

**A STUDY TO ASSESS THE EFFECTIVENESS OF  
AEROBIC DANCE MOVEMENT THERAPY ON  
ANXIETY LEVEL AMONG ADOLESCENT GIRLS AT  
SELECTED SCHOOLS AT TIRUVANNAMALAI**

**M.Sc (NURSING) DEGREE EXAMINATION  
BRANCH –V MENTAL HEALTH NURSING**

**VENKATESWARA NURSING COLLEGE, THALAMBUR,  
CHENNAI-600130.**



*A dissertation submitted to*

**THE TAMILNADU Dr. M.G.R. MEDICAL UNIVERSITY,  
CHENNAI - 600 032.**

*In partial fulfilment of the requirement for the degree of*  
**MASTER OF SCIENCE IN NURSING**

**APRIL - 2015**

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## **CERTIFICATE**

This is to certify that this dissertation titled “**A STUDY TO ASSESS THE EFFECTIVENESS OF AEROBIC DANCE MOVEMENT THERAPY ON ANXIETY LEVEL AMONG ADOLESCENT GIRLS AT SELECTED SCHOOLS AT TIRUVANNAMALAI**”, is a bonafide work done by Ms.Thilagavathy.S, Venkateswara Nursing College, Thalambur, Chennai-600130, submitted to The Tamil Nadu Dr.M.G.R. Medical University, Chennai in partial fulfilment of the University rules and regulations towards the award of the degree of Master of Science in Nursing Branch- V, Mental health Nursing under our guidance and supervision during the academic period from 2014-2015.

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## LIST OF ABBREVIATIONS

N	Total Number of sample
SD	Standard deviation
$\chi^2$	Chi square
S	Significant
NS	Not significant
n	Frequency
T	Student 't' test
NA	Not association
%	Percentage
ADMT	Aerobic dance movement therapy
WHO	World health organization
BMI	Basal Metabolic rate

# **ABSTRACT**

## **STATEMENT OF THE PROBLEM**

A study to assess the effectiveness of aerobic dance movement therapy on anxiety level among adolescent girls in selected school at tiruvannamalai

### **Introduction**

Adolescent period is not an age of problems and frustrations, in most of them it is golden age of adventure, romance and creativity. It is the period in life when an individual is having time, energy, creativity and a spirit of trying new things. Adolescents form above nearly one fifth of the total population of India and are significant proportion of the world's adolescent population. It is understandable that the occurrence of various psychosocial stressors during the transition from the adolescent to childhood is inevitable.

### **Objectives**

- a. To assess the pre-test level of anxiety among adolescent girls in the Experimental group and control group.
- b. To assess the post-test level of anxiety among adolescent girls in the experimental and control group.
- c. To evaluate the effectiveness of aerobic dance movement therapy on anxiety among adolescent girls in experimental group.
- d. To associate the post-test anxiety levels of adolescent girls in the experimental Group with their selected demographic variable.

### **Materials and Methods**

A Quantitative Research approach was adopted for this study. A review of literature was done on studies related to aerobic dance movement therapy on psychological condition, Studies related to Aerobic Dance movement therapy on medical condition, studies related



to anxiety. The conceptual framework opted for this study was based on the Model of Widenbach's helping art of clinical nursing theory (1969), in order to achieve the objectives of the study. The Research design adopted was quasi experimental design. The tool adopted for the study is standardized "State trait anxiety scale". The tool was validated by 4 experts.

A pilot study was conducted before under taking the main study. The main study was conducted in, Government Girls Higher Secondary and Government Higher Secondary School, among 60 adolescent girls of age group between 16-18 years. Purposive sampling technique was used to select 30 samples into experimental group and 30 students into control group. The study lasted for a period of 4 weeks during which, pre test was conducted using State trait anxiety scale to access the level of anxiety among adolescent girls in both the schools. The intervention was given from the next day to the subjects in Government Girls Higher Secondary. The intervention had 4 phases; Preparation Phase, Incubation Phase, Illumination Phase, Evaluation Phase. Intervention was given for a period of 4 weeks for 30 min per day. The subjects in the Government Higher Secondary School were used for control group. After 4 weeks post test was given to both the groups. The data was analysed by descriptive and inferential statistics, the hypothesis was tested, the objectives were achieved and the result was presented.

### **Major Findings of the Study**

The analysis revealed that the analysis of pre and post test score of anxiety of adolescent girls were evaluated and showed that the score of anxiety in post test is reduced than the scores in pre test of anxiety. The overall improvement mean showed a un paired T value of 18.329, which was statistically significant at  $p < 0.001$  level. These findings revealed that there was significant difference in the post level between the experimental and the control group.

### **Conclusion**

On the basis of the findings of the study, the investigator felt the aerobic dance movement therapy is effective non – pharmacological therapy for reduction of anxiety. Therefore this aerobic dance movement therapy used as a safe and effective method for giving support, comfort and relaxation to anxiety persons.

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## INTRODUCTION

*“Everything is affected by and is part of everything else , changing constantly from one state to another. The rain becomes the river; the river surrenders to the sea and the cycle begins over again. Nothing is ever lost. The melody changes – the dance goes on”.*

*Aurora Greenway*

Adolescent is an age of creativity, Idealism and adventure, if nurtured properly they can contribute eventually to themselves to become good individual or citizen for development of nation. Adolescence is a period of many critical transitions - physical, psychological, economic and social. Adolescents are full of energy, have significant drive and new ideas. They are a positive force for a nation and are responsible for its future productivity provided they develop in a healthy manner. Many mental health problems emerge in late childhood and early adolescence. Enhancing social skills, problem solving skills and self-confidence can help prevent mental health problems such as conduct disorders, anxiety, depression, and eating disorders as well as other risk behaviour. **WHO( 2003)**

The education of the adolescent shall be directed to the development of the adolescent ‘s personality, talent and mental and physical abilities to their fullest potential, the preparation of the adolescent for responsible life in society; in the spirit of understanding ,peace, tolerance, equality of the sexes, and friendship among all people. **WHO(1997).**

Anxiety is among the most common mental, emotional and behavioural problems that occur during childhood and adolescent. Adolescent girls who suffer from excessive anxiety regularly experience



a range of physical symptoms like muscle tension and cramps, Stomach aches, headaches, pain in the limbs & back, fatigue or discomfort associated with pubertal changes. *Collins( 2008)*.

Anxiety in adolescent of great importance because anxiety in adolescent are associated with negative outcomes including peer relationship difficulties, academic failure and later onset of co morbid disorders including major depression and alcohol abuse. *Gail and Bernstein (2001)*.

Aerobic dance is known to have powerful effect of the mind, body, and emotions. Aerobic dance movement is a type of therapy that uses movement to further the social, cognitive, emotional and physical development of the individual. Aerobic movement Dance therapy is often an easy way for a person to express emotions, even when his/her experience is so traumatic he or she can't talk about it (*American Dance Therapy Association*).

## **1.1 NEED FOR THE STUDY**

*“Life isn't about waiting for the storm to be over, It's about learning how to dance in the rain.”*

*- Maya Angelou*

Our brain is a thinking organ that learns and grows by interacting with the world through perception and action. Mental stimulation improves brain function and actually protects against cognitive decline, as does physical exercise. The human brain is able to continually adapt and rewire itself. The population of adolescent form a large about 25.1% that is about 250 million. The state of Indian population examines the challenges and risks faced by adolescent that

has an impact directly on their physical, emotional, and mental wellbeing. *Census (2011)*

*WHO* estimates that between 65 to 80 per cent of the world's population (about 3 billion people) rely on traditional (alternative) medicine as their primary form of health care.

Aerobic dance is great to enhance and increase concentration levels especially among school going children and adolescent. Aerobic dance movement therapy provide the structure for developing body sense and bring out the individual response related to emotion and memory. *Ambika kaneswa(2001)*

*Dr.StewartTrost of Oregon State University (2007)* reports of physical activity like exercise and dance therapy to improve concentration, memory and learning abilities among adolescent school student. Complementary actions are needed to promote healthy development in adolescents to prevent physical and mental health problems. (*India Development Gateway*). During adolescence, boys and girls face several challenges such as forming bonds with peers, differentiating themselves from their family members and establishing their adult identities.*De Minzi(2003)*.

*Goodill.et.al (2000)* conducted a study among 21 University students Showed that those who took a series of four to five groups dance therapy sessions in a period of 2 weeks significantly reduced their test anxiety as measured by a well-known exam called the Test anxiety inventory. Afterwards, the subjects reported that their dance movement experience was positive and provided them with psychological insight. The researchers concluded that Dance therapy could be an available

method of treatment for students who suffer from over Whelming test anxiety, and should be researched further.

