

**EFFECTIVENESS OF TENSING TOE RELAXATION TECHNIQUE IN
REDUCING TEST ANXIETY AMONG ADOLESCENTS IN
A SELECTED SCHOOL AT KULASEKHARAM, IN
KANYAKUMARI DISTRICT.**



**A DISSERTATION SUBMITTED TO THE TAMILNADU
DR. M.G.R. MEDICAL UNIVERSITY, CHENNAI,
IN PARTIAL FULFILMENT FOR THE
DEGREE OF MASTER OF
SCIENCE IN NURSING
APRIL 2015**

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.....
INTERNAL EXAMINER

.....
EXTERNAL EXAMINER

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Approved by the dissertation committee on

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BONAFIDE CERTIFICATE

This is to certify that the dissertation entitled "**A study to assess the effectiveness of tensing toe relaxation technique in reducing test anxiety among adolescent in a selected school at Kulasekharam, Kanyakumari.**" is the bonafide work done by **Miss. Sabisitha.S**, II year M.Sc. Nursing, Sree Mookambika College of Nursing, Kulasekharam, under the guidance of **Mrs. Manju Packiyavathy, MSc(N)**, Associate Professor department of Child Health Nursing, in partial fulfilment of the requirement for the degree of Master of Science in Nursing under The Tamilnadu Dr. M.G.R. Medical University, Chennai.

Place : Kulasekharam

Principal

Date : 09.02.2015

Sree Mookambika College of Nursing.

DECLARATION

I hereby declare that the present dissertation titled “**A study to assess the effectiveness of tensing toe relaxation technique in reducing test anxiety among adolescent in a selected school at Kulasekharam, Kanyakumari.**” is the outcome of the original research work under taken by me under the guidance of **Mrs. Manju Packiavathy, MSc(N)**, Associate Professor department of Child Health Nursing, SreeMookambika College of Nursing, Kulasekharam. I also declare that the material of this has not formed anyway the basis for the awarded of any degree or diploma in this university or any universities.

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INVESTIGATOR

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ABSTRACT

INTRODUCTION

Adolescent anxiety and depressive disorders should be thought of any time an adolescent's social, academic or behavioural functioning starts to deteriorate without an obvious explanation. In teenage years depression and anxiety increases.

Adolescent anxiety can cause both an emotional and physical reaction. Unexplained or unreasonable feelings of fear and obsessive or negative thoughts are psychological symptoms of an anxiety disorder. Increased heart rate, rapid breathing or difficulty catching one's breath and excessive sweating in non-threatening situations are common physical symptoms of anxiety disorders. They may happen in a normal situation when a teenager is faced with a difficult situation like speaking in front of the class but when they appear suddenly for no reason, an anxiety disorder might be the cause. Teenagers with an anxiety disorder are placed at an increased risk for abusing alcohol and drugs and this can result in co-occurring disorder.

OBJECTIVE

The overall objective of the study to assess the effectiveness of tensing toe relaxation technique in reducing test anxiety among adolescent.

METHODOLOGY

This study based on pre experimental one group pretest posttest design. Pilot study was conducted on 6 samples. After conducting the pilot study, a total of 60 samples were selected for the main study by purposive sampling technique.

The investigator conducted a main study in a sample of 60 adolescents with test anxiety. Verbal consent was obtained from the sample and confidentiality was maintained.

Modified test anxiety questionnaire was used to assess the test anxiety among adolescents. It has 10 items related to test anxiety. Data were analyzed by descriptive and inferential statistics.

FINDINGS OF THE STUDY

The findings of the study revealed that the pretest mean score as 30.83. A comparison was done between the pre and post test level of test anxiety by paired 't' test. The t test was 14.33 at $p < 0.05$, that was statistically highly significant.

The association of level of test anxiety with their demographic variables such as age, sex, birth order, education and occupation status of parents, family income, type of family, type of school and child accompanying was tested by chi square test and found to be insignificant with level of test anxiety.

CONCLUSION

The study has concluded that the adolescents who had undergone tensing toe relaxation technique showed significant decrease in the level of their test anxiety. This shows the children need practice of tensing toe relaxation technique during each stage of their development to reduce their test anxiety, which may internally enhance their academic performance.

Chapter - I

INTRODUCTION

Background of the Study

“Adolescence is like having only enough light to see the step directly” (Sarah Addison Allen)

“Poetry is adolescence fermented and thus preserved” (Jose Ortega)

“Snow and adolescence are the only problems that disappear if you ignore them long enough” (Earl Wilson)

Adolescence is derived from the Latin word ‘ADOLESCENCE’ meaning to grow into maturity. Adolescence is a period of transition from childhood to adulthood during which the individual learns the skills needed to flourish as an adult. Adolescence is considered as crucial and significant period of an individual’s life. It represents a period of growth and change in nearly all aspects of the child’s physical, mental, social and emotional life. Adolescence has been described by Stanley hall as “the period of storm and stress of human life”. It is also a period of anxieties and worries. Then it is the period of ambitions as well as conflicts and complexities (Sathe, Vishranthiuttam 2012).

A thorough understanding of adolescence in society depends on information from various perspectives including psychology, biology, history, sociology, education and anthropology, within all of these perspectives, adolescence is viewed as a transitional period between childhood and adulthood, whose cultural purpose is the preparation of children for adult roles. It is a period of multiple transitions involving education, training, employment and unemployment as well as transitions from one living circumstance to another (Divya Mohan, 2012).

In studying adolescent development adolescence can be defined biologically as the physical transition marked by the onset of puberty and the termination of physical growth, cognitively, as changes in the ability to think abstractly and multi - dimensionally or socially as a period of preparation for adult roles. Major pubertal and biological changes include changes to the sex organs, height, weight and muscle mass as well as major changes in brain structure and organization. Cognitive advances

encompass both increases in knowledge and in the ability to think abstractly and to reason more effectively (Shahandeh 2010).

The study of adolescent development often involves interdisciplinary collaborations. For example researchers in neuroscience or bio-behavioural health might focus on pubertal changes in brain structure and its effects on cognition or social relations. Sociologists interested in adolescence might focus on the acquisition of social roles(Campus blues 2012).

Most adolescents have concerns about being accepted by their peers, but many teens with ADHD have come to expect some social rejection due to their difficulties with controlling their behavior and understanding other's social signals. It is easy to see how academic, social, and family strains can create a heavy emotional burden for adolescents. Low self esteem caused by academic failure and social rejection can lead to depression, defensiveness, pessimism about their future, hostility, and physical aggression combined and it can pave the way for unsafe sexual activity, alcohol, tobacco or drug abuse and other high risk behavior.

Adolescent anxiety and depressive disorders should be thought of any time an adolescent's social, academic or behavioural functioning starts to deteriorate without an obvious explanation. In teenage years depression and anxiety increases.

Adolescent anxiety can cause both an emotional and physical reaction. Unexplained or unreasonable feelings of fear and obsessive or negative thoughts are psychological symptoms of an anxiety disorder. Increased heart rate, rapid breathing or difficulty catching one's breath and excessive sweating in non-threatening situations are common physical symptoms of anxiety disorders. They may happen in a normal situation when a teenager is faced with a difficult situation like speaking in front of the class but when they appear suddenly for no reason, an anxiety disorder might be the cause. Teenagers with an anxiety disorder are placed at an increased risk for abusing alcohol and drugs and this can result in co-occurring disorder(NAMI 2009).

Test anxiety can also be labeled and anticipatory anxiety, Situational anxiety or evaluation anxiety some anxiety is normal and often helpful to stay mentally and physically alert. When one experiences too much anxiety. However it can result in emotional or physical distress, difficulty concentrating emotional worry. Test anxiety

has been shown to have a consistently negative relationship with test performance, and test anxious students are found to perform 12% below their non-anxious peers (Richard Driscoll 2010).

Test and evaluative situations have emerged as one potent cause of anxiety provoking stimuli in our society, which is important in determining individuals status in school, college and works. Contemporary society is best described as test oriented and test consuming (Moshe Zeidner 1998).

We live in a test conscious, test giving culture in which the lives of people are in part determinant by their test performance. Test is widely used in education and by the industrial, government and military sectors to help make decisions about people. It is impossible to grow up in modern society without encountering some type of test (Moshe Zeidner 1998).

Test anxiety is a psychological condition in which people experience extreme distress and anxiety in testing situations. It is common among students. Students experience stress or anxiety before an exam. It interferes with their learning and can lead to poor performance (Kendra cherry 2012).

Test anxiety results in a combination of cognitive and physical response that are aroused in testing situations or in similar situation in which a person believes that he or she is being personally evaluated (Gregory J. Cizek, Samantha S. Burg, 2006).

The symptoms of test anxiety can vary considerably and range from mild to severe. Some students experience only mild symptoms of test anxiety and some may experience panic attacks before or during exams. The physical symptoms of test anxiety include sweaty palms, shaky hands, rapid heart beat, dry mouth, fainting and troubled sleep at night before a test, nausea and butterflies in stomach. The cognitive and behavioural symptoms include fidgeting or outright avoidance of testing situation, trouble concentrating on the test, mind goes blank during a test. The emotional symptoms can include depression, low self-esteem, anger and a feeling of hopelessness (Kendra cherry 2012).

Test anxiety can develop for a number of reasons. There may be some prior negative experience with test taking that secures on the activating event. This kind of anxiety can build as the testing situation approaches and can interfere with the students ability to prepare adequately. Lack of confidence, fear of failure and other negative thought processes may also contribute to test anxiety. Test anxiety construct is considered as a situation specific trait accounting for individual differences in the extent to which people find exam threatening (Campus Blues (2012)).

Many students however experience test anxiety students with test anxiety experience high level of stress, nervousness and apprehension during testing and evaluative situations that significantly interfere with their performance, emotional and behavioural wellbeing and attitude towards school (Cizek and Burg 2006, Huberty 2009).

Test anxiety is a widespread problem in school, and Shakes (1996) estimated that 30% of all students suffer from some level of test anxiety. Test anxiety begins in childhood, and as testing experiences increase, an individual's test anxiety levels may also increase because of compounding episodes of poor performance. Test-anxious students report the inability to recall information when in a testing situation (Birenbaum and Nasser (1994)).

Many strategies are there to reduce anxiety before and during tests. Tensing toe relaxation technique reduce the test anxiety among students. Practice whole body (progressive muscle) relaxation exercises can give better outcome. Tensing toe relaxation technique also include the progressive muscle relaxation.

Need and Significance of the Study

According to W.H.Auden, the modern era is in the age of anxiety” Anxiety is a diffusely highly unpleasant, often vague feeling of apprehension accompanied by test anxiety. It is world wide phenomenon. It is a big educational problem experienced by millions of students all over the world. The epidemic rate of test anxiety of students of is 30 to 40%. The students with test anxiety have educational improvement lower than normal students (Shahandeh 2010).

Anxiety disorders are the most common psychiatric condition in the united states affecting 40 million people annually. Anxiety is one of the most common

psychological disorders in school aged children and adolescents world wide. These figures could be underestimated since anxiety among a large number of children and adolescents goes undiagnosed owing too the internalized nature of its symptoms (NHM, 2006).

The latest report by the national crime records Bureau has positioned Tamil Nadu as the Indian State with highest suicide rate. At least in part this is happening due to exam pressure among adolescents emphasizing the imperative need to understand the pattern of anxiety and various factors contributing to it among students. The present study was conducted to analyze the level of state anxiety among board exam attending school students in Tamilnadu India.

Anxiety is an emotional and behavioural disorder caused by the activation of sympathetic nervous system. In the domain of education, high level of anxiety is often experienced by students during performance related activities such as exams. In fact academic examinations and school work are considered to be most stressful events of adolescents life.

According To Tamilnadu statistics, all board exam going students had increased level of anxiety. Which was particularly higher among boys and 10th standard board exam going students. Analysis of variables showed that students from nuclear families presented higher anxiety levels compared to their desired competitive group.

A worried teenager performs less well in school, sports and social interactions. Too much worry can also result in a teenager failing to achieve to his potential some teenagers who experience persistent anxiety may also develop suicidal feelings or engage in self-destructive behaviours, These situations require immediate attention and treatment (American academy of child and adolescent psychiatry, 2008).

Test anxiety is a serious academic impairment and arguably the most prevalent handicaps in our schools today. Majority of students hate exams as the major source of worry and stress in their lives. If left untreated, anxieties continue into adulthood where they restrict career choices and quality of life (Richard Driscoll, 2010).

With the exception of a few research studies (Verma& Gupta, 1990; Verma, Sharma & Larson, 2002), academic stress and adolescent distress has not been explored in great detail in India. It is important to note that this issue is one that affects

a small proportion of Indian youth, i.e., those who are fortunate enough to attend and graduate from high school (about 12-15 million students per year) (Shula, 2005).

Mental health professionals in India, however, have identified academic pressure as an acute stress factor that leads to mental distress, and in extreme cases, to suicide. “Children,” psychologist Dr. Matthew Kurien says, “are under pressure to deliver at school; they are under pressure to appear for competitive exams”. Around exam time and when exam results are announced, when academic stress is very high, suicide hotlines in many cities across the country are swamped with calls. “I get hundreds of calls from students who are contemplating suicide because they could not achieve the good scores expected by their parents,” says phone counselor Elizabeth Vadakkekara (Iype, 2011).

Statement of the Problem

A study to assess the effectiveness of tensing toe relaxation technique in reducing test anxiety among adolescents in selected school at Kulasekharam in Kanyakumari district.

