE – TEST BAI

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CONTROL GROUP POST – TEST BAI

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26	3	1	3	1	3	3	2	2	0	3	3	3	2	3	2	2	3	2	2	3	2
27	2	3	2	2	2	2	2	1	0		1	2	2	2	2	1	2	2	1	3	1
28	1	2	1	3	3	1	3	3	3	2	3	1	3	1	3	3	1	3	3	2	1
29	1	1	2	2	2	1	2	2	2	3	2	1	2	1	2	2	1	2	2	1	2
30	2	3	2	2	0	2	3	1	2	2	3	2	3	1	1	2	3	1	1	1	1

ANNEXURE - N

TABLE OF FORMULAS

Mean $\bar{x} = \frac{\sum x}{n}$

Standard Deviation (SD) = $\sqrt{\frac{\sum(x-\bar{x})^2}{n}}$

Paired t test

$$\bar{t} = \frac{|d|}{SE(d)}$$

$$SE = \sigma d = \sqrt{1/n\text{-}1\Sigma\ (d\text{-}d)^2}$$

$$\sqrt{n}$$

Unpaired t test

$$t = \frac{X_1 - X_2}{SE(d)}$$

Chi –Square test for contingency table $\chi^2 = \frac{\sum(o-E)^2}{E}$

Chi – Square test (if< 5 scores in 2x2 table) $\chi^2 = \frac{N\left((ad-bc)^{-\frac{N}{2}}\right)}{(a+b)(b+c)(c+d)(a+c)}$