*Leste and Rust (2002)* investigated the effects of modern dance on anxiety. State anxiety was assessed before and after a 3 month education programme, using the Spielberg State – Test Anxiety Inventory. The target group followed a class in modern dance. Control group were (1) a physical education group to control for the effects of exercise, (2) a Music groups to control for aesthetic sensitivity training and (3) a mathematics group. Several Concomitant variables were measured like age, sex, and attitude towards dance and previous Experience in sport, dance and relaxation. Dance training significantly reduced anxiety, but no Control activities did so.

*Robyn price (2005)* did a study to test the potential of an aerobic dance / movement therapy program as a treatment for anxiety. The program was developed by drawing psychodynamic, developmental, self-psychology and cognitive behavioural approaches. Eight out of the ten clients experienced a reduction in anxiety. This study provides support for further investigation into the use of aerobic dance Movement Therapy interventions to treat anxiety. *Blatt (2003) and Hanna(2004)* accredit aerobic dance therapy with increased identification or inclusion within a group, which greatly reduces anxiety, stress.

The aerobic dance Movement Therapy have the potential benefit of avoiding side effectswhereas of pharmacological medications having side effect. So researcher wanted to find out the effectiveness of Aerobic dance movement therapy on anxiety among adolescent girls and has undertaken this study.

## **1.2 STATEMENT OF THE PROBLEM**

“A study to assess the effectiveness of Aerobic Dance Movement Therapy (ADMT) on anxiety level among adolescent girls in selected schools at Tiruvannamalai.”

### **1.3 OBJECTIVES**

- 1) To assess the pre-test level of anxiety among adolescent girls in the Experimental group and control group.
- 2) To assess the post-test level of anxiety among adolescent girls in the experimental and control group.
- 3) To evaluate the effectiveness of aerobic dance movement therapy on anxiety among adolescent girls in experimental group.
- 4) To associate the post-test anxiety levels of adolescent girls in the experimental Group with their selected demographic variable.

### **1.4 OPERATIONAL DEFINITION**

#### ***Effectiveness***

In this study effectiveness refers to the extent to which the Aerobic Dance Movement Therapy has impact on the reduction of anxiety among adolescent girls as measured by state trait anxiety scale.

#### ***Aerobic Dance Movement Therapy***

AerobicDance movement is a therapy in which can use to improve social skill, problem solving skill, and self-confidence. Inthis study Aerobic dance movement therapy is given by the investigator for 30 minutes, once a day.

#### ***Anxiety***

It refers to natural and important emotion experienced by adolescent girls, signalling through sense of worry, apprehension, fear, shy, & distress which alarm that a danger or a sudden Threatening change.

### ***Adolescent Girls***

It refers to girls who were in the age group of 16-18 years studying in selected Schools of Tiruvannamalai district and would be able to perform Aerobic Dance Movement Therapy.

## **1.5 RESEARCH HYPOTHESIS**

H<sub>1</sub> There is a significant difference between the pre-test and post test levels of anxiety among Adolescent girls in both experimental and control group before Aerobic Dance Movement Therapy.

H<sub>2</sub> There is a significant association in the post test level of anxiety among Adolescent girls in experimental with the selected demographic variables.

## **1.6 ASSUMPTIONS**

The study assumes that the adolescent girls have some level of anxiety.

Aerobic Dance Movement Therapy will be effective in reducing the level of anxiety among the adolescent girls.

## **1.7 DELIMITATION**

- 1) Study limited for four weeks.
- 2) The Adolescent girls in age group of 16 to 18 years.

## **CHAPTER – II REVIEW OF LITERATURE**

Polit and beck (2008) state that review of literature refers to the activities involved in searching for information on a topic and developing a comprehensive picture of current knowledge in that topic .An extensive review of literature relevant to the research study topic is done to gain information and insight to build the foundation of the study.

The present study aims at investigating the effectiveness of Aerobic dance movement therapy in reducing the level of anxiety among adolescent girls.

### **PART-1: LITERATUR RELATED TO**

- I. Study related to aerobic dance movement therapy on psychological condition.
- II. Study related to Aerobic Dance movement therapy on medical condition.
- III. Study related to anxiety.

### **STUDIES RELATED TO AEROBIC DANCE MOVEMENT THERAPY ON PSYCHOLOGICAL CONDITION.**

*Colucci (2010)* conducted a study to assess the effects of aerobic dance therapy and relaxation therapy on anxiety levels in college students. The participants consisted of 24 undergraduate students from a Catholic Liberal Arts College in New England and were divided into two treatment groups. The first was a aerobic dance therapy treatment group where students followed an instructor, via videotape, in order to ease their feelings of anxiousness. The other group was a relaxation

therapy treatment, where the students listened to an audio tape consisting of the tensing and relaxing of muscle group, accompanied with deep breathing. It was predicted that the dance therapy session would experience a greater decrease in anxiety levels due to the process of self-expression and nonverbal communication, which allow for a greater release of the students feelings of anxiousness. All participants were administered the Speilberger State-Trait Anxiety Inventory to test for pre- and post-session anxiety. Findings indicated that both therapy sessions had a significant decrease on anxiety levels, with dance therapy levels having a greater decline than the relaxation therapy

*Silvetri, lynette (2007)* Ninety high schools girls were assessed to determine if aerobic dance alone or in combination with relaxation training had an effect on anxiety level. State and trait anxiety scores measured by the state trait anxiety inventory where used as pre test and post test measures. Aerobic dance or in combination with relaxation training was administrated during the school physical education classes. High and low anxiety subjects were identified to determine if treatment had differential effects on anxiety level over time depending on the initial level of anxiety.

*Robyn Price, (2005)* describes a study to test the potential of a aerobic dance movement therapy program as a treatment for anxiety. The program was developed by the author, drawing from the approaches of *Kier (2000)* and *Bourne (2000)* and incorporating elements from psychodynamic, developmental, self-psychology and cognitive behavioural approaches. Ten self-selected adults joined a community based aerobic dance movement therapy program for a ten week series of sessions. Assessment tools included a client interview, Zung SAS questionnaire, movement analysis using the Samuels and Chaiklin

movement observation scale and client feedback form. Eight out of the ten clients experienced a reduction in anxiety and those with no depression showed a higher level of improvement. Further research into the treatment of anxiety and depression is recommended, especially into the combination of verbal and aerobic dance movement therapy within a multidisciplinary treatment approach.

*Leste and Rust, (2002)* investigated the effects of aerobic dance on anxiety. State anxiety was assessed before and after a 3 month education programme, using the Spielberger State Trait Anxiety Inventory. The target group followed a class in aerobic dance. Control group were i) a physical education group to control for the effects of exercise ii) a music group to control for aesthetic sensitivity training and iii) a mathematics group. Several concomitant variables were measured: age, sex, attitude towards dance, and previous experience in sport, dance and relaxation. Aerobic dance training significantly reduced anxiety, but no control activities did so. Examinations of the concomitant variables showed that the result could not be accounted for by any obvious artifacts.

*Jeong. et.al (2005)* conducted a randomized controlled trial in Korea found that aerobic dance movement therapy worked better than no treatment in adolescent girls with mild depression. This study assessed the profiles of psychological health and changes in neurohormones of adolescents with mild depression after 12 weeks of dance movement therapy. Forty middle school seniors (mean age: 16 yrs) volunteered to participate in this study and were randomly assigned into either a dance movement group (n=20) or a control group (n=20). All subscale scores of psychological distress and global scores decreased significantly after the 12 weeks in the aerobic dance movement therapy group. Plasma



serotonin concentration increased significantly and dopamine concentration decreased in the aerobic dance movement therapy group. These results suggest that dance movement therapy may stabilize the sympathetic nervous system.

*Lundy & Guffin, (2005)* conducted a study using aerobic dance/movement therapy to augment the effectiveness of therapeutic holding with children. Research was conducted incorporating aerobic dance/movement therapy technique before and after therapeutic holding. Volunteer residential treatment centre staff participated in a 4 hours aerobic dance/movement therapy based training workshop integrating the techniques with the intervention. The study found out that aerobic dance movement therapy training increased adult awareness, sensitivity, perspective shifting ability, and confidence in the intervention while decreasing the necessity for physicality. It decreased the threat of trauma to adult participants.

## **2. STUDY RELATED TO AEROBIC DANCE MOVEMENT THERAPY ON MEDICAL CONDITION.**

*Fatai A. Maruf (2014)*, Hypertension is associated with dyslipidemia. Thiazides adversely affect serum lipid levels in hypertensive. There is currently a dearth of information on benefits of aerobic exercise training on serum lipid levels in individuals on thiazides and this study aimed at bridging this gap in knowledge. This randomized-controlled trial involved 120 newly-diagnosed adults with essential hypertension ( $\geq 65$  years). They were treated with 50 mg of hydrochlorothiazide + 5 mg of hydrochloride amiloride and 5 or 10 mg of amlodipine for 4–6 weeks before they were randomly assigned into exercise group (EG) and control group (CG). Only EG underwent 12-week aerobic dance training at 50–70 % of heart rate reserve three times per week. Low-density lipoprotein cholesterol (LDL-C), high-density

lipoprotein cholesterol, triglyceride and total cholesterol were measured and recorded at baseline and post-study.