Objectives of the study

1. To assess the level of test anxiety among adolescents before intervention.
2. To assess the level of test anxiety among adolescents after intervention.
3. To assess the effectiveness of tensing toe relaxation technique among adolescents after intervention.
4. To find the association between the level of test anxiety and selected demographic variables such as age, sex, birth order, education & occupation of parents, income, type of family and person accompanying with child.

Hypotheses

1. There is significant reduction in the level of test anxiety after tensing toe relaxation technique among adolescents.
2. There is a significant association between the level of test anxiety and selected demographic variables such as age, sex, birth order, education & occupation of parents, income, type of family and person accompanying the child.

Operational Definitions

Effect

In this study, effect refers to the reduction in the level of test anxiety among adolescents after their 14 days practice of tensing toe relaxation technique as measured by modified test anxiety questionnaire.

Tensing toe Relaxation technique

In this study tensing toe relaxation technique refers to relaxation of the toe muscles by closing of eyes and upward flexion of toes for 10 seconds and slowly release it and was repeated for 10 times.

Test anxiety

Test anxiety is a combination of nervousness, sweaty palms, shaky hands, nauseated feeling, tension that occur during test situations.

Adolescents

In this study adolescents refers to those children who belong to the age group of 14 to 15 years.

Assumption

1. All adolescents have test anxiety.
2. Tensing toe relaxation technique helps to reduce test anxiety among adolescents.
3. Tensing toe relaxation technique helps to reduce test anxiety among all children.

Delimitations

The study is delimited to:

1. Adolescents of 14-15 years.
2. 60 samples.
3. One school only.

Ethical Consideration

The study was conducted after getting the approval from the dissertation committee of Sree Mookambika Institute of Medical Sciences. Oral consent was obtained from each sample and parents, assurance was given to the sample and privacy was maintained.

Conceptual Frame work

Newman(1995) views wholism as both as philosophical and a biological concept. Wholism includes relationships that arise from wholeless, dynamic freedom and creativity as the system responds to stressors from the internal and external environment. The Newman systems model is a unique system based on perspective that provides a unifying focus for approaching a wide range of nursing concerns.

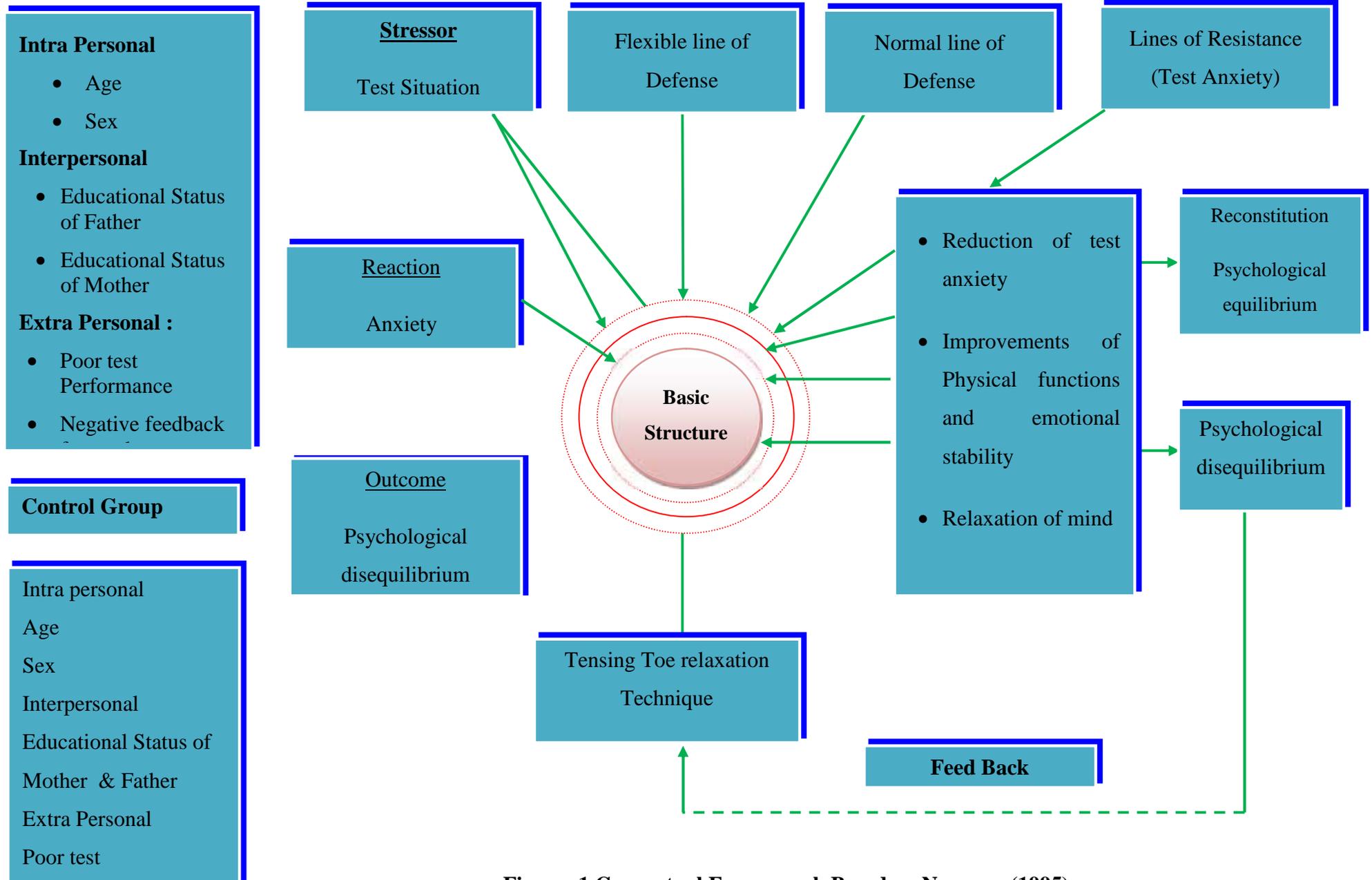


Figure :1 Conceptual Frame work Based on Newman (1995)

Chapter – II

REVIEW OF LITERATURE

The reviews of literature is defined as broad comprehensive in depth systematic and critical review of scholarly publication, unpublished scholarly print materials, audio-visual materials and personal communication. (Basavanthappa, 2002)

A literature review uses as its database reports of primary or original scholarship and does not report new primary scholarship itself. The primary reports used in the literature may be verbal, but in the vast majority of cases, reports are written documents. The types of scholarship may be empirical, theoretical, critical/analytical, or methodological in nature. Second a literature review seeks to describe, summarize, evaluate, clarify and/or integrate the content of primary reports (H.M. Cooper, 1988).

A literature review is an evaluative report of information found in the literature related to selected area of study. The review describes, summarizes, evaluates and clarifies this literature. It gives a theoretical base for the research and helps to determine the nature of research (Queensland University, 1999).

A literature review is a body of text that aims to review the critical points of knowledge on a particular topic of research (ANA,2000).

A literature review is an account of what has been already established or published on a particular research topic by accredited scholars and research (University of Toronto, 2001).

The literature is reviewed and presented under the following headings.

- 1) Studies related to test anxiety.
- 2) Studies related to tensing toe relaxation technique.
- 3) Studies related to tensing toe relaxation technique for test anxiety.

Studies Related to Test Anxiety

Mark S. Chapel, Michael E. Silverstein, Masami Takahashi, Brain Newman, Aaron Gubi, NicoleMccann(2005), conducted a study on test anxiety and academic performance in 4000 undergraduate and 1,414 graduate students attending a large public university in new jersey. Test anxiety inventory was administered.

Results showed significant relationship between test anxiety and grade point average in both groups ($p < 0.05$). Test anxiety is associated with reduction in grade point average (GPA) at both educational levels.

EmineErdem (2007), from the faculty of education, Hacettepe University, conducted a study on the relationship between test anxiety and the epistemological and problem solving beliefs of students on a general chemistry course. 173 samples were selected from Hacettepe University and an epistemological questionnaire was administered. Results showed that when test anxiety scores are controlled a low level negative and meaningful relationship was found between the epistemological beliefs and problem solving beliefs of students. ($r = -0.187$, $p < 0.05$).

Malavika . V. Mokasi (2007), conducted a study on the correlation of anxiety and scholastic achievement of residential school students. 330 samples were selected from the residential school in Kittur and Bijapur city of Karnataka state. The experimental research design was used. Results showed that there was a significant negative relationship between anxiety and scholastic achievement of the respondents ($p < 0.05$).

M. Mousavi, et al (2008), from the department of psychiatry conducted a study on the effect of gender, school performance and school type on test anxiety among adolescents. 536 second grade high school students were selected as samples. The Spielberger's Test Anxiety Inventory was administered along with two questionnaires to collect data. Results revealed a significant and negative correlation between test anxiety scores and grade point average of the students ($r = -0.17$, $p < 0.001$). Also, female students showed a higher level of anxiety in contrast to male students and school type (private, public, school for gifted children) affected the level of test anxiety.

AbhaSubbaRao(2009) conducted a study where a combination of quantitative and qualitative methods was used in the current study – surveys assessed the prevalence of academic stress and adolescent distress, and interviews with 12th standard students explored their perceptions of the issue and their understanding of the role of parents. In the survey part of the study, the prevalence of the problem was assessed with the use of scales that measured depression and anxiety. Surveys were completed by 12th standard students ($n = 588$) from the south Indian city of Chennai. A majority of students reported that they faced stress and test anxiety by the coming school year,

and rates of depression and anxiety were very high in the sample. In contrast with previous research and contrary to expectations, few gender, academic track and school type differences were found. Further analyses indicated that different groups of students appeared to experience distress in different ways. Semi-structured interviews were conducted with 12th standard students ($n = 24$) to explore their perceptions of academic stress and test anxiety. Their perceptions could be categorized into six themes: busy schedules, experience of stress, somatic symptoms, attitudes and beliefs about 12th standard, the role of God vs. hard work, and education reform. The same interview data was also used to understand the role of parents. Analysis suggested that parents were involved in their child's education in five ways – they had specific expectations for achievement, they put pressure on their children, they compared their child to others, they controlled the study environment, and 14 they were supportive of their children. Some categories appeared to be associated with a greater experience of academic stress and test anxiety than others. The interview data was also explored for gender, academic track, and school type differences. Jointly, these findings suggest that academic stress and test anxiety is indeed a significant problem in Chennai, India. A variety of interventions are suggested to address the issue.

Fayegh Yousefi, Mansor Abu Talib, Mariani Bte Mansor et al (2010) from the faculty of human ecology conducted a study on the relationship between test anxiety and academic achievement among Indian adolescents, 400 students, in the age range of 15-19 years old were randomly selected from nine high schools in Bengal. Results showed that there is a significant correlation ($r=0.23$, $p=0.000$) between test anxiety and academic achievement among adolescents. Students with low test anxiety had academic achievement than the students with moderate and higher test anxiety.

Ginger Evans, & Gary Ramsey, November (2010) Nursing programs can be highly stressful, and nursing students have been found to be more test-anxious than other students. The present investigation examines a practical program to reduce test-anxiety impairment and improve academic performance for a significant number of highly anxious nursing students. Incoming nursing students were screened using the Westside Test Anxiety scale, and half (42 of 84) were identified as having high- or moderately-high anxiety and were randomly assigned to an "active control" Treatment or an information Control group. Students in both groups were introduced to their material and encouraged to review it. Students took the comprehensive Evolve/HESI

exit exam in the early spring. The Treatment group showed a significant 12+ percentile gain over the Control group on the HESI ($p < .05$), and a 9 percentile gain over the Controls on their spring GPAs. The active control treatment protocol used here is seen to provide a cost-effective intervention to improve test performance. Circumstances permitting, the authors recommend that nursing programs include provisions for highly anxious students.

Birsiya and VikandaCherry(2010) was conducted a study in pune to assess the role of test anxiety symptoms in school performance in a community sample of adolescent and children. The sample of elementary ($N=131$, age 8-10 years), middle ($N=267$, age 11-13 years), and high school ($N=80$, age 14-16 years) was selected using a survey and anxiety was measured using Multi-Dimensional Anxiety Scale. The study findings revealed that out of the 478 children, 35 (7.3%) was in anxious range. The rate of children in the anxious state was 2.3% in elementary, 7.9% in middle, and 15.9% in high school ($\chi^2=7.8$, $df=2$, $p < 0.05$), and was 14.1% among students with insufficient grades, 9.4% among those with sufficient grades, and 3.9% among those with good or very good grades ($\chi^2=11.68$, $df=2$, $p < 0.01$). The study concluded that the prevalence of test anxiety symptoms increased with age and that high level of anxiety was negatively associated with school performance¹⁴.

TuncayErgene(2010) conducted a meta analysis of studies of test anxiety. This meta analysis synthesized the results from test anxiety reduction programs. Analyses were based on 56 studies ($n=2,482$) the overall mean effect size(ES) for test anxiety reduction programs was $E=0.65$ (95% confidence intervals (CI)+0.58to0.73). on measures of anxiety reduction, the average individual completing treatment is seen as better off than 74% of those individuals who did not receive treatment. The treatment of test anxiety has been quite successful in reducing the test anxiety level of students. The most effective treatments appear to be those that combine skill-focussed approaches with grams, along with behavior or cognitive approaches. Individually conducted programs, along with programs that combined individual and group counseling formats, produced the greatest changes. There is a serious lack of research on test anxiety reduction programs for primary, secondary and high school students.