*Dr.Hendry N. williford (2012)* to the intensity of the exercise. ‘Low intensity’ dance exercise is usually characterised by less large muscle activity and/or less low extremity impact, and music of slower tempo. Dance exercise representative of this variety requires a cost of approximately 4 to 5 kcal/minute. Several trials, however, have shown that vigorous ‘high intensity’ aerobic dance which entails using the large muscle groups can require 10 to 11 kcal/minute. The associated training outcomes could be affected by such differences in dance exercise intensity and style. Aerobic dance exercise is currently one of the most commonly practised adult fitness activities. The majority of the research pertaining to this form of exercise supports its application as a valid cardiovascular training alternative, especially for adult females if performed according to the American College of Sports Medicine (ACSM) guidelines. If however, the participant is interested in modifying body composition, training frequency, duration, or efforts toward caloric restriction may need to be increased or altered beyond those employed in the aerobic dance training investigations. The amount of energy expended during a bout of aerobic dance can vary dramatically according

*Bengain stoek(2014)*. Cancer-related fatigue is a multidimensional symptom with an underestimated prevalence and severity in cancer patients. The aim of the study was to evaluate the effect of dance as a holistic sportive activity in cancer patients under active anticancer treatment with fatigue as endpoint. Forty patients under active anticancer treatment (adjuvant (25), palliative (11) or neoadjuvant (4)) with moderate or severe fatigue ( $\geq 4$  on the visual analogue scale) were

investigated in two groups for severity of fatigue (visual analogue scale, Functional Assessment of Chronic Illness Therapy: Fatigue questionnaire), quality of life (European Organization for Research and Treatment of Cancer, Quality of Life Questionnaire) and physical performance (6-minutewaltest) before and after the study period—group A ( $n = 20$ ): intervention (10 dance classes in 5 weeks in addition to counselling) and group B ( $n = 20$ ): control (no dance, standard of care, counselling). We found significant improvements for cancer-related fatigue in the intervention group (baseline mean  $\pm$  SD  $5.95 \pm 1.701$ , end-of-study mean  $3.8 \pm 1.542$ ,  $p = 0.001$ , reduction of 36 %) compared to the control group (baseline mean  $4.95 \pm 0.999$ , end-of-study mean unchanged at  $5.0 \pm 1.556$ ,  $p = 0.887$ ); as well as for emotional and social functioning scales and physical performance ( $p < 0.05$ ). Dance might be an appropriate, effective approach for treatment of cancer-related fatigue.

*Leelarungrayub D, Saidee K*, (2011) This study evaluated the change in blood oxidative stress, blood interleukin-2, and physical performance following 6 weeks of moderate intensity and duration aerobic dance exercise in 24 sedentary women. Blood samples were collected at rest twice before (baseline) and after the 6-week intervention for analysis of protein hydro peroxide (PrOOH), malondialdehyde (MDA), total anti-oxidant capacity (TAC), and interleukin-2 (IL-2) levels. Maximal treadmill run time (Time(max)) and maximal oxygen consumption (VO(2max)) were also measured. All variables were statistically analyzed with a repeated measurement ANOVA and Tukey post hoc. No differences were noted in any variable during the baseline period ( $p > 0.05$ ). After aerobic dance exercise, VO(2max), Time(max), TAC and IL-2 were significantly increased,

whereas MDA levels were decreased significantly ( $p < 0.05$ ). Prop did not change either between baseline measures or after exercise. It can be concluded that aerobic dance exercise at a moderate intensity and duration can improve physical fitness, decrease MDA, and increase TAC and IL-2 in previously sedentary women.

***Dr.Fatma Arslan(2012)***. Regular physical activity leads to significant changes in terms of the reduction of health-related risks. The purpose of this study was to investigate the effects of an eight-week step-aerobic dance exercise programme on weight loss and body composition parameters in middle-aged sedentary obese women. This study comprised an eight-week randomised controlled trial. A total of 49 healthy sedentary obese women participated in this study voluntarily. They were randomly divided into two groups: those undertaking a step-aerobic dance extended (BMI), weight, waist circumference, waist-hip ratio, four-site skinfold thickness, fat percentage, basal metabolic rate and lean body mass were assessed before and after the completion of the step-aerobic dance exercise programme. After the eight weeks of the step-aerobic dance exercise programme, significant differences were found in the subjects' weight, BMI, body composition parameters, waist-hip ratio (WHR), waist circumference (WC), fat percentage, lean body mass (LBM) and basal metabolic rate (BMR) in the experimental group ( $p < 0.05$ ). There were no significant differences in the control group after the experiment in terms of the same measures ( $P > 0.05$ ).

### ***3. Studyrelated to anxiety***

***University of London (2000)*** to assess the effectiveness of dance therapy on anxiety to improve concentration among children; with the sample size of 114. State anxiety was assessed before and after the therapy education program using the “Spielberger State Anxiety

Inventory". The target group followed a class in modern dance. Control groups were (1) a physical education group to control the effects of exercise ;(2) a group controls the aesthetic sensitivity training, and (3) a mathematics group. Several concomitant variables were measured; age, sex, attitude towards dance and previous experience in sports, dance relaxation. The result shows that dance training significantly reduced anxiety and helps in developing concentration, whereas control group activities were not ben obtained such as a like of experimental group.

*Goodill.et.al, 2000* conducted a pilot study of 21 university students showed that those who took a series of four to five dance therapy sessions in a period of two weeks significantly reduced their test anxiety as measured by a well-known exam called the test anxiety inventory. Afterwards, the subjects reported that their dance movement experience was positive and provided them with psychological insight. The researchers concluded that dance therapy could be a viable method of treatment for students who suffer from overwhelming test anxiety, and should be researched further.

*Parslow.et.al, (2006)* conducted a study to review the evidence for the effectiveness of complementary and self help treatments for anxiety disorders and situational anxiety in children and adolescents. Systematic literature search using pub Med, psycINFO and the Cochrane library for treatments up to February 2006 were used as data sources. There were treatments for which intervention studies had been undertaken and reported. Studies on each treatment were reviewed by one author and checked by a second. A consensus was reached for level of evidence. Relevant evidence was available for bibliotherapy, dance and movement therapy, distraction techniques, humour, massage,

melatonin, relaxation training, autogenic training, avoiding marijuana and music therapy.

*Truppi (2001)* compared the efficacy of two interventions, multi-model verbal therapy and dance/movement therapy for the treatment of these issues with adolescent girls in a residential placement. This study found both methods to be equally beneficial. There were no significant differences found when shame, sexual concerns, dissociation, and post-traumatic stress were measured after using these two forms of interventions. This was attributed to the possibility that the group size was too small and the length of treatment was not sufficient.

*Palusk&Schwenk (2000)* explanation of the effect exercise leads to increase in self-confidence and enhancement of mood. The mastery hypothesis proposes that individual gain a feeling of independence and control and therefore experience less anxiety.

## **2.2 CONCEPTUAL FRAMEWORK**

A Conceptual framework refers to framework of prepositions for conducting research. Conceptual framework serves as a spring board for theory development. As this made up of concepts which are mental images of a phenomenon.

This study is based upon Wiedenbach's helping art of clinical nursing theory. Wiedenbach's first published her ideas in 1964 in clinical nursing. She further refined her theory in "nursing wisdom in nursing theory" published in 1970. Wiedenbach views nursing as an art based on goal directed care. Factual and speculative knowledge, judgment, and skills are necessary for effective nursing practice.

Wiedenbach's vision of nursing practice closely parallels assessment, implementation and evaluation steps of nursing process.

According to Widenbach, nursing practice consists of identifying a patient's need for help, ministering the needed help and validating that the need for help was met.

***The main concepts of this study are,***

- Identifying a need for help
- Ministering needed help
- Validating that need for help was met.

***Identifying a Need for Help:***

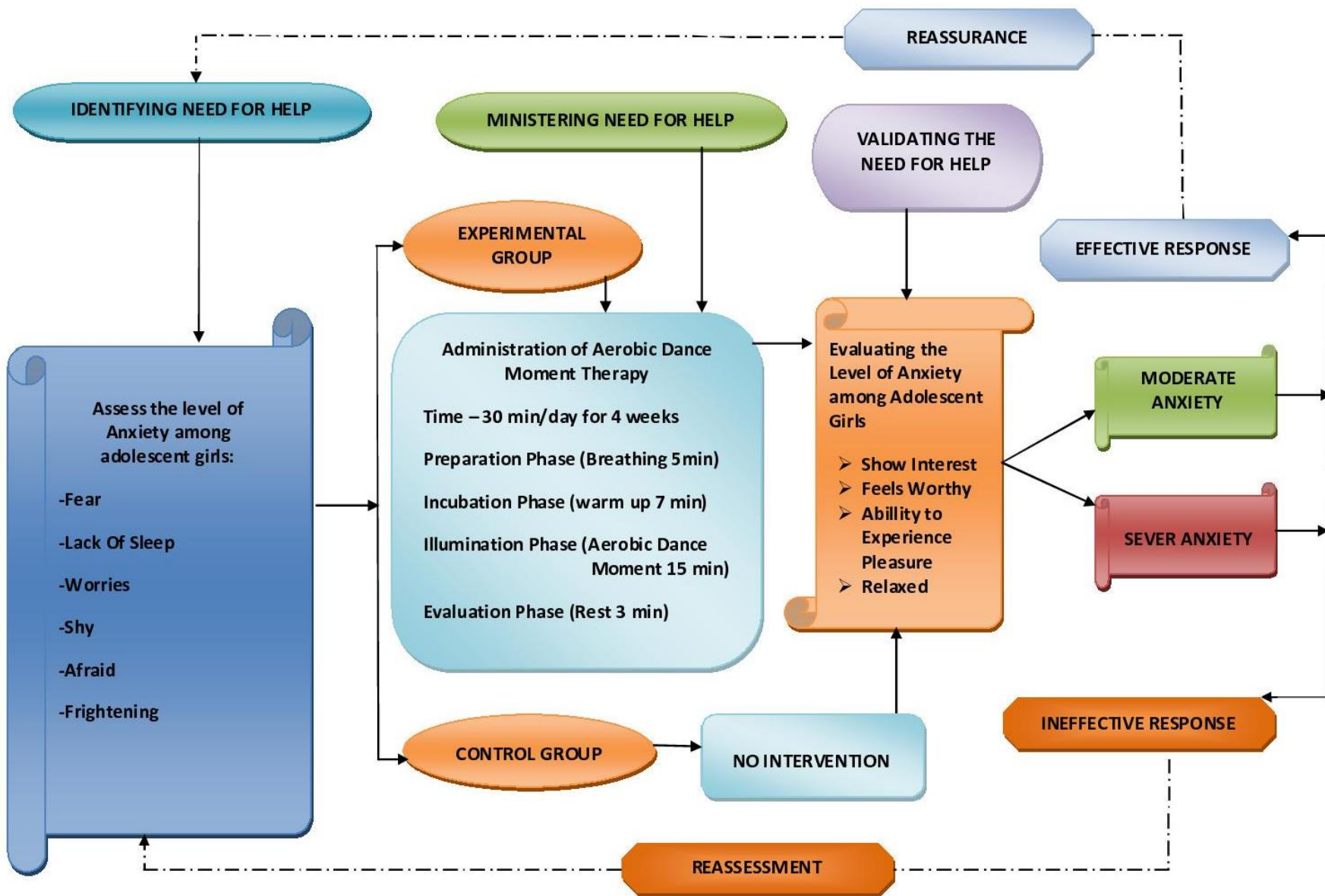
Here, the individual is considered as a unique experience person. Person need are determined and seen whether the person realize the need and what prevents the person from meeting the needs. In this study it refers to the assessment of anxiety level among adolescent girls before aerobic dance movement therapy.

***Ministering the needed help:***

It measures to meet the need of the individual who needs help. In this study it refers to ministering aerobic dance movement therapy to the adolescent girls with anxiety.

***Validating that a need for help was met:***

It is to evaluate and show that individual need have been met and his functional ability has been returned as a direct result of the nurse action. In this study it refers to post assessment of level of anxiety after aerobic dance movement therapy. There will be a reduction in the level of anxiety.



*Fig 2.1 Conceptual Frame Work of Modified Wiednbach's helping art of Clinical Nursing Theory (1964)*



## **CHAPTER- III**

### **RESEARCH METHODOLOGY**

The methodology of the research indicates the general pattern of organising the procedure for gathering valid and reliable data for investigation. This chapter provides a brief description of the method to be adopted by the investigator in this study it includes the research approach ,research design , setting ,sample size, sampling technique ,description of the tool, pilot study, data collection procedure and plan for data analysis.

#### **3.1 RESEARCH APPROACH**

Two approaches were used in this study.

##### **PHASE –I**

Descriptive survey was used to assess the level of anxiety among the adolescent girls in the selected schools at tiruvannamalai.

##### **PHASE – II**

Experimental approach was used to determine the effectiveness of aerobic dance movement therapy in terms of reducing anxiety among adolescent girls in selected school at thiruvannamalai.

#### **3.2 RESEARCH DESIGN**

The research design adopted for the study quasi experimental design .(Experimental group andControl group).

<b>Group</b>	<b>Pre test</b>	<b>Intervention</b>	<b>Post test</b>
Experimental Group ( E )	O <sub>1</sub>	X	O <sub>2</sub>
Control Group ( C )	O <sub>1</sub>	-	O <sub>2</sub>

- E – Experimental group
- C – Control group
- O<sub>1</sub> – Pre-test level of anxiety
- O<sub>2</sub> – Post-test level of anxiety
- X – Aerobic dance movement therapy

### **3.3 VARIABLES**

A Variable is anything that can change or anything that is liable to vary. Two types of variables were identified in this study.

***Dependent variable:*** Dependent variables are the effect of action of the independent variable and cannot exist by itself. In this study, it refers to Anxiety of adolescent girls.

***Independent variable:*** An Independent variable is the variable that stands alone and is not dependent on any other. In this study, it refers to Aerobic dance movement therapy to adolescent girls.

### **3.4 SETTING OF THE STUDY**

The study was conducted in two Government girl's higher secondary school in and around Tiruvannamalai. The Government girl's higher secondary school is located at the centre of the town. This school has good physical facilities like playground, drinking water supply, and toilet facilities. Class rooms are well ventilated and are under close supervision of the teachers. Government higher secondary school is similar to that of Government girl's higher secondary school of Tiruvannamalai.

### **3.5 POPULATION**

The population of the study was the adolescent girls in the age group of 16 to 18 years studying in selected schools of Tiruvannamalai District, Tamil Nadu.

### **3.6 SAMPLE**

Sample consists of a subset of the unit that compose the population. The Sample for this study consisted of 60 adolescent girls in the age group of 16 to 18 years, who fit into the inclusion criteria.

### **3.7 SAMPLE SIZE**

Sample size of 60 was taken for the study,30 adolescent girls in experimental groups and 30 adolescent girls in control group.

### **3.8 SAMPLE TECHNIQUE**

Sampling is the process of selecting a portion of the population to obtain data regarding a problem. In this study the investigator had used Purposive sampling technique of the subjects.

### **3.9 CRITERIA FOR SAMPLE SELECTION**

#### ***Inclusion Criteria***

- 1) Adolescent girls studying in selected schools of Tiruvannamalai district.
- 2) Adolescent girls in the age group of 16 to 18 years.
- 3) Adolescent girls who can read Tamil / English.
- 4) Adolescent girls who scored in severe and moderate level of anxiety.

### ***Exclusion Criteria***

1. Adolescent girls who are not available during the data collection period.
2. Adolescent girls who are not willing to participate in the study.
3. Adolescent girls with physical illness and physical disabilities.

### **3.10 DESCRIPTION OF THE TOOL**

The research tool had two sections.

#### **PART 1**

This part deals with demographic variables. Such as age, religion, type of family, monthly family income, occupation of the head of the family, area of residence, medium of education, weight, height, BMI.

#### **PART 2**

State trait anxiety scale was used to identify the anxiety level among adolescent girls. It consisted of 40 statements. Each item had 4 options not at all, somewhat, moderately so , very much so.

### **3.11 INTERPRETATION OF THE SCORE**

A total score of less than 20 indicates the absences of an anxiety.

A total score of 20-40 indicates the mild level of anxiety of anxiety and 40-60 indicate moderate level and 60-8 indicate severe level of anxiety.

### **3.12 TESTIG OF THE TOOL**

In order to ensure the content validity of the tool and enhancement, it was submitted to 4 experts from psychiatry department.

### **3.13 ETHICAL CONSIDERATION**

The proposed study was conducted after the approval of the ethics committee of Venkateswara Nursing College, Thalambur, Chennai. Permission was obtained from the Principals of Government higher schools at Tiruvannamalai Verbal assurance was given to the adolescent girls and written consent was obtained.

### **3.14 CONTENT VALIDIY**

In order to determine the content validity, the tool was submitted to Medical superintendent, Medical office and Nursing experts in Mental Health Nursing and their suggestion were incorporated in the tool.

### **3.15 RELIABILITY OF THE TOOL**

Reliability of an instrument is the degree of consistency with which it measures the attribute it is supposed to be measuring. The reliability of the tool was found ( $r=0.8$ ) by test retest method, and the tool was considered as fit for proceeding with pilot study.

### **3.16 PILOT STUDY**

In order to test the feasibility, relevance and practicability of the study, a pilot study was conducted among 5 adolescent girls with anxiety in high school at Tiruvannamalai. The study was conducted in a manner in which the final study would be done.it revealed that the study was feasible.