Sibnath Deb, Kerryann Waish, Pooja Chatterjee (2010), from the faculty of Queensland university of technology conducted a study on the test anxiety among high school students in India. The objective of the study was to understand better anxiety among adolescents in Kolkata city, 460 adolescents aged, 13-17 years from schools at Kolkata city were selected via a multistage sampling technique. The data were collected using a self report semi-structured questionnaire and state – trait anxiety inventory. Results showed that anxiety was prevalent in the sample with 20.1% of boys and 17.9% of girls found to be suffering from high anxiety. Also more boys were anxious than girls ($p < 0.01$). Adolescents belonging to the middle class suffered more anxiety than those from both high and low socio economic groups. ($p < 0.01$).

Lindsay Sullivan (2012) The effects of high levels of test anxiety on attention and memory skills were examined. Twenty-four (24) undergraduate students answered questionnaires measuring their level of test anxiety, performed cognitive tasks measuring attention through a modified version of the Stroop task, and were assessed for hits and false alarms in a paradigm designed to evoke both neutral (e.g., “sweet”), and anxiety-related (e.g., “test”) false memories. Results indicated test anxiety had a negative impact on performance scores for high test-anxious individuals over low test-anxious individuals, though only on some cognitive measures. Individuals with higher levels of test anxiety displayed slower times on attention-measuring tasks than low-anxious individuals, and also were more apt to falsely remember memories related to anxiety. However, high-anxious individuals showed equivalent performance to low-anxious individuals on other attention-measuring tasks, recall of neutral false memories, and correct hits.

Studies Related to Tensing toe Relaxation Technique

Sabesh, Ragav, Binishv (2010) conducted a study on the effect of tensing toe relaxation technique on reducing academic stress among adolescents. The objective of the study was to understand the academic stress among adolescents in Punjab city. 500 adolescents aged 13-18 years from schools at Punjab city were selected via a random sampling technique. The tensing toe relaxation technique were practiced for two months. The data were collected using a perceived stress scale. Results showed

that stress was reduced in males from moderate(74.5%) to mild (33.4%) and female students from severe (86%) to mild (38.7%) . Also results more girls were anxious than boys ($p<0.01$).

Verma and Ahuja (2010) was conducted a descriptive study in Bangalore to assess the level of examination anxiety in a randomly selected sample of 60 graduate nursing students using a structured knowledge questionnaire. The study findings revealed severe anxiety level in first year B. Sc. nursing students (42%) that gradually decreased in next level of students, with 25% among the fourth year students. The study concluded that the students in first year were experiencing higher anxiety than next level of students, and a series of exercises could help reduce the anxiety before and during examination⁸.

Kai-Chung Hsuehet al (2011) conducted a study on the effect of tensing toe relaxation technique training on anxiety. Two group experimental design was used. The setting was pediatric outpatient clinic of a medical center in central Taiwan. Participants were 48 children, ages 6-14 years. The results showed that the anxiety (especially state anxiety) was significantly lower for children in the experimental group than in the comparison group. A combination of self-management and relaxation training can reducing anxiety, thus improving the children's health and reducing anxiety.

Samanesh, Bagheriyan, FaribaBhahani, Ogundokum(2011), conducted a study on the effect of regular tensing toe relaxation technique on reducing the stress among adolescents. 60 children in the age range of 13 to 18 years were selected. Demographic questionnaire and perceived stress scale was used to collect data. Results showed a significant difference in the mean scores (based on perceived scale and the questionnaire) between the control group and the experimental group after the intervention. The relaxation technique exercise can reduce the test anxiety in adolescent.

Malini Sahadev and Rajeev (2011) conducted a study in Tamil Nadu Medical College to assess the effect of toe tensing relaxation technique reduce the anxiety and stress in undergraduate Medical students. A sample of 109 students was selected using random sampling and a structured questionnaire was administered. Anxiety and stress were measured using the Depression Anxiety Stress scale. It

revealed that the females was comparatively higher than males and the incidence of males was 51.3%, females 66.05%. Academic factors were perceived as more stressful ($p < 0.05$). the participants were taught relaxation technique then to assess the anxiety level. The study concluded that the relaxation intervention had a significant effect reducing stress and anxiety in students.

G.K. Pai's, Velkumary And Madanmohan (2012) from the department of psychology, Jawaharlal institute of post graduate medical education and research conducted a study on the effect of short term practice of tensing toe relaxation techniques on autonomic functions in normal human young volunteers in the age group of 17-19 year 60 male undergraduate medical students were randomly selected as samples. The tensing toe relaxation techniques were practiced for a period of three months. Autonomic function tests were performed before and after the practice of tensing toe technique. Results showed that regular practice of slow tensing toe relaxation technique exercise for three months improve the autonomic functions of the body.

Studies Related to Tensing toe Relaxation Technique for Test Anxiety

Pranav Singh et al (2008) experimental study was conducted in 8 public schools of Punjab to assess the effect of tensing toe relaxation technique on academic performance in relation to stress and anxiety. A sample of 800 students was selected using the score obtained in Bisht Battery of Stress scale – high stress (150) and low stress (142) students. Experimental and control groups were selected and pre-test in three subjects, i.e., mathematics, science, social studies, and yoga module was administered and post-test was conducted for their performance on the same subjects. The study findings revealed that high stress and anxiety affected students' performance negatively. The academic performance score of experimental group was ($M_{exp}=32.63$) higher than the control group ($M_c=22.4$), thereby showing that students who practiced tensing toe relaxation performed better than those did not. The study concluded that tensing toe intervention technique improves the academic performance by optimising the stress and anxiety level¹⁶.

Heidi A .Larson ,Mera K. EiRamhi, Steven R.Conn, Lincoln A. Estes Amanda B. Ghibellini, (2009) conducted a study on reducing test anxiety among third grade students through the implementation of tensing toe relaxation techniques.

The purpose of this study was to reduce the negative effects that self- perceived levels of test anxiety have on third grade students. The participants in this study consisted of 177 third grade students at two mid- western public elementary schools. Students at one school were taught tensing toe relaxation techniques while students at the second school served as the control group, receiving no training. The west side test anxiety scale, elevator breathing and guided relaxation were utilized to measure and manage level of test anxiety. The results indicated that the relaxation intervention had a significant effect reducing test anxiety, in experimental group.

Bethany Iyanne Rosado (2011) conducted a study on the effects of tensing toe relaxation technique to reduce test anxiety, the researcher conducted two experiments in which tensing toe relaxation training and taught to participants from east texes Baptist university over a course of ten weeks per experiment. There were 6 participants in sample A, and 17 participants in sample B. each participant was pre and post tested using a combination of 3 surveys that assessed levels of test anxiety and study behavior. Time spent studying each week and their self-rated concentration levels were collected each week. The pre/post test comparisons for sample A showed a decrease in test and generalized anxiety for participants.

S. Ahmadnejad, Z. Monjamed, M. Pakrannejad, A Malekian (2011), conducted a study on the effect of relaxation tensing toe technique on the first year nursing students anxiety in clinical settings. Sample consists of 60 first term female nursing students in nursing and midwifery faculty of Tehran university of medical sciences. A quasi experimental research design was used and samples were selected by convenience and random sampling. The spielberger anxiety test was used and the tensing toe relaxation was presented to the test group in a 45 minute session of question answers and illustrations. Results showed the positive effect of relaxation in reduction of anxiety among students of the test group.

Broota and Sangavi (2011) conducted a study investigated the use of tensing toe relaxation technique as a treatment for examination anxiety. Broota and Sanghvi carried out a three way comparison between their tensing toe relaxation technique, Jacobson's progressive relaxation technique, and a control among university students who had a history of examination anxiety and recorded a high baseline score on Spielberger's test anxiety scale. After the three day intervention, the relaxation group recorded a significantly greater improvement on the anxiety check

list measure than the relaxation group and the control group. There were no significant group differences among groups for the self evaluation ladder scale measure. In a three month trial conducted with medical students,found a significant reduction in anxiety after treatment for the intervention group one month before examinations and on the actual day of examinations. There was no such significant reduction for the control group. Post hoc *t* tests between the group means after treatment showed a significant difference one month before the examination and on the day of the examination ($p < 0.001$ for both). No such difference existed before treatment at either time point. On the day of the examination, the mean state-trait anxiety inventory score for the intervention group fell by 34.0% from the moderate anxiety range before treatment to the low anxiety range after treatment, representing a clinically significant change¹⁸.

Chapter - III

METHODOLOGY

Research methodology is the way to systematically solve the research problem. Methodology occupies a key position as far as research documentation is concerned. It may be understood as a science of studying how research is done. It involves the systematic procedure by which the researcher starts from the initial identification of the problem to its final conclusion (C.R.Kothari).

This chapter includes the research approach, research design, setting of the study, variables, populations, sample size, sampling technique, sample selection criteria, description of tool, validity and reliability, pilot study, data collection procedure and plan for data analysis.

Research Approach

This study aims to evaluate the effectiveness of tensing toe relaxation technique in reducing the test anxiety among adolescents. The research approach used for the study is quantitative approach.

Research Design

The research design is the plan, structure and strategy of investigations of answering the research questions is the overall plan or blue print the researcher selects to carry out their study (Basavanthappa).

The design used in this study was pre experimental one group pretest posttest research design.

E O1 x O2

E – Experimental

O1 – Pre test to assess the level of test anxiety among adolescents.

X - Tensing Toe relaxation technique.

O2 - Post test to assess the effect of tensing toe relaxation technique among adolescents.

Setting of the study

Setting is a location for conducting a research(Sharma).

The setting selected by the investigator to conduct the study was government higher secondary school Nediyaalai at Arumanai in kanyakumari district. The investigator has selected this setting due to availability of the samples and its accessibility to the investigator.

Variables

Independent Variable : Tensing toe relaxation technique.

Dependent variable : Level of test anxiety.

Demographic Variable : Age, sex, birth order, education and occupation of parents, income, type of family, type of school and person accompanying with the child.

Population

Population is a total category of persons or objects that meets the criteria for establish by the researcher, any set of persons, objects or measurements having an observable characteristics in common.

The population under the study refers to all 9th and 10th standard students in the Nediyaalai Government school.

Sample Size

Sample size is a number of subjects, events, behaviours, situations that are examined in a study (Sharma).

The investigator has selected 60 adolescent boys and girls between the age group of 14-15 years.

Sampling Technique

Sampling is the process of selecting representative units of a population for study in a research it is the process of selecting a subset of a population inorder to

obtain information regarding a phenomenon in a way that represents the entire population (Basavanthappa).

The investigator selected 60 samples by using Purposive sampling technique. The sample was selected based on the inclusion and exclusion criteria.

Criteria for Sample Selection

Sampling criteria is a list of the characteristics essential for inclusion or exclusion in the target population (Sharma).

The sample was selected based on the following inclusion and exclusion criteria.

Inclusion criteria:

1. Adolescents between the age group of 14-15 years.
2. Adolescents who are present on the day of data collection and willing to participate in the study.
3. Adolescents who know Tamil language.
4. Who are available during the period of data collection.

Exclusion Criteria:

1. Adolescents with visual and hearing disability.
2. Adolescents who are having anxiety disorders and taking anti-anxiety drugs under prescription.

Data Collection Tool

Description of the Tool

The various technique of data gathering involve the use of appropriate recording forms, these are called tools or instruments for data collection.

A research tool is an instrument used to collect data. Anything that becomes a means of collecting information for the study is called a research tool or a research instrument.

After extensive review of literature and experts guidance the tool was prepared. The tool consist of 2 sections.

Section A: Demographic Variables:

Section B: Modified test anxiety questionnaire.

Section A: Demographic Variables

This section deals with demographic variables such as

Age, Sex, Birth order, Education of parents and Occupation of parents, Income, Type of family and Type of school and person accompanying with child.

Section B

The Modified test anxiety questionnaire is used for assessing test anxiety.

Scoring and Interpretation

It consists of 10 items which reflect upon past testing experiences indicate how often each statement describes the person by choosing a number from one of the five as outlined below.

The scoring was assessed as always, often, sometimes and never with numerical values of 4, 3, 2, 1 and 0 respectively.

0-20 : Mild

21-40 : Moderate

41-50 : Severe

Content Validity And Reliability

Content validity of tool was established from 5 experts, 4experts from the field of pediatric nursing personnel and one from pediatric medicine doctor (pediatrician). The necessary suggestions and modification were incorporated in the final preparation of the stool.

Reliability of the tool was identified by test-retest method and evaluated by using spearman's correlation formula the finding shows that the value $r=0.96$. the tool is reliable.

Pilot Study

To test feasibility in conducting the main study, the pilot study was conducted.

The Pilot study was conducted at Thirunanthikarai government higher secondary school. Six students were selected as study sample.

After getting permission from the school authority, oral consent also obtained from the class teachers by explaining the objectives and data collection procedure. Pilot study was conducted for a period of 7 days. The modified test anxiety questionnaire was used for data collection. Pilot study findings revealed that the study was feasible and the tool was appropriate for the study.

Data Collection Procedure

The pilot study was found to be practicable and feasible to conduct the final study among adolescents. The final study was conducted in the Nediyaalai Government Higher Secondary School Arumanai. Before starting the study, the investigator obtained permission from school authorities for conducting the study. The subjects were explained about the study and consent was taken.

Data collection period was one month. This study was conducted in Government higher secondary school Nediyaalai with 60 samples.

Purposive sampling was used. Pretest was conducted for all samples. In that the students anxiety level was assessed and taken the moderate severe anxiety students are selected and give tensing toe relaxation technique training continuously 14 days 10 times for every time. And at the end of the month the post test was assessed.

Plan for Data Analysis

The data was organizes, tabulated, summarized and analyzed by using descriptive and inferential statistical analysis.

Descriptive statistical methods like frequency, arithmetic mean, standard deviation were used to assess the level of test anxiety among adolescent boys and girls.

Inferential statistical methods like paired 't' test was used to assess the effect of tensing toe relaxation technique and chi-square test used to associate the selected variables.

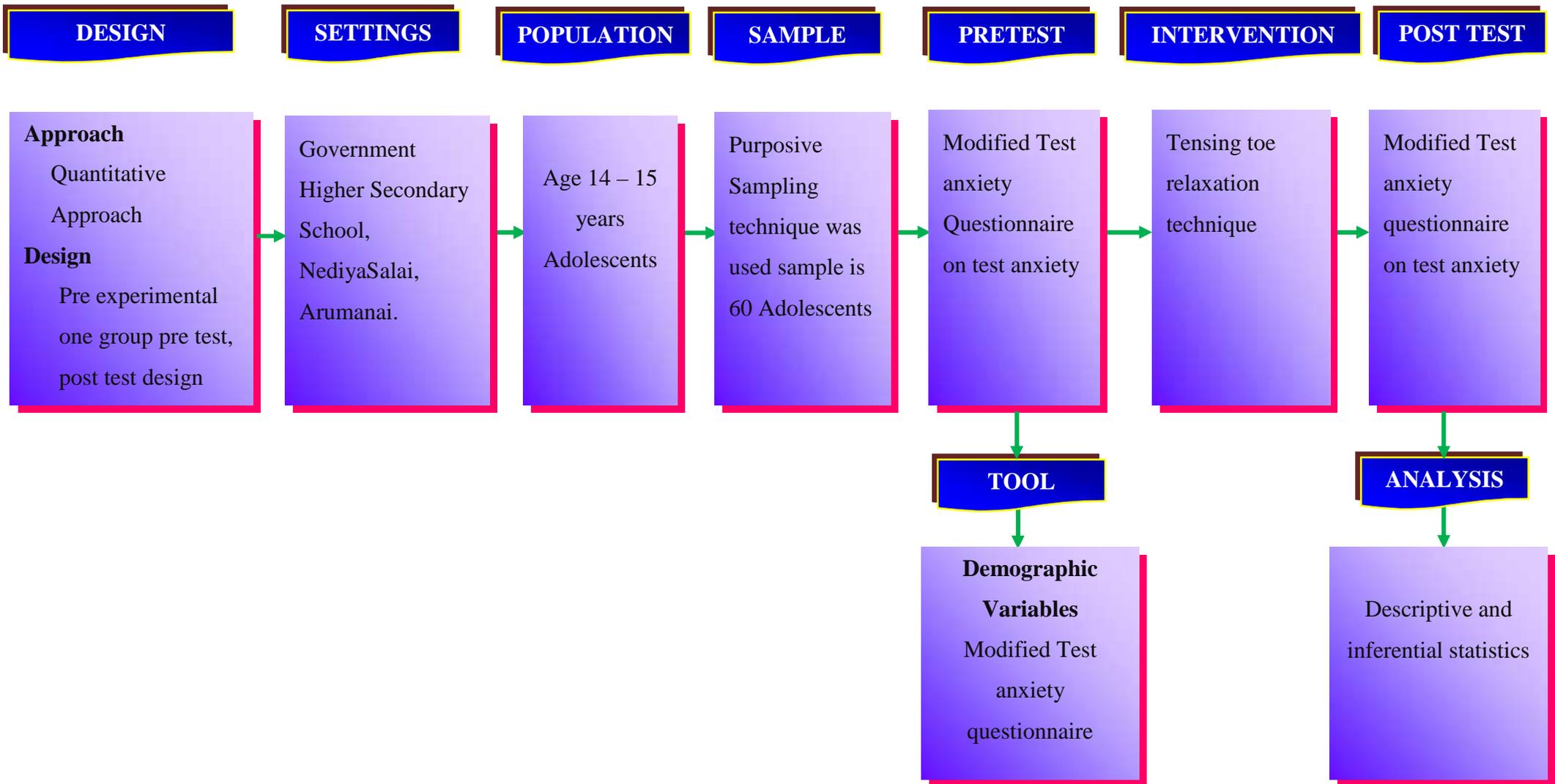


Figure : 2 Schematic Representation of Research Design

Chapter – IV

DATA ANALYSIS AND INTERPRETATION

Statistical analysis is a method of rendering quantitative information meaningful and intelligible. It is intended to bring to light the findings of the study.

This Chapter deals with the analysis and interpretation of data collected in accordance with the objectives stated for the study. The data collected was analyzed by using descriptive and inferential statistics.

The analysis and interpretation of test anxiety was made by 't' test. The association between the demographic variables with test anxiety were analyzed and interpreted by chi-square test. The level of significance was tested at 0.05 level.

Objectives of the Study

1. To assess the level of test anxiety among adolescents before intervention.
2. To assess the level of test anxiety among adolescents after intervention.
3. To find the effectiveness of tensing toe relaxation technique after intervention among selected adolescents.
4. To determine the association between the level of test anxiety and selected demographic variables such as age, sex, birth order, Education of mother and father, occupation of parents, Family Income, Type of family, Type of school and person accompanying with child.

Findings are Grouped and Presented Under the Following Headings

Section : A

This section deals with the frequency and percentage distribution of the sample according to the demographic variables.

Section : B

This section deals with effectiveness of tensing toe relaxation technique on test anxiety.

1. To determine the level of test anxiety among adolescents in a Government school at Kanyakumari district.
2. To Evaluate the effectiveness of tensing toe relaxation technique on test anxiety among adolescents after intervention.

Section : C

This section deals with effectiveness of tensing toe relaxation technique on test anxiety by comparing the pre-test and post – test anxiety level of adolescents.

Section : D

This section deals with association between the level of test anxiety with selected demographic variables such as age, sex, birth order, education of parents, occupation of parents, family income, type of family and person accompanying with child.

SECTION : A**Table : 1**Distribution of demographic variables of study subjects

Sl. No	Demographic Variables	Experimental Group	
		Frequency	Percentage
1.	Age		
	a) 14 years	36	60
	b) 15 years	24	40
2	Sex		
	a) Male	33	55
	b) Female	27	45
3	Birth Order		
	a) First	22	37
	b) Second	28	47
	c) Third	8	13
	d) Above	2	3
4	Father's Education		
	a) Uneducated	-	-
	b) Primary	28	47
	c) Secondary	32	53
	d) Degree	-	-

Table 1 cont

5	Mother's Education		
	a) Uneducated	-	-
	b) Primary	10	17
	c) Secondary	41	68
	d) Degree	9	15
6.	Family Income		
	a) < 5000	15	25
	b) 5000 – 10,000	37	62
	c) >10,000	8	13
7.	Father's occupation		
	a) Unemployee	-	-
	b) Daily wages	39	65
	c) Private employee	21	35
	d) Government Employee	-	-
8.	Mother's Occupation		
	a) Housewife	40	67
	b) Daily wages	15	25
	c) Private employee	5	8
	d) Government Employee	-	-

Table 1 Cont

9.	Type of Family		
	a) Nuclear Family	64	77
	b) Joint Family	14	23
10.	Type of School		
	a) Government School	60	100
	b) Private School	-	-
	c) Government Aided School	-	-
11.	Person Accompanying with child		
	a) Parents	53	88
	b) Relatives	7	12
	c) Hostels / Orphanages	-	-

The above table describes that the 60% participants were 14 years of age and 40% were 15 years of age and 55% were males and 45% were females. Among birth order 37% were first born children and 47% were second and 13% were third and 3% were above third. Among education of parents 53% of samples mothers and 68% of father's are secondary educated and 47% of samples mothers and 17% of fathers are primarily educated. Regarding Income 25% of the students have monthly income of below 5,000. In respect of occupation of father 65% of samples father's were Daily wages and 67% of mothers were (unemployed) House wife. In case of the type of family 77% belong to nuclear family and child accompanying with 88% of the students with parents.

The above findings shown in table 1 are presented from figure 3 figure 15, there are,

1. Distribution of sample according to age presented as bar diagram in figure 3.
2. Distribution of sample according to gender presented as bar diagram in figure 4.
3. Distribution of sample according to Birth order presented as bar diagram in figure 5.
4. Distribution of sample according to father's education presented as bar diagram in figure 6
5. Distribution of sample according to mother's education presented as bar diagram in figure 7
6. Distribution of sample according to family income presented as bar diagram in figure 8
7. Distribution of sample according to father's occupation presented as bar diagram in figure 9
8. Distribution of sample according to mother's occupation presented as bar diagram in figure 10.
9. Distribution of sample according to Type of family presented as bar diagram in figure 11.
10. Distribution of sample according to Type of school presented as bar diagram in figure 12.
11. Distribution of sample according to Person accompanying with presented as bar diagram in figure 13.
12. Distribution of sample according to Level of test anxiety before intervention presented as bar diagram in figure 14.
13. Distribution of sample according to Level of test anxiety before intervention presented as bar diagram in figure 15.