### **3.17 DATA COLLECTION PROCEDURE**

The data collection was done for a period of 4 weeks in two selected schools of Thiruvannamalai district, Government Girls Higher Secondary and Government Higher Secondary School. A formal permission from school authority was collected before the study. The study was conducted from 15/09/2014 to 15/10/2014. The students of age group 16-18years were selected. The samples were selected based on the inclusion criteria and by purposive sampling method sorted into experimental and control group.

The researcher explained about the study and its purpose and got written consent from the samples. Pre test was conducted using State trait anxiety scale to access the level of anxiety among adolescent girls in both the schools. The intervention was given from the next day to the subjects in Government Girls Higher Secondary. The intervention had 4 phases; Preparation Phase, Incubation Phase, Illumination Phase, Evaluation Phase. Intervention was given for a period of 4 weeks for 30 min per day. The subjects in the Government Higher Secondary School were used for control group. After 4 weeks post test was given to both the groups.

### **3.18 PLANS FOR DATA ANALYSIS**

Data is analysed using both descriptive and inferential statistics.

#### **DESCRIPTIVE STATISTICS**

Frequency, percentage and mean were used for the analysis of the pre-test and post-test.

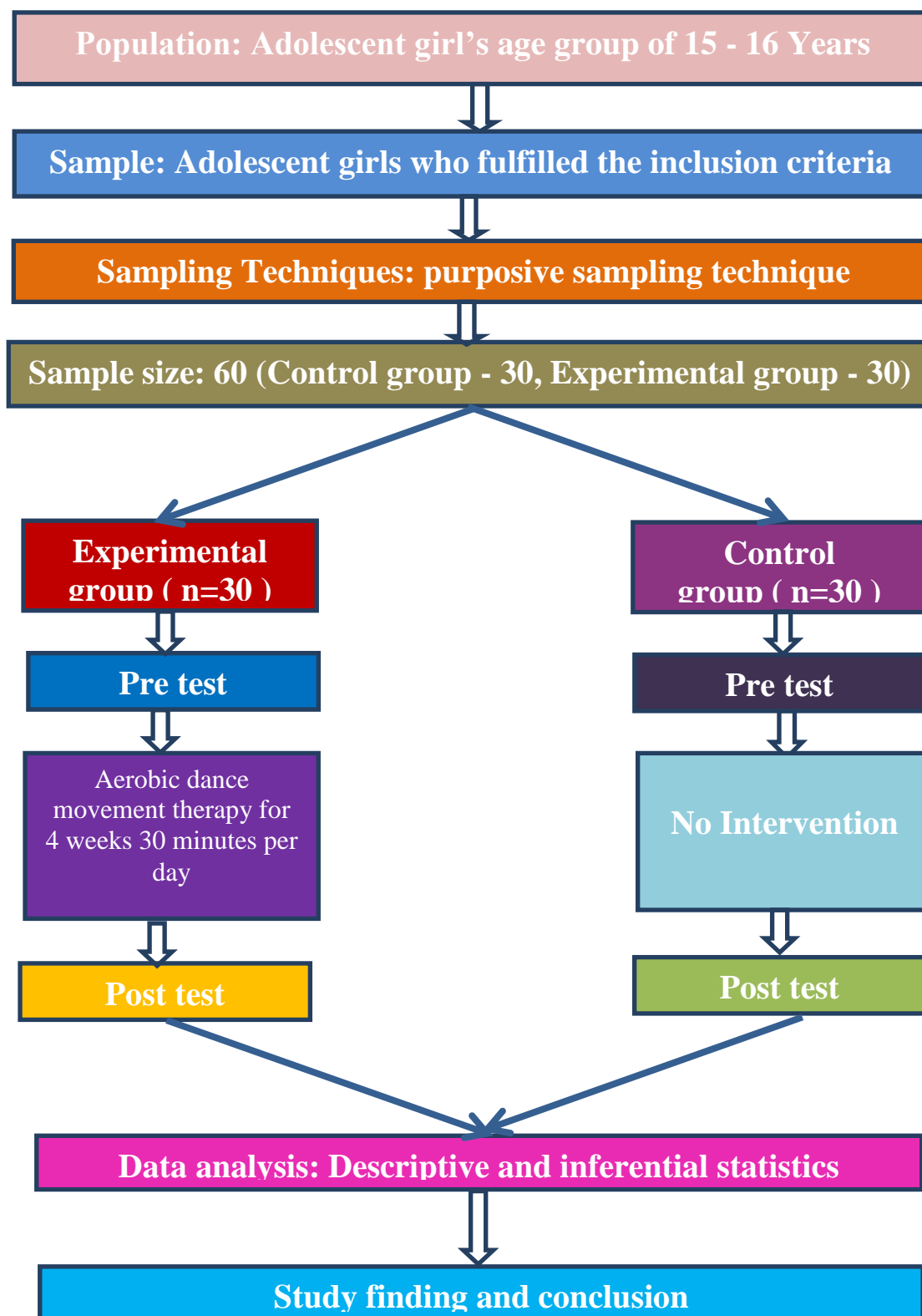
#### **INFERENTIAL STATISTICS**

Paired t test was used to determine the deference between pre-test and post score in experimental groups.

Independent t test was used to determine post test score difference between experimental and control group.

Chi square test was used to determine the associate between selected demographic variables, post test score in experimental group.

*Fig 3.1 Schematic representation of study design*





## **CHAPTER - IV**

### **DATA ANALYSIS AND INTERPRETATION**

Analysis is defined as systematic examination and evaluation of data or information, by breaking it into its component parts to uncover their interrelationships

*- Francline*

This chapter deals with the analysis and interpretation of the data collected from 60 samples of adolescent girls to assess the level of anxiety in selected schools at Tiruvannamali. The data findings have been tabulated and analyzed according to the plan for data analysis and interpreted according to the following section

#### **ORGANIZATION OF DATA**

- Section A** Analysis of demographic variables of level of anxiety among adolescent girls in experimental and control group.
- Section B** Analysis of the pre test level of anxiety among adolescent girls in experimental and control group.
- Section C** Analysis of the post test level of anxiety among adolescent girls in experimental and control group.
- Section D** Analysis of effectiveness of level of anxiety among adolescent girls in pre and post test in experimental and control group.
- Section E** Association of post test level of anxiety among adolescent girls in experimental group with the selected demographic variables

**SectionA: Analysis of demographic variables of level of anxiety among adolescent girls in experimental and control group.**

This section deals with the description of demographic variables of adolescent girls in experimental and control group.

**TABLE – 4.1 Frequency and percentage distributions of samples according to Demographic Variables**

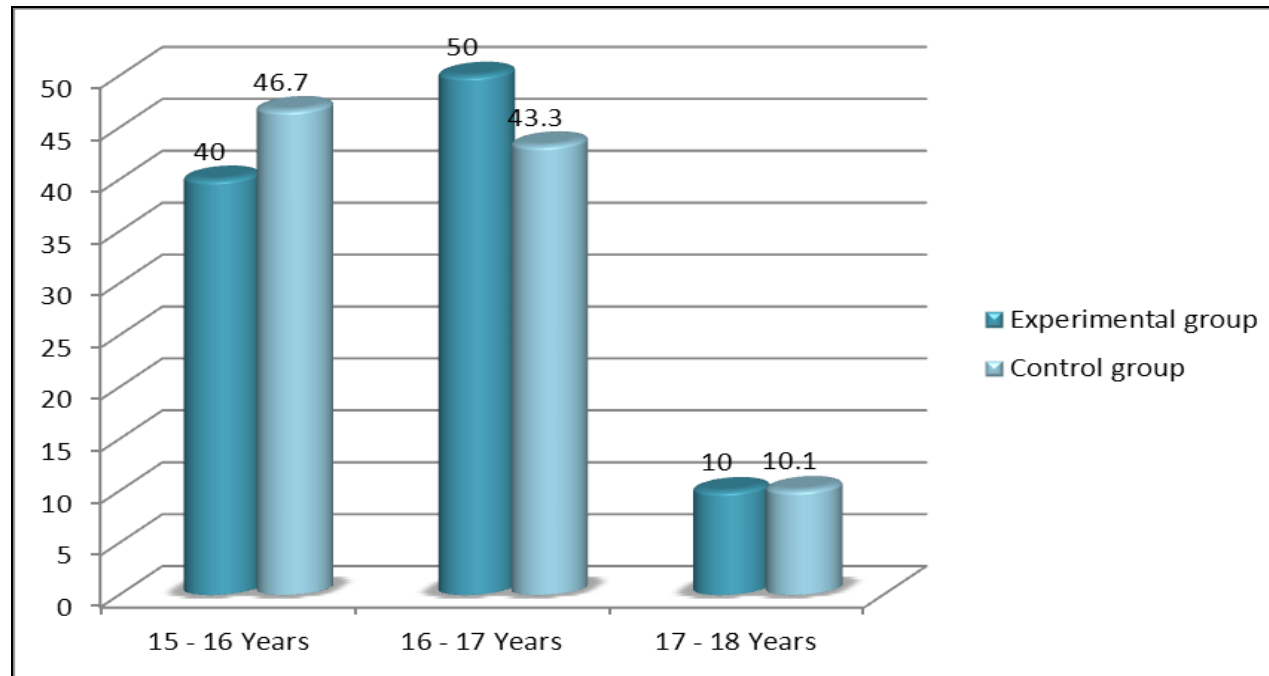
**$N=30+30=60$**

SI No	Demographic variables		Experimental group		Control group	
			n	%	n	%
1	Age	15 - 16 Years	12	40	14	46.7
		16 - 17 Years	15	50	13	43.3
		17 - 18 Years	3	10	3	10.1
2	Religion	Hindu	25	84	23	76.7
		Christian	3	10	5	16.7
		Muslim	2	6.7	2	6.7
3	Type of Family	Nuclear Family	15	50	13	43.3
		Joint Family	13	43	16	53.3
		Extended family	2	6.7	1	3.3
4	Monthly income	Rs 2000 - 3000	11	64	10	33.3
		Rs 3000 - 5000	9	30	11	36.7
		Above 5000	10	33	9	30
5	Occupation of Head of Family	Farmer	13	43	12	4
		Daily wage earner	11	37	13	43.3

SI No	Demographic variables	Experimental group		Control group		
		n	%	n	%	
		Clerical work	6	20	5	16.7
6	Area of Residence	Urban	16	53.3	14	46.7
		Rural	14	46.7	16	53.3
7	Medium of Educatio	English	-	-	-	-
		Tamil	30	100	30	100
8	Weight	40 - 50 Kg	13	43.3	12	40
		51 - 60 Kg	13	43.3	13	43.3
		60 Above	4	13.3	5	16.7
9	Height	140 - 145 Cm	2	6.7	15	50
		150 - 155 Cm	14	46.7	2	6.7
		160 Cm Above	14	46.7	13	43.3
10	BMI	Below 18.5 Kg/m <sup>2</sup>	0	-	17	56.7
		18.5 - 24.9 Kg/m <sup>3</sup>	16	53.3	0	-
		25 - 29.9 Kg/m <sup>4</sup>	14	46.7	13	43.63

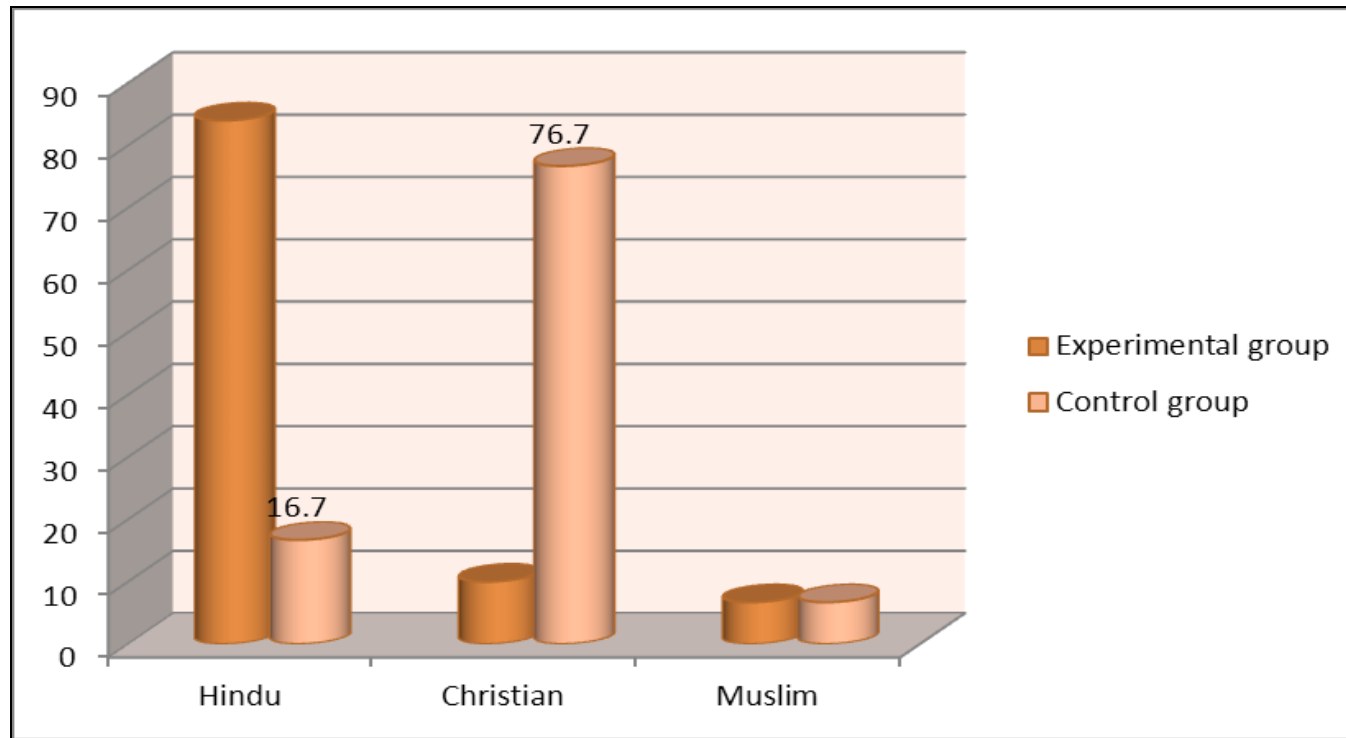
*Table-1 describes the frequency and percentage distribution of samples according to demographic variables.*

## AGE



***Figure 4.1 Percentage Distribution of age Regarding Age, Among 60 samples,12(40.0%) in experimental group and 14(46.7) in control group were 15-16 years of age,15(50%)in experimental group and 13(43.3%) in control group were16-17years of age ,3(10.0%)in experimental group and3(10.10%) in control group were17-18 years of age.***

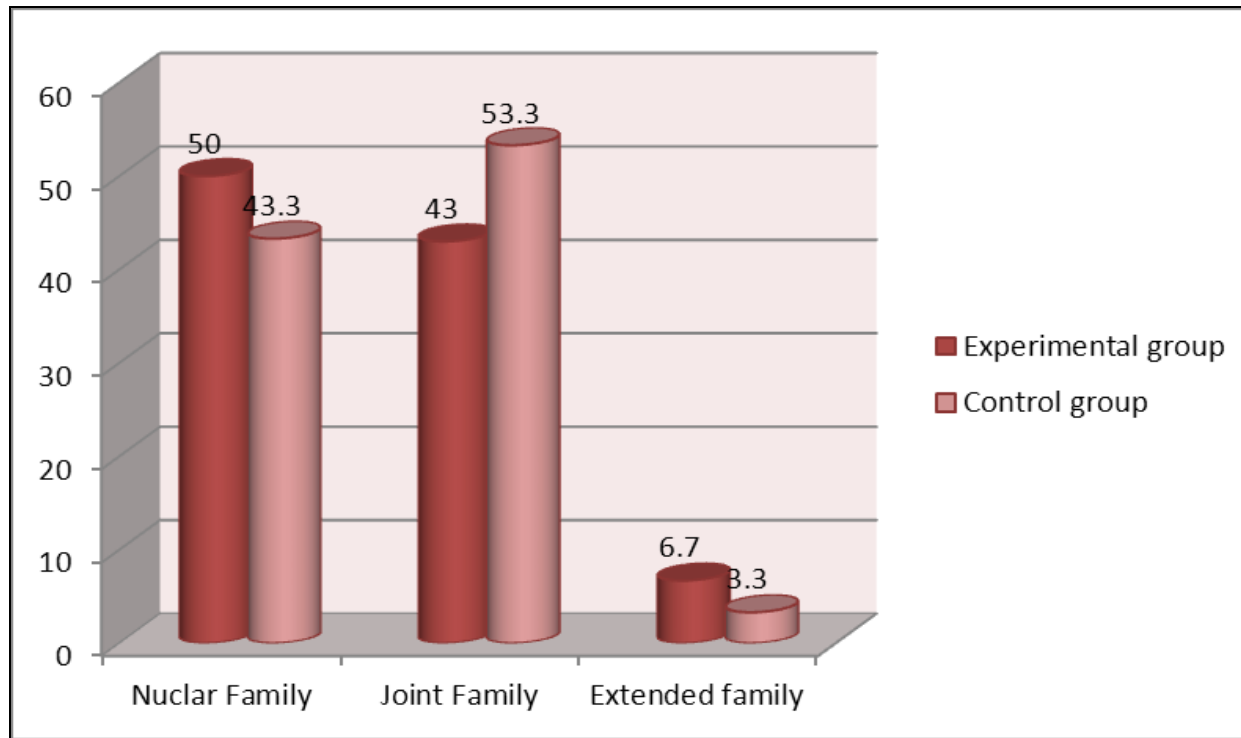
## RELIGION



***Figure 4.2 Percentage Distribution of Religion***

***Regarding Religion, Among 60 samples, 25 (83.8%) in experimental group and 5 (16.7) in control group were Hindu, 3 (10%) in experimental group and 23 (76.7%) in control group were Christian, 2 (6.7%) in experimental group and 2 (6.7%) in control group were Muslim.***