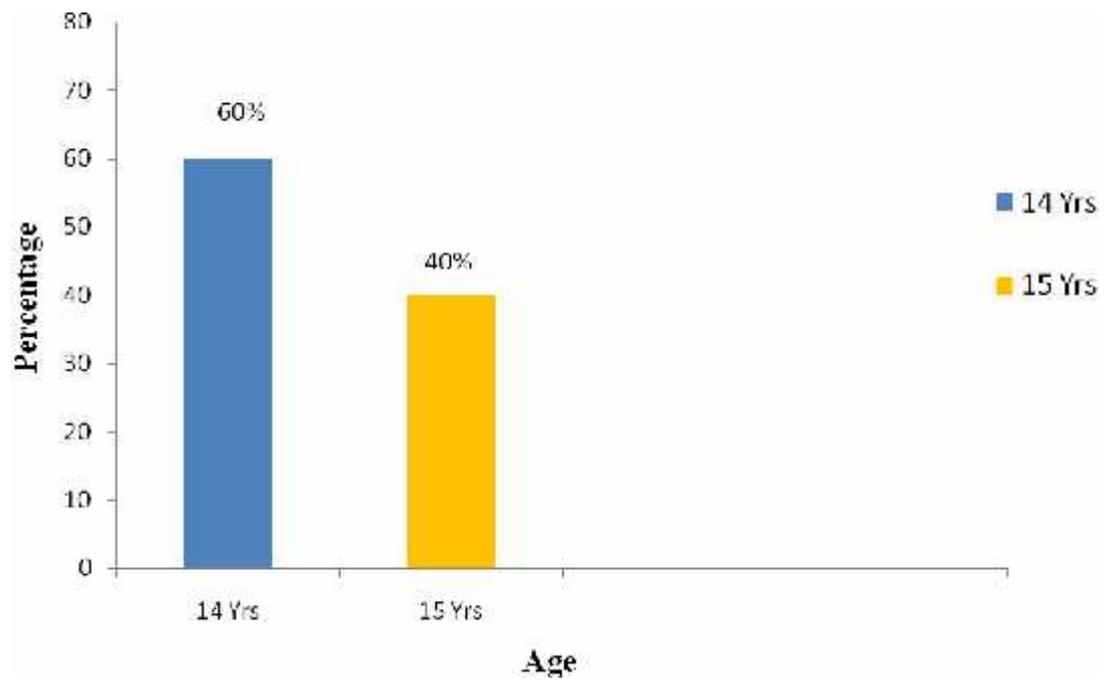


Figure 3 : Bar diagram represents distribution of samples according to the age

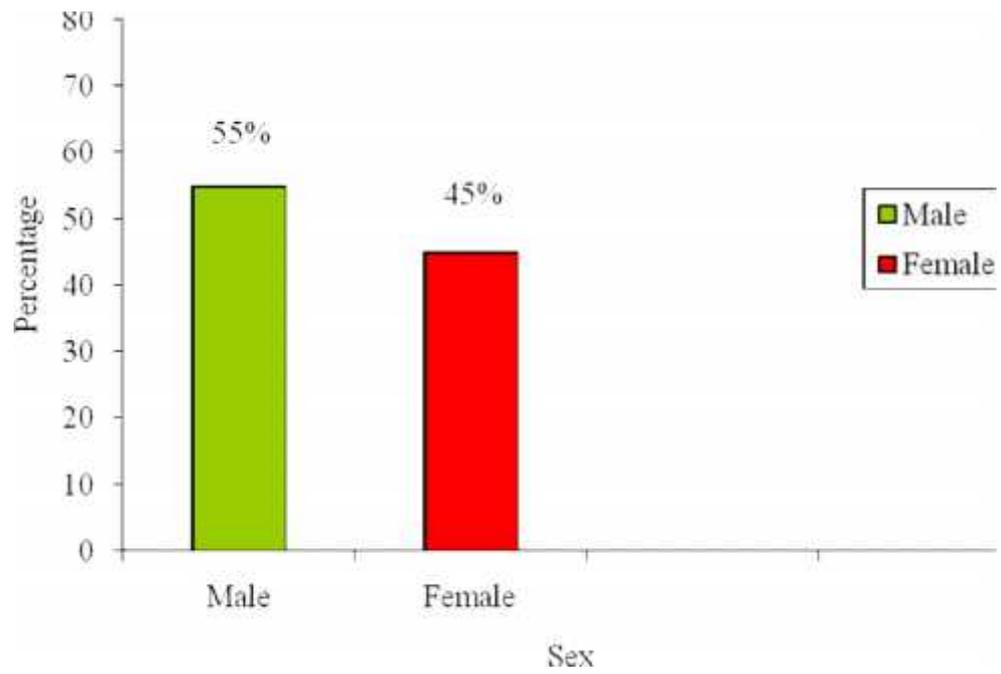


Figure 4 : Bar diagram represents distribution of samples according to the sex

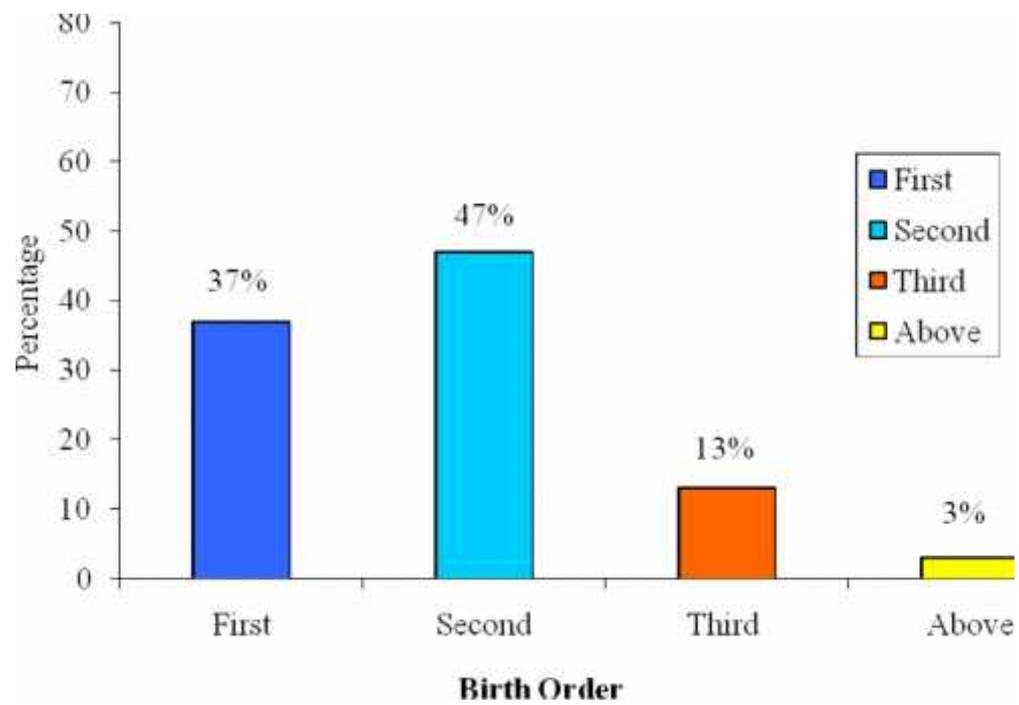


Figure 5 : Bar diagram represents distribution of samples according to the Birth order

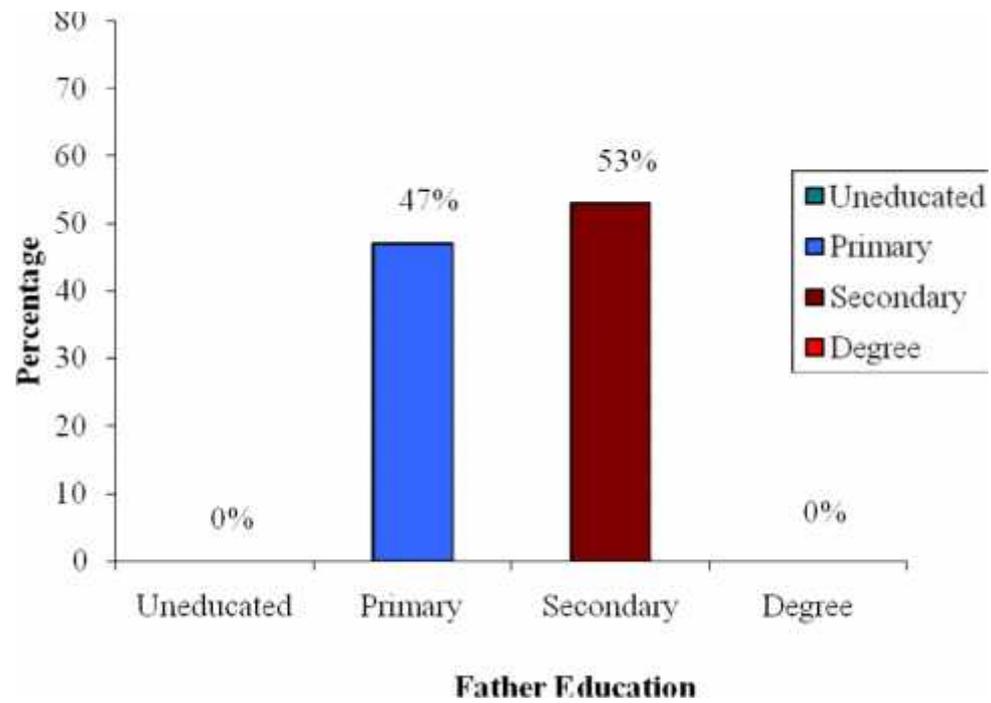


Figure 6 : Bar diagram represents distribution of samples according to education of father.

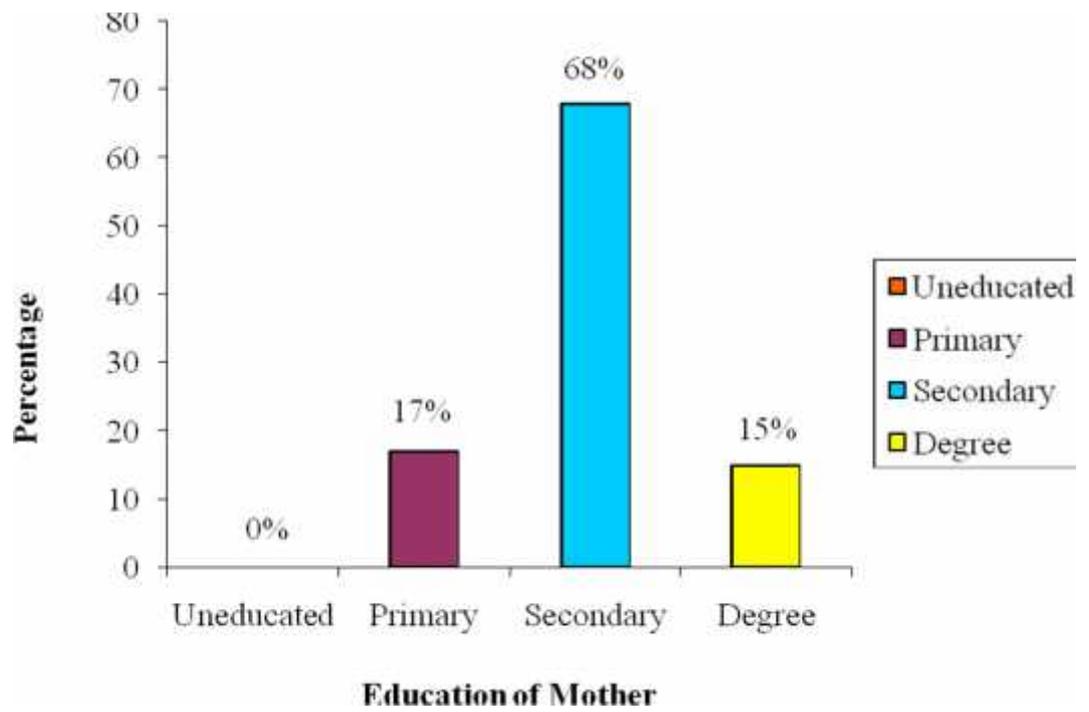


Figure 7 : Bar diagram represents distribution of samples according to Education of mother

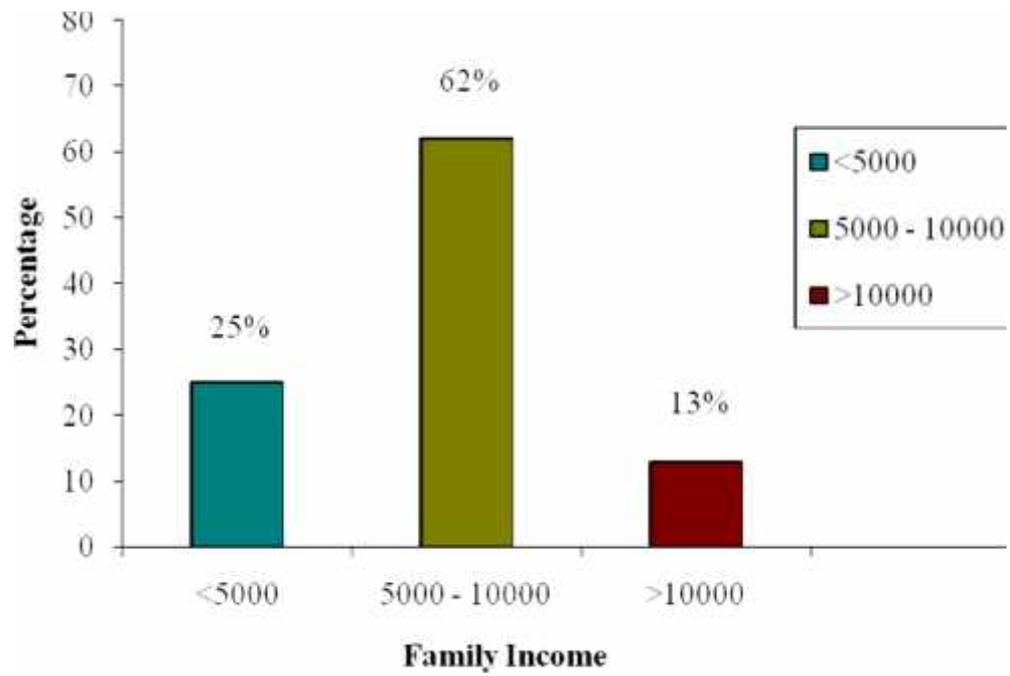


Figure 8 : Bar diagram represents distribution of samples according to Family Income

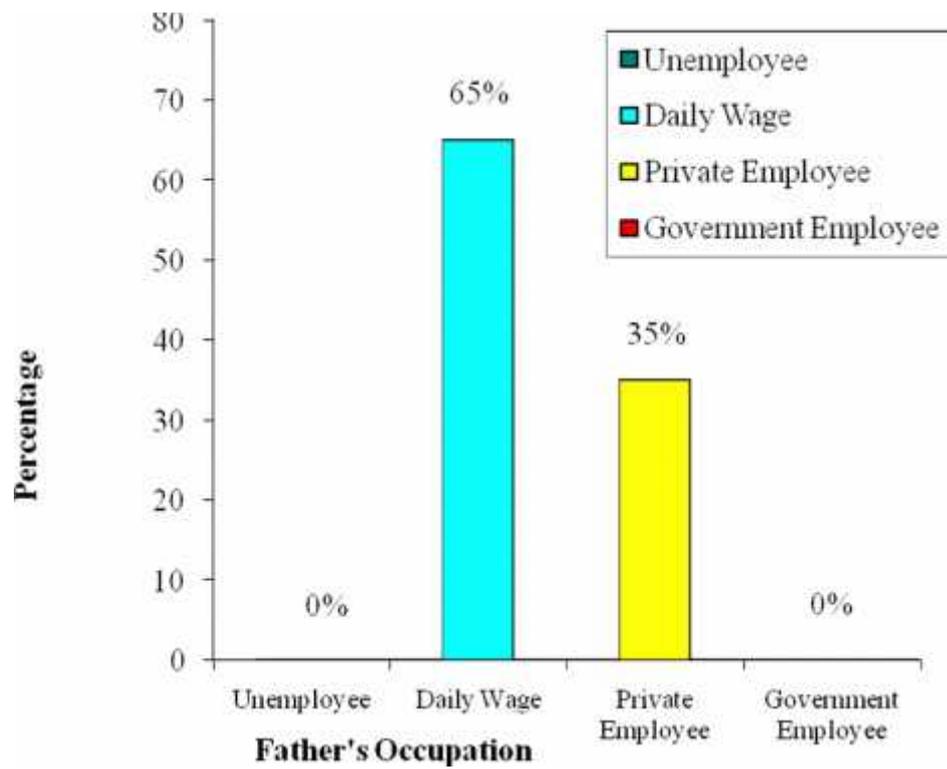


Figure 9 : Bar diagram represents distribution of samples according to Father's Occupation

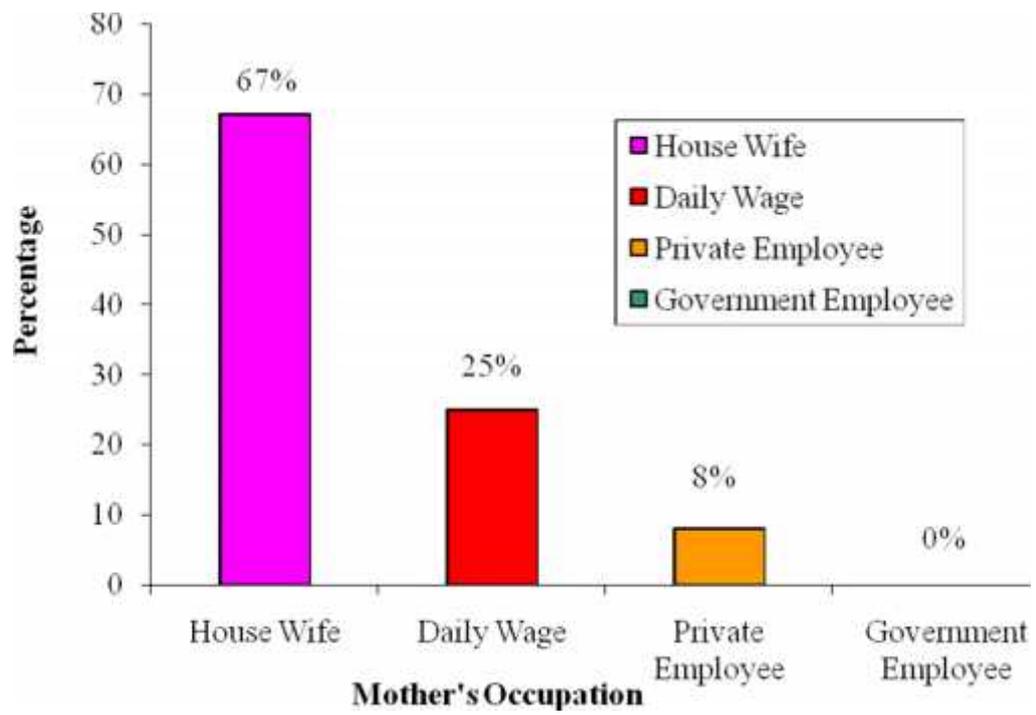


Figure 10 : Bar diagram represents distribution of samples according to Mother's Occupation