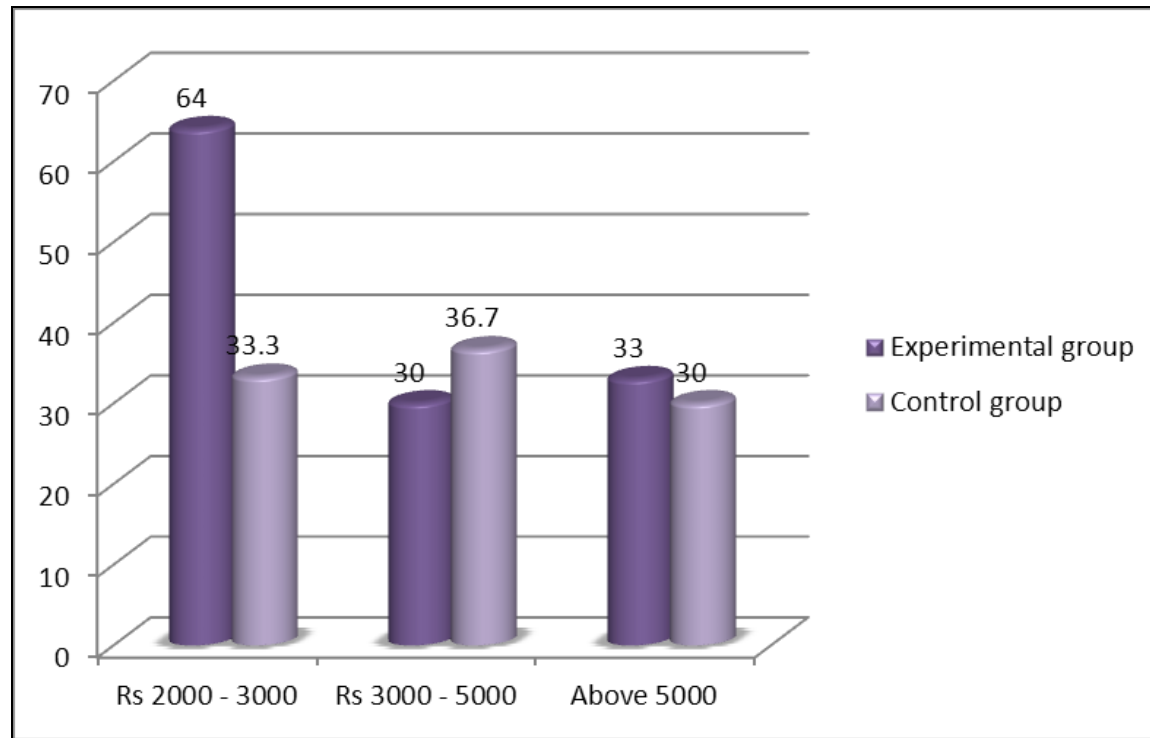
## TYPE OF FAMILY



*Figure 4.3 Percentage Distribution of Type of family*

*Regarding the type of family 15 (50%) in experimental group and 13(43.3%) in control group were Nuclear family, 13(43.3%) in experimental group and 16 (53.3%) in control group were Joint family, 2(6.7%) in experimental group and 1(3.3%) were Extended family.*

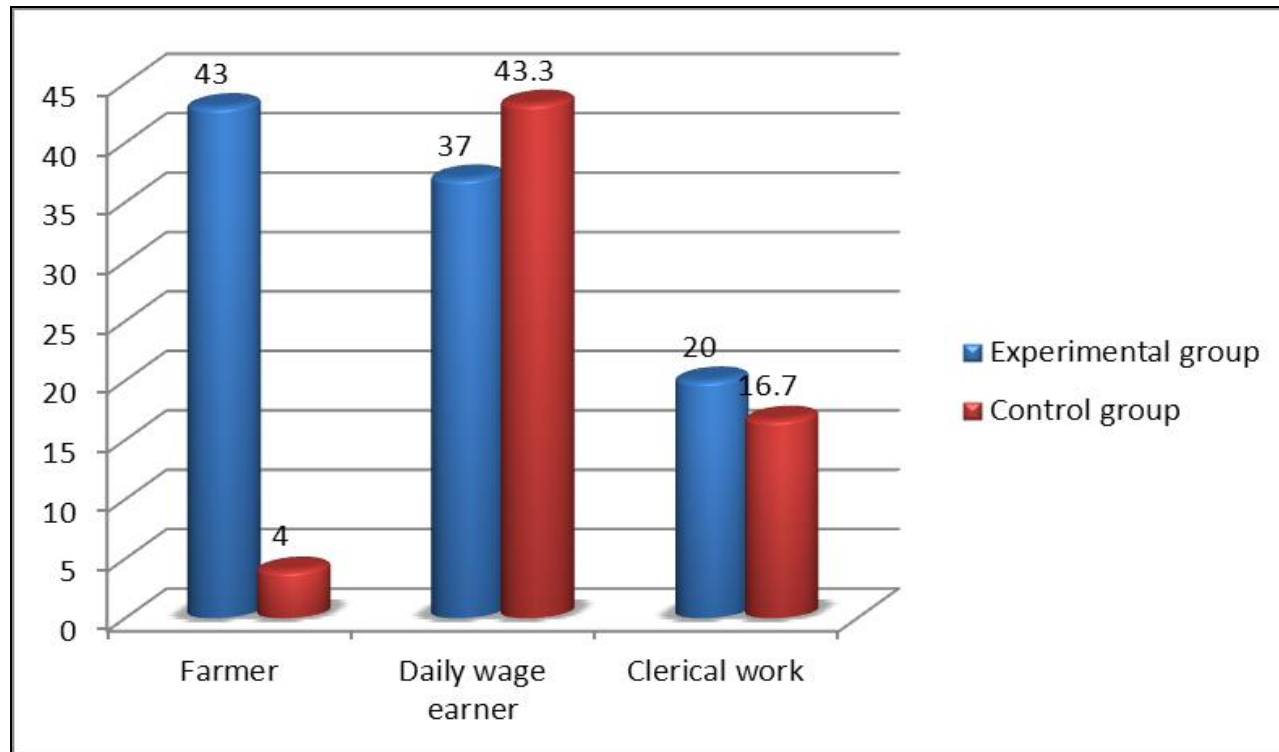
## MONTHLY INCOME



*Figure 4.4 Percentage Distribution of Monthly incomes*

*Considering the Monthly income in experimental group 11(36.7%) and 10(33.3%) were in the income group Rs2000-3000,9(30%) in experimental group and 11(36.7%)in control group were in the income group of Rs 3000-5000,10(33.3%)in experimental group and 9 (30%) in control group were in the income group of Rs above 5000.*