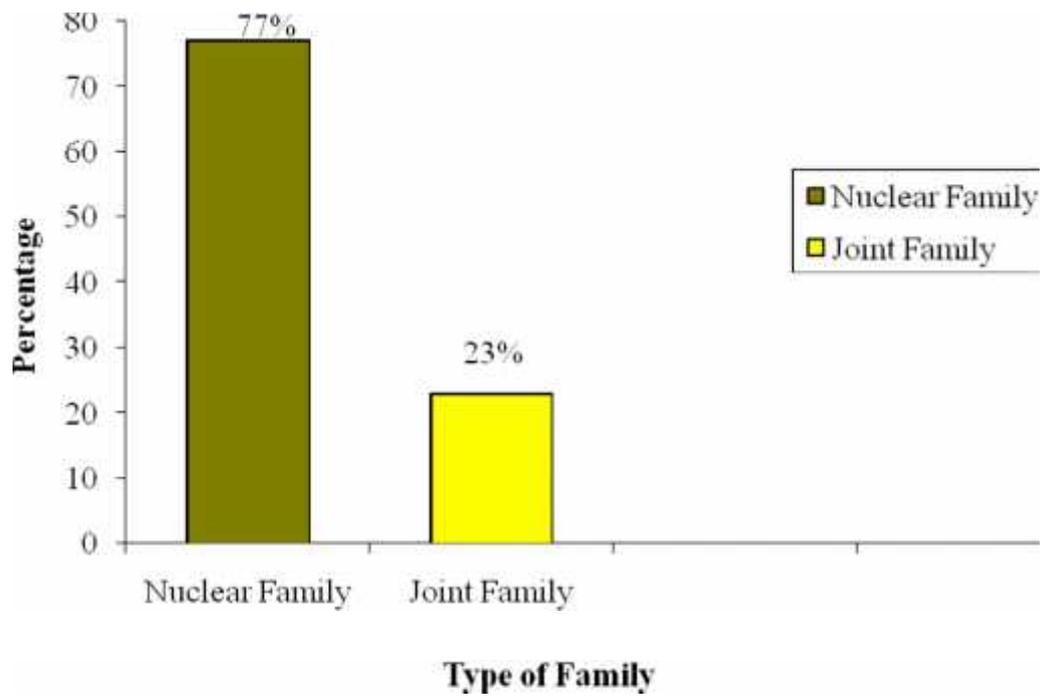


Figure 11 : Bar Diagram represents distribution of samples according to type of family.

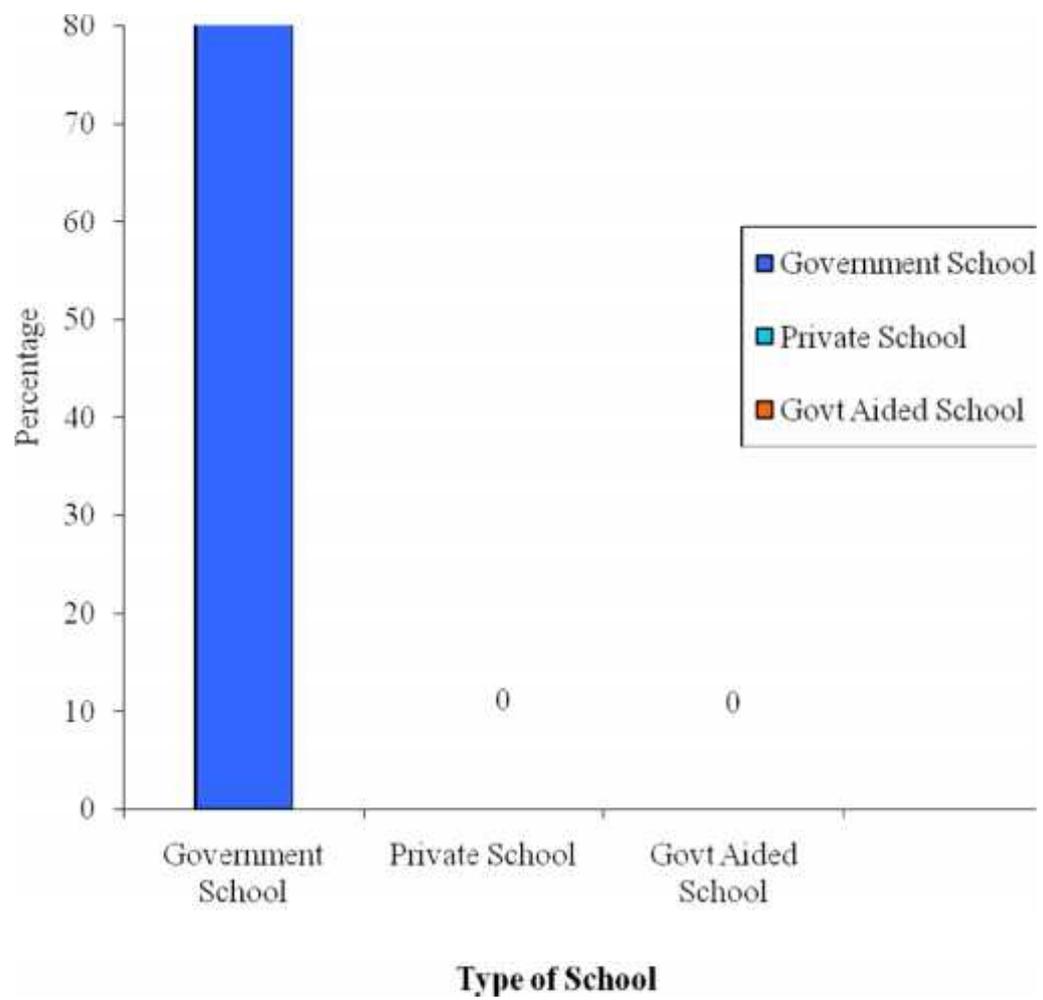


Figure 12 : Bar diagram represents distribution of samples according to Type of School

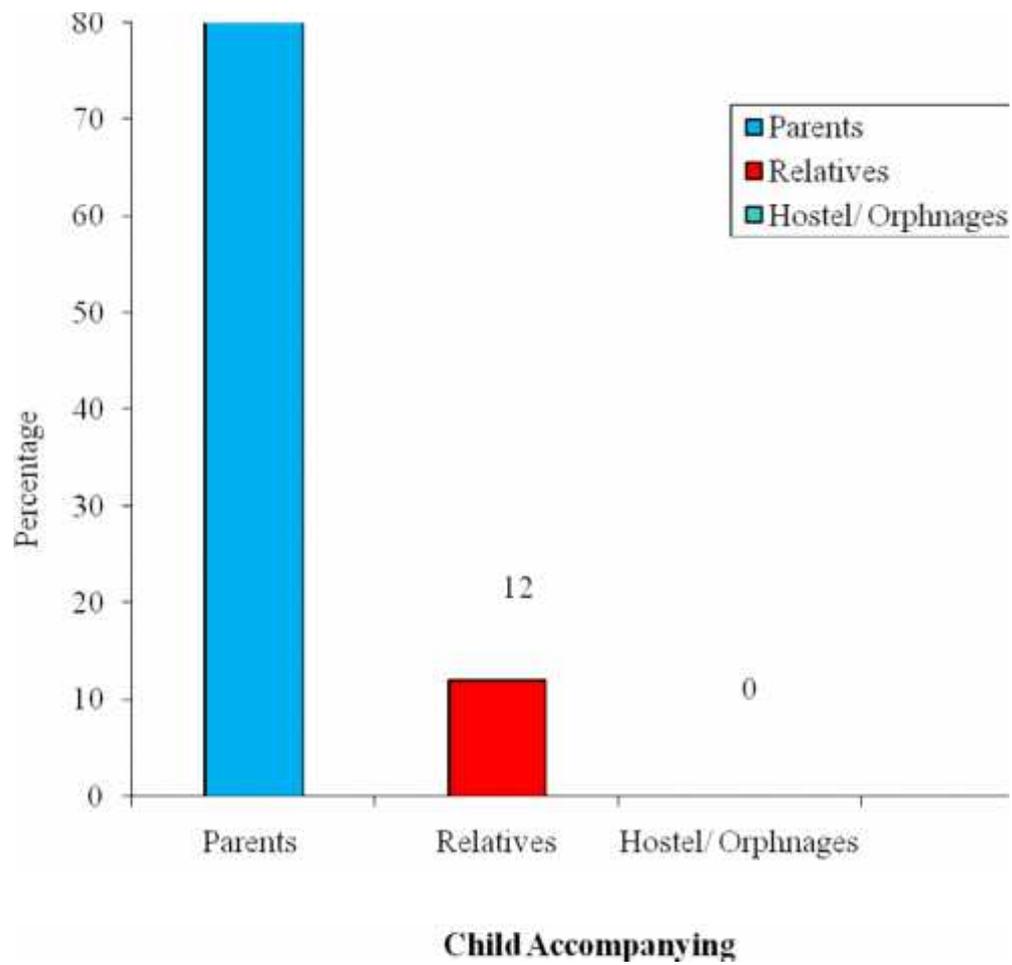


Figure 13 : Bar diagram represents distribution of samples according to Child accompanying.

Section : B

This section deals with the distribution of mean and standard deviation of the level of test anxiety among adolescents before the intervention.

Table : 2

The level of test anxiety among adolescents before intervention.

N = 60

Categories of Scoring	Adolescents test anxiety		Mean	SD
	Frequency	Percentage		
Mild anxiety (1-20)	13	21.7%		
Moderate anxiety (20-40)	30	50 %	30.83	9.05
Severe anxiety (40 – 50)	17	28.3%		

The above table shows that the mean and standard deviation of test anxiety of adolescents. Are 60 samples 21.7% had mild anxiety, 50% had moderate anxiety and 28.3% had severe test anxiety.

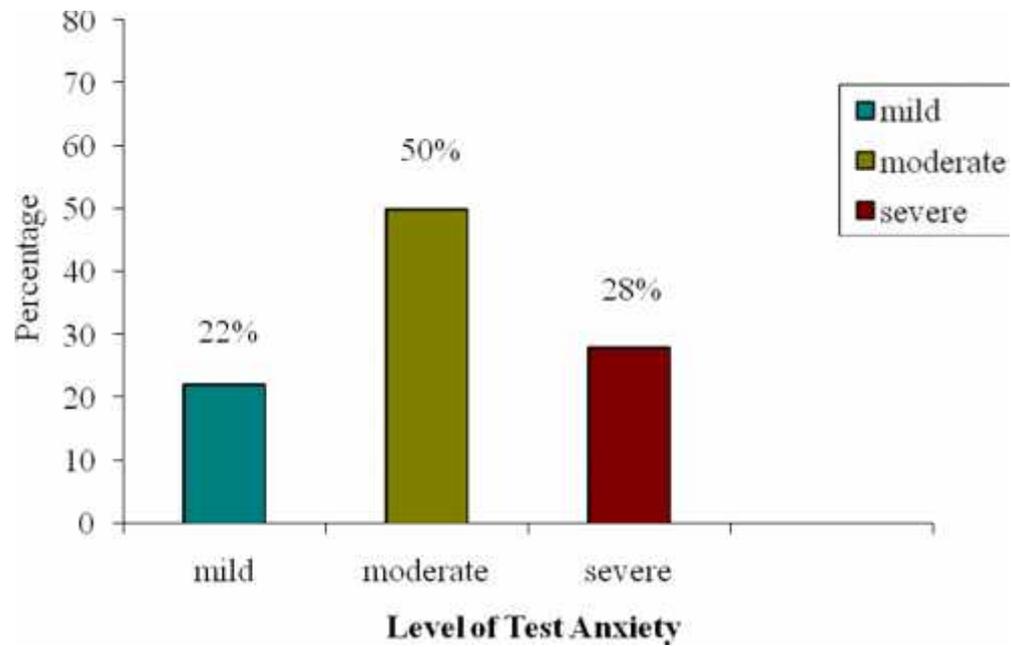


Figure. 14 Bar diagram represents distribution of samples according to Level of Test Anxiety before intervention

Table : 3

This section deals with Effectiveness of tensing toe relaxation technique on test anxiety among adolescents.

N = 60

Categories of Scoring	Adolescents test anxiety		Mean	SD
	Frequency	Percentage		
Mild anxiety (1-20)	35	58.3%		
Moderate anxiety (20 – 40)	25	41.7%	18.22	4.16
Severe anxiety (40-50)	-	-		

The above table shows that the level of test anxiety after giving of tensing toe relaxation technique. The test scores are 58.3% had mild stress and 41.7% had moderate anxiety.

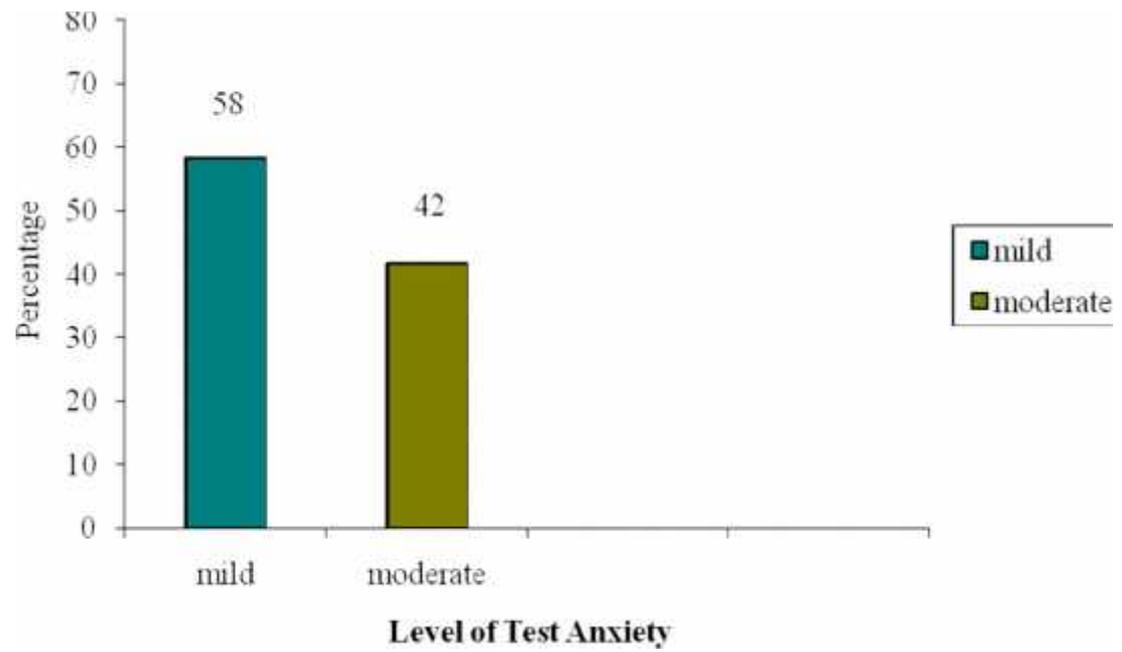


Figure. 15 Bar diagram represents distribution of samples according to level of test anxiety after intervention.

Section : C

This section deals with effectiveness of tensing toe relaxation technique on test anxiety by comparing the pre-test and post – test anxiety level of adolescents.

Table : 4

Effectiveness of tensing toe relaxation technique reducing test anxiety among adolescents.

Category	Pre test		Post test		Mean difference	df	t value	Table value
	Mean	SD	Mean	SD				
Anxiety Level	30.83	9.24	18.22	4.16	13.8	59	14.23	2.045

The above table evaluates the effectiveness of tensing toe relaxation technique in reducing test anxiety among adolescents. The mean score was decreased after giving tensing toe relaxation technique from 30.83 to 18.22 and the standard deviation was 4.05 to 4.16 respectively. The above table reveals that the calculated ‘t’ value is (14.23) which is higher than that of the table value (t value is 2.045) with df 59 at 0.05 level of significance ($p < 0.05$). It is highly significant and the above table interprets that the tensing toe relaxation technique reduces the test anxiety among adolescents.

Section : D

This section deals with association between the level of test anxiety and selected demographic variables such as age, sex, birth order, education of parents, income of family, occupation of Parents, Type of family and person accompanying with child.

Table : 5

Association between Test anxiety and selected demographic variables.

Sl. No.	Demographic variables	Frequency	χ^2	df	Table Value
1.	Age of Samples				
	a) 14 years	36	0.01	1	3.841
	b) 15 years	24			
2.	Sex				
	(a) Male	33	0.45	1	3.841
	(b) Female	27			
3.	Birth order				
	a) First	22			
	b) Second	28	0.05	3	7.815
	c) Third	8			
	d) Above	2			
4.	Father's Education				
	a) Uneducated	0			
	b) Primary	28	0.004	3	7.815
	c) Secondary	32			
	d) Degree	0			

Table 5 continued....

5.	Mother's Education				
	a) Uneducated	0			
	b) Primary	10	0.34	3	7.815
	c) Secondary	41			
	d) Degree	9			
6.	Family Income				
	a) <5000	15			
	b) 5001 – 10,000	37	0.13	2	5.99
	c) >10,000	8			
7.	Father's Occupation				
	a) Unemployee	0			
	b) Daily wages	39	1.01	3	7.815
	c) Private Employee	21			
	d) Govt Employee	0			
8.	Mother's occupation				
	a) Housewife	40			
	b) Daily wages	15	1.21	3	7.815
	c) Private Employee	5			
	d) Govt Employee	0			
9.	Type of Family				
	(a) Nuclear Family	46	0.02	1	3.841
	(b) Joint Family	14			
10.	Type of School				
	a) Government	60	0	2	5.99
	b) Private	0			

c) Govt Aided 0

Table 5 continued....

11.	Person accompanying with child				
	a) Parents	53	0	2	5.99
	b) Relatives	7			
	c) Hostels /Orphanages	0			

There was no significant association with demographic variables such as age, sex, birth order, education of parents, Family Income, Occupation of parents, Type of family and child accompanying with obtained at the 0.05 level of significance.

Chapter - V

RESULTS AND DISCUSSION

This study was undertaken to assess the effectiveness of tensing toe relaxation technique reducing test anxiety among adolescents in government higher secondary school Nediyaalai Arumanai. It is a pre experimental one group pretest posttest design. In this study the test anxiety level was assessed by modified test anxiety questionnaire and data were collected by descriptive and inferential statistics. The results were discussed based on the objectives set for the study.

The First Objective of the Study was to Assess the Level of Test Anxiety Among Adolescents Before Intervention

The investigator conducted a pretest to assessing the test anxiety level of the adolescents. Out of 60 samples, 21.7% students were having mild anxiety, 50% students having moderate anxiety and 20.3% students having severe anxiety. The investigator selects 60 samples who are at mild, moderate and severe level of anxiety.

The findings in this study are congruent with the study conducted by **Sibnath deb, Kerryann Waish, PoojaChatterjee(2010)**, in this study the researcher analysis the test anxiety among high school students in India. The objective of the study was to understand better anxiety among adolescents in Kolkata city, 460 adolescents aged, 13-17 years from schools at Kolkata city were selected via a multistage sampling technique. The data were collected using a self report semi-structured questionnaire and state – trait anxiety inventory. Results showed that anxiety was prevalent in the sample with 20.1% of boys and 17.9% of girls found to be suffering from high anxiety. Also more boys were anxious than girls ($p < 0.01$). adolescence belonging to the middle class suffered more anxiety than those from both high and low socio economic groups ($p < 0.01$).

The second objective of the study was to assess the level of test anxiety among adolescents after intervention

The level of test anxiety of adolescents was assessed after giving tensing toe relaxation technique. During the post test 58.3% scored mild anxiety and 47.7% scored moderate anxiety.

The findings in this study are congruent with the study is conducted by **Pranav Singh et al (2008)** experimental study was conducted in 8 public schools of Punjab to assess the effect of tensing toe relaxation technique on academic performance in relation to stress and anxiety. A sample of 800 students was selected using the score obtained in Bisht Battery of Stress scale – high stress (150) and low stress (142) students. Experimental and control groups were selected and pre-test in three subjects, i.e., mathematics, science, social studies, and yoga module was administered and post-test was conducted for their performance on the same subjects. The study findings revealed that high stress and anxiety affected students' performance negatively. The academic performance score of experimental group was ($M_{exp}=32.63$) higher than the control group ($M_c=22.4$), thereby showing that students who practiced tensing toe relaxation performed better than those did not. The study concluded that tensing toe intervention technique improves the academic performance by optimizing the stress and anxiety level.

Third Objective of the Study was to Evaluate the Effectiveness of Tensing Toe Relaxation Technique Reducing Test Anxiety Among Adolescents

The level of test anxiety of adolescents was assessed before and after giving tensing toe relaxation technique. During the pretest among 60 students, 28.3% scored severe anxiety. But in the posttest none of them scored severe anxiety. Likewise in the pretest 50% gained moderate anxiety, and in the post test 58.3% of the adolescents scored mild anxiety. This shows that reduction in the level of test anxiety. So tensing toe relaxation technique is essential.

The above considerable mean difference was statistically proved by student paired “t” test $t=14.33$. With the table value (2.032) $df=59$ the difference of test anxiety was statistically highly significant highly significant at the level of $p<0.05$ from the above result H1 was accepted.

These findings show that using tensing toe relaxation in the test anxiety will reduce the test anxiety of the adolescents. So imparting tensing toe relaxation in the test anxiety is essential to avoiding anxiety, nervousness, tension, fatigue, and poor coping skills.

The findings in this study is congruent with the study conducted by **Samanesh, Bagheriyan, FaribaBhahani, Ogundokum (2011)**, conducted a study on the effect of regular tensing toe relaxation technique on reducing the stress among adolescents. 60 children in the age range of 13 to 18 years were selected. Demographic questionnaire and perceived stress scale was used to collect data. Results showed a significant difference in the mean scores (based on perceived scale and the questionnaire) between the control group and the experimental group after the intervention. The relaxation technique exercise can reduce the stress in adolescents.

Fourth Objective of the Study was to Identify the Association Between the Level of Test Anxiety With Their Selected Demographic Variables Such as Age, Sex, Birth Order, Education and Occupation of Parents, Income, Type of Family, Type of School And Child Accompanying

There was no significant association between test anxiety of adolescents regarding sex, age, birth order, education and occupation of parents income , type of family, type of school and child accompanying. Information obtained at the level of significance ($p>0.05$).

The findings in this study is congruent with the study conducted by **Malinisahadev and Rajeev (2011)** was conducted a study in Tamil Nadu Medical College to assess the effect of toe tensing relaxation technique reduce the anxiety and stress in undergraduate Medical students. A sample of 109 students was selected using random sampling and a structured questionnaire was administered. Anxiety and stress were measured using the Depression Anxiety Stress scale. It revealed that the females was comparatively higher than males and the incidence of males was 51.3%, females 66.05%. Academic factors were perceived as more stressful ($p<0.05$).

Chapter - VI

SUMMARY, CONCLUSION, NURSING IMPLICATIONS, LIMITATIONS AND RECOMMENDATIONS:

This chapter deals with the summary of the study and the conclusion drawn from the study. It also explains the limitations, implications and recommendations of the study for different areas like nursing education, nursing administration nursing practice and nursing research.

Summary

The study was undertaken to assess the effectiveness of tensing toe relaxation technique reduce the test anxiety among adolescents in selected school at Kulasekharam.

Objectives of the Study

1. To assess the level of test anxiety among adolescents before intervention.
2. To assess the level of test anxiety among adolescents after the intervention.
3. To find the effectiveness of tensing toe technique after intervention among selected adolescents.
4. To find the association between the level of test anxiety and selected demographic variables such as age, sex, birth order, education & occupation of parents, income, type of family and person accompanying with child .

Hypotheses

1. There is significant reduction in the level of stress after tensing toe relaxation technique among adolescents.
2. There is a significant association between the level of test anxiety and selected demographic variables such as age, sex, birth order, education & occupation of parents, income, type of family and person .

The present study was based on the concept of Betty Newman System Model. The review related to this study has been done to identify, select, critically analyze and report on existing information of the problem selected for the study. The pilot

study was found to be practicable and feasible to conduct the final study among adolescents. The final study was conducted in the Nediyaalai Government higher secondary school Arumanai. Before starting the study, the investigator obtained permission from school authorities for conducting the study. The subjects were explained about the study and consent was taken.

Data collection period was one month. This study was conducted in Government higher secondary school Nediyaalai with 60 samples. Purposive sampling was used. Pretest was conducted for all samples. In that the students anxiety level was assessed and taken the moderate severe anxiety students are selected and give tensing toe relaxation technique training continuously 10 times for every time. And at the end of the month the post test was assessed. The data was organized, tabulated, summarized and analyzed by using descriptive and inferential statistical analysis. Descriptive statistical methods like frequency, arithmetic mean, standard deviation were used to assess the level of test anxiety among adolescent boys and girls. Inferential statistical methods like paired 't' test was used to assess the effect of tensing toe relaxation technique and chi-square test used to associate the selected variables.

Findings of the Study

The study findings revealed that there was a significant difference among pre and posttests done within the group. The association of level of test anxiety with their demographic variables such as age, sex, birth order, education and occupation status of parents, family income, type of family, type of school and person accompanying with the child.

Conclusion

The study has concluded that the adolescents who had undergone tensing toe relaxation technique showed significant decrease in the level of their test anxiety. This shows the children need practice of tensing toe relaxation technique during each stage of their development to reduce their test anxiety, which may internally enhance their academic performance.

Nursing Implication

The findings of the study reveal the effect of tensing toe relaxation technique in reducing test anxiety and it can be implied in nursing practice, nursing education, nursing research and in nursing administration.

Nursing Education

Today's advanced education in nursing prepares the student nurses to take independent decision based on the principles of health care.

This technique can be integrated in the child health nursing curriculum of nursing programmes, so that the students can implement this technique for their clients during their clinical experience. An in-service education can be conducted on effect of tensing toe relaxation technique in reducing test anxiety for the nurses in the pediatric units so that they will be aware of the outcome of the programme and implement it in their units.

Nursing Practice

Extreme effects of test anxiety can be comorbid with over anxious disorder, social phobia and or suicide. So this tensing toe relaxation technique can be implemented in the pediatric units especially in the child psychiatry unit as routine intervention.

Nursing Research

There is need for extensive and intensive research in this area. It is the responsibility of the nurse researcher to plan and conduct a study in their units to assess the effect of tensing toe relaxation technique as well as in the community by the community health nurse for the children at different stages of development. So that they can feel good and valued by the world in which they live.

Limitations

1. Period was much shorter for the detailed data to be collected.
2. Study could be conducted before starting the class hours and in the evening after completion of the class hours.

Recommendations

1. The study can be done for a long term basis to produce more outcomes.
2. The same study could be replicated for each stage of development separately in different schools. Such studies can be conducted in government schools also.

3. The study can be done for a larger size of samples, for more generalizability.
4. The study can be done to assess the debilitating levels of anxiety among adolescents due to test or evaluative situations.

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APPENDIX – A

Letter Seeking Permission for Conducting Study



SREE MOOKAMBIKA COLLEGE OF NURSING

PADANILAM WELFARE TRUST, V.P.M.HOSPITAL COMPLEX, PADANILAM,
KULASEKHARAM, K.K.DIST., TAMIL NADU, PIN : 629 161.

Phone : 04651 - 280745, 280742, 278250

(Approved by Govt. of The Tamil Nadu & Recognised by Indian Nursing Council, New Delhi)

Date : 01.09.2014

Lr. No :

From

The Principal,
Sree Mookambika College of Nursing,
Kulasekharam.

To

The Head master,
Govt Higher Secondary School,
Nediya Salai,
Arumanai.

Respected Sir,

Sub : Letter for seeking permission to conduct data collection reg:-

This is to introduce **Sabisitha .S**, IInd year M.Sc (N) student of Sree Mookambika College of Nursing. She has to conduct data collection in research study as a partial fulfillment of the course which is to be submitted to the TN Dr. MGR Medical University, Chennai. **"A study to assess the effectiveness of tensing toe relaxation technique reducing test anxiety among adolescents in selected school in Arumanai at kanyakumari District."**

The student is in need of your esteemed help and co-operation as she is interested in conducting the study in your institution. In this regard I request you to extent possible guidance and support for successful completion of data collection.

Thanking You

Yours faithfully,

Principal

Letter Seeking Expert Opinion for Content and Tool Validity



SREE MOOKAMBIKA COLLEGE OF NURSING

PADANILAM WELFARE TRUST, V.P.M.HOSPITAL.COMPLEX, PADANILAM,
KULASEKHARAM, K.K.DIST., TAMIL.NADU, PIN : 629 161.

Phone : 04651 - 280745, 280742, 278250

(Approved by Govt. of The Tamil Nadu & Recognised by Indian Nursing Council, New Delhi)

Date :

Lr. No :

LETTER SEEKING EXPERT OPINION FOR TOOL VALIDITY

Date :

To

Madam / Sir

Sub : M.Sc Nursing Programme – dissertation – Validation of study tool request –reg:

Ms/Mrs. **SABISITHA** is a bonafide if II Year M.Sc Nursing student of Sree Mookambika College of Nursing is approaching you to obtain validation of study tool pertaining to her dissertation in practical fulfillment of the requirement for the degree of Master of Science in Nursing. The selected topics is **A study to assess the effectiveness of toe tensing relaxation technique in reducing test anxiety among adolescents in selected school in kulasekaram at Kanyakumari district.** In this regard I request you to kindly extent possible technical guidance and support for successful completion of dissertation. I enclosed here with a check list for your evaluation.

Thanking You

Yours Sincerely

PRINCIPAL
Sree Mookambika College of Nursing
Kulasekharam-629 161

Ethical Clearance Certificate



SREE MOOKAMBIKA COLLEGE OF NURSING

PADANILAM WELFARE TRUST, V.P.M.HOSPITAL COMPLEX, PADANILAM,
KULASEKHARAM, K.K.DIST., TAMILNADU, PIN : 629 161.

Phone : 04651 - 280745, 280742, 278250

(Approved by Govt. of The Tamil Nadu & Recognised by Indian Nursing Council, New Delhi)

Date :

Lt. No :

ETHICAL COMMITTEE CLEARANCE

To

Date:11.01.14

Ms . Sabisitha.S

II yr M.Sc nursing

Sree Mookambika Medical College of Nursing

Kulasekharam.

Ref:Research Topic: A study to assess the effectiveness of tensing toe relaxation technique reducing test anxiety among adolescents in selected school in arumanai at kanyakumari district.

Sub: Approval of the above reference study and its related documents

Dear Sabisitha

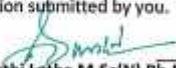
Ethics committee of Sree Mookambika College of Nursing Kulasekharam reviewed and discussed the study proposal documents submitted by related to the conduct of the above referenced study and its meeting held on

The following ethical committee members are present at the meeting held on

NAME	PROFESSION	POSITION IN THE COMMITTEE
Prof. Mrs. Shanthi Letha	Nursing	Chairman
Dr. Kani Raj Peter	Medical	Basic Medical Scientist
Dr. T.C. Suguna	Nursing	Clinicians
Adv. Mohanan	Legal	Legal Expert
Prof. Mrs. Ajitha Rethinam	Nursing	Member Secretary
Dr. A. Selva Raj	Management	Philosopher
Mr. Natarajan	Social	Medical Social Worker
Mrs. Latha	Lay person	Community Person

After due ethical and scientific consideration, the Ethics committee has approved the above presentation submitted by you.

Regards


Mrs. Shanthi Letha M.Sc(N) Ph.D(N)
Ethics committee chairperson
Sree Mookambika College of Nursing
VPM complex Padanilam Kulasekaram

Date:11.01.14

Place: Kulasekharam

Certificate showing conduction of study

CERTIFICATE

This is to certify that Ms. Sabisitha II year Msc Nursing student of Sree Mookambika College of Nursing has done her data collection regarding the effectiveness of tensing toe relaxation technique reducing test anxiety among adolescence in Government Higher Secondary School Nediyaalai .



S. Lakshman
8/12/2014.
Signature of Head Master
Headmaster
Govt. Higher Secondary School
Arumanai - 629 151
Tamil Nadu

APPENDIX B

LIST OF EXPERTS VALIDATED THE TOOL

- 1. Dr. Nedunchezian MD, DCH,**
Professor of Pediatrics Department,
SreeMookambika Institute of Medical Sciences.
Kulasekharam, Kanyakumari Dist.
- 2. Mrs.Sarayu Priya MSc(N)**
Principal,
P.S College of Nursing,
Marthandam.
- 3. Mrs.ViolinSheeba. MSc(N)**
Principal,
Thasiah College of Nursing,
Marthandam.
- 4. Mrs.C.V.Kavitha. MSc(N),**
Principal,
Saraswathy College of Nursing,
Parassala.
- 5. Mrs.Prema Latha, MSc(N),**
Assoiate Professor
Christian College of Nursing
Neyyoor.

DATA COLLECTION TOOL - ENGLISH

SECTION – A

DEMOGRAPHIC DATA:

1) Age of the subject in years

a) 13-14yrs

b) 14-15yrs

2) Sex of the subject

a) Male

b) Female

3) Order of birth

a) First

b) Second

c) Third and above

4) Educational status of the father

a) Illiterate

b) Primary school

c) High school

d) Higher secondary and above

5) Educational status of mother

a) Illiterate

b) Primary school

c) High school

d) Higher secondary and above

6) Family income

a) ≤ 5000

b) 5000 – 10,000

c) $\geq 10,000$

7) Father's occupation

a) Unemployee

b) Daily wages

c) Private employee

d) Government employee

8) Mother's occupation

a) Housewife

b) Daily wages

c) Private employee

d) Government employee

9) Type of family

a) Nuclear

b) Joint

c) Extended

10) Type of school

a) Government

b) Government aided

c) Private

11) child accompanying with

A) Parents

B) Relatives

C) Hostels/ orphanages

SECTION – B

TEST ANXIETY QUESTIONNAIRE:

Nist and Diehl (1990) Developed a short Questionnaire for determining if a student experiences a mild or severe case of test anxiety. To complete this education, read through each statement and reflect upon past testing experiences. You may wish to consider all testing or experiences focus on a particular subject (history, science, maths, etc...), one at a time. Indicate how often each statement describes you by choosing a number from one to five as outlined below.

	Never 1	Rarely 2	Sometimes 3	Often 4	Always 5
1. I have visible signs of nervousness such as sweaty palms, shaky hands etc, before writing a test.					
2. I have “butterflies” in my stomach					
3. I feel nauseated before a test.					
4. I read through the test and feel that I do not know any of the answers.					
5. I panic before and during a test.					
6. My mind goes blank during a test.					
7. I remember the information that I blanked on once I get out of the testing situation.					
8. I have trouble sleeping the night before a test.					
9. I make mistakes on easy questions or put answers in the wrong places.					
10. I have trouble choosing answers.					

0 – 20 Points indicate that you do not suffer from test anxiety. In fact, if you score was extremely low (close to 10), a little more anxiety may be healthy to keep you focused and to get your blood flowing during exams.

21 – 40 points shows that although you exhibit some of the characteristic of test anxiety, the level of stress and tension is probably healthy.

41-50 points suggest that you are experiencing an unhealthy level of test anxiety.

DATA COLLECTION TOOL – TAMIL

பகுதி : 1

புள்ளி விவரப் பட்டியல்

புள்ளி விவரப் பட்டியல் என்பது ஒரு ஆய்வின் சரியான முறைப்படி செய்திகளை வழங்குவதாகும். மேலும் இது தனிமனிதனைப் பற்றி விவரங்களை தெரிவிப்பதாகும்.

1. வயது

(A) 14 வயது

(B) 15 வயது

2. இனம்

(A) ஆண்

(B) பெண்

3. பிறப்பு வரிசை

(A) முதல்

(B) இரண்டாவது

(C) மூன்றாவது

(D) அதற்கு மேல்

4. தந்தையின் கல்வித் தகுதி

- (A) படிக்காதவர்
- (B) ஆரம்பக்கல்வி
- (C) மேல்நிலைக் கல்வி
- (D) பட்டப்படிப்பு

5. தாயின் கல்வித் தகுதி

- (A) படிக்காதவர்
- (B) ஆரம்ப கல்வி
- (C) மேல்நிலைக் கல்வி
- (D) பட்டப்படிப்பு

6. குடும்ப வருமானம்

- (A) 5000க்கு உள்
- (B) 5000 முதல் 10000
- (C) 1000க்கு மேல்

7. தந்தையின் தொழில்

- (A) வேலை செய்யாதவர்
- (B) தினசரி கூலி
- (C) தனியார் ஊழியர்
- (D) அரசாங்க ஊழியர்

8. தாயின் தொழில்

- (A) இல்லத்தரசி
- (B) தினசரி கூலி
- (C) தனியார் ஊழியர்
- (D) அரசாங்க ஊழியர்

9. குடும்ப வகை

- (A) தனிக்குடும்பம்
- (B) கூட்டுக் குடும்பம்

10. பள்ளியின் வகை

- (A) அரசுப்பள்ளி
- (B) தனியார் பள்ளி
- (C) அரசு சார்ந்த பள்ளி

11. மாணவனின் உடன் வசிப்பவர்

- (A) பெற்றோர்கள்
- (B) உறவினர்கள்
- (C) விடுதி / குழந்தைகள் காப்பகம்

	ஒரு போதும் இல்லை	அரிதாக	சில நேரங்களில்	பெரும்பாலும்	எப்போதும்
1. தேர்வு எழுதும் முன்னர் பதட்டத்தின் அறிகுறிகளான பதற்றம் மற்றும் கைகளில் வியர்வையும் எனக்கு ஏற்படும்					
2. என் வயிற்றுக்குள் பட்டாம்பூச்சி பறப்பது போன்று இருக்கும்					
3. தேர்வுக்கு முன் வாந்தி வருவதை போன்று தோன்றும்					
4. தேர்வின் போது கேள்விகள் அனைத்திற்கும் பதில் தெரியாதது போன்று தோன்றும்					
5. தேர்வின் போதும், தேர்வுக்கு முன்னும் பயப்படுதல் உண்டு					

<p>6. தேர்வின் போது படித்தது எல்லாம் மறந்தது போன்று தோன்றும்</p>					
<p>7. தேர்வின் போது மறந்து போன விடைகள் தேர்வுக்கு பின் நினைவில் வரும்</p>					
<p>8. தேர்வின் முந்தின நாள் இரவின் போது தூக்கம் வருவதில்லை</p>					
<p>9. எளிய கேள்விகளின் விடைகளை தவறாக எழுதுதல் அல்லது விடைகளை மாற்றி எழுதுதல்</p>					
<p>10. விடைகளை எழுதும் போது தடுமாற்றம் ஏற்படும்.</p>					

APPENDIX - D

Evaluation Checklist

Name of the expert :

Designation :

College :

Respected Madam / Sir,

Kindly go through the content and the place the right () marks against the check list in the following columns ranking from relevant to non-relevant. Where ever there is a need for modification, kindly give your opinion in the remarks column.

SECTION A
DEMOGRAPHIC VARIABLES

Item No.	Relevant	Needs Modification	Not Relevant	Remarks
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				

SECTION B

Test anxiety Questionnaire

Item No.	Relevant	Needs Modification	Not Relevant	Remarks
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				