## OCCUPATION OF HEAD OF FAMILY

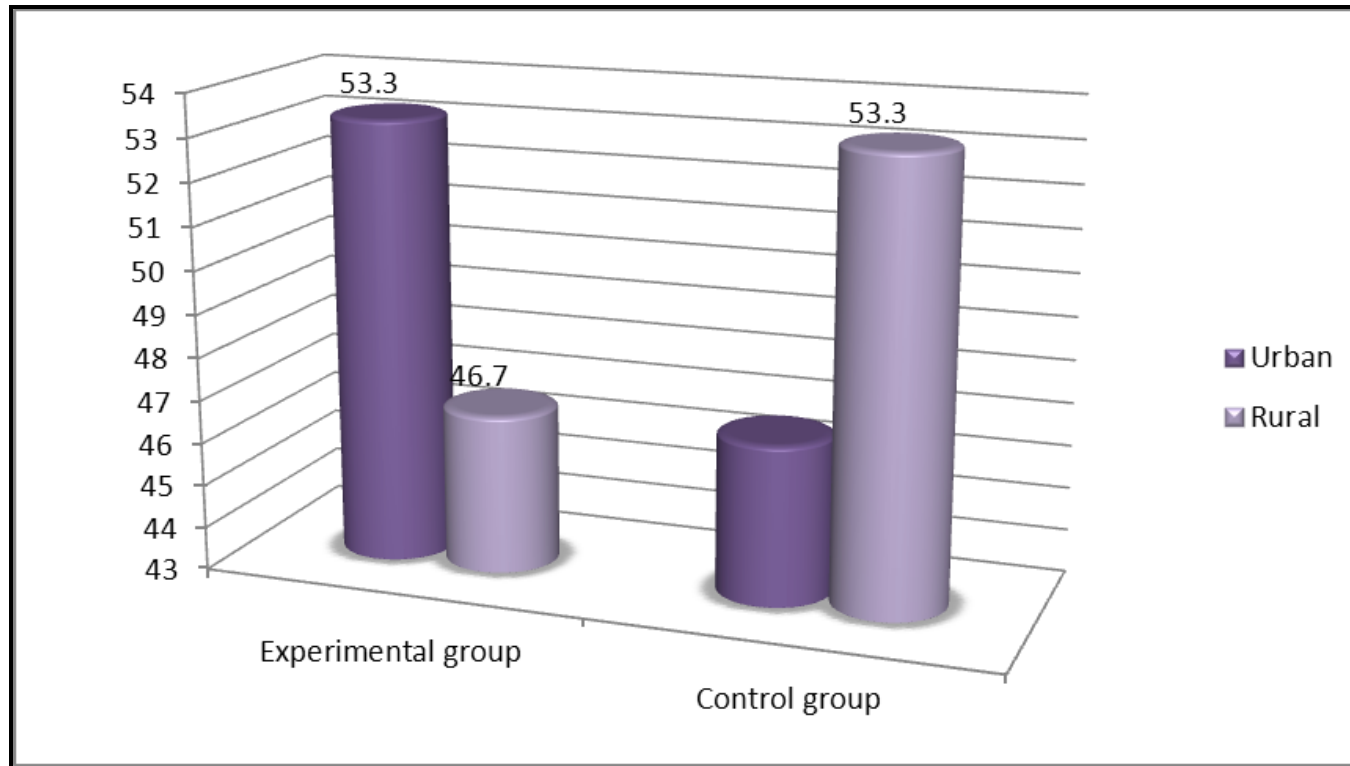


*Figure 4.5 Percentage Distribution of Occupation of head of family*

*Regarding occupation of head of family 13(43.3%)in experimental group and 12(40%)in control group were Farmer,11(36,7%) in experimental group and 13(43.3%) in control group were Daily wage earner,6(20%) in experimental group and 5(16.7%)in control group were clerical work.*



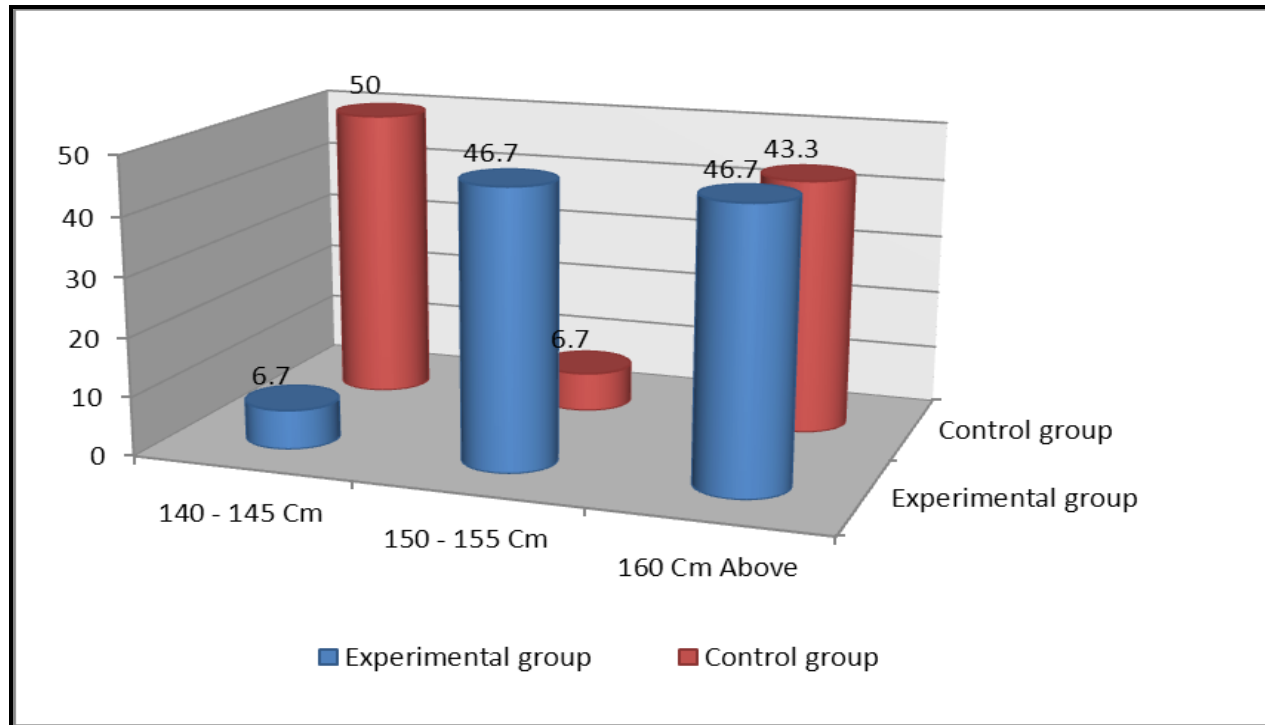
## AREA OF RESIDENCE



*Figure 4.6 Percentage Distribution of Area of residence*

*Among the samples,16(53.3%)in experimental group and 14(46.7%) in control group were urban area ,14(46.7%) in experimental group and 16(53.3%) in control group were Rural area.*

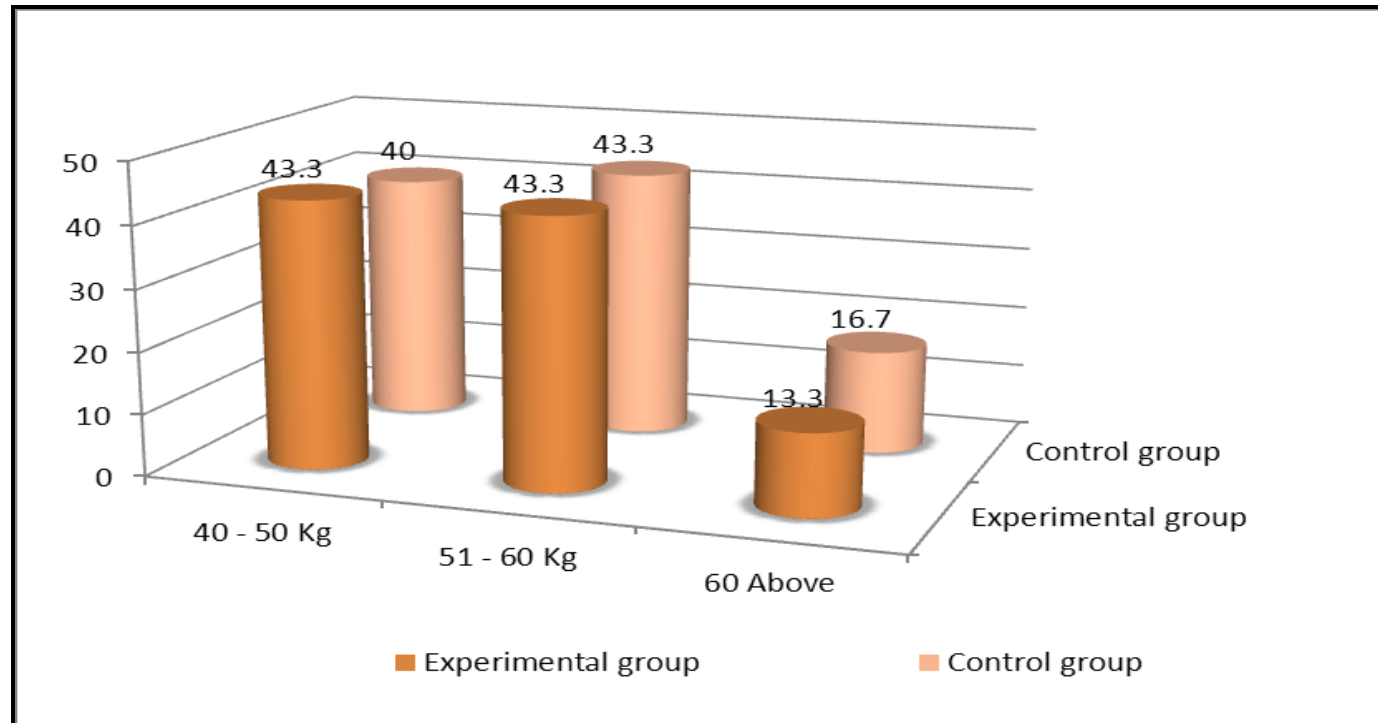
## HEIGHT



*Figure 4.7 Percentage Distribution of Height*

*Regarding height of the samples, 2 (6.7%) in experimental group and 15 (50%) in control group were 140-145 Cm in height, 14 (46.7%) in experimental group and 2 (6.7%) in control group were 150-155 Cm in height, 14 (46.7%) in experimental group and 13 (43.3%) in control group were above 160 Cm in height.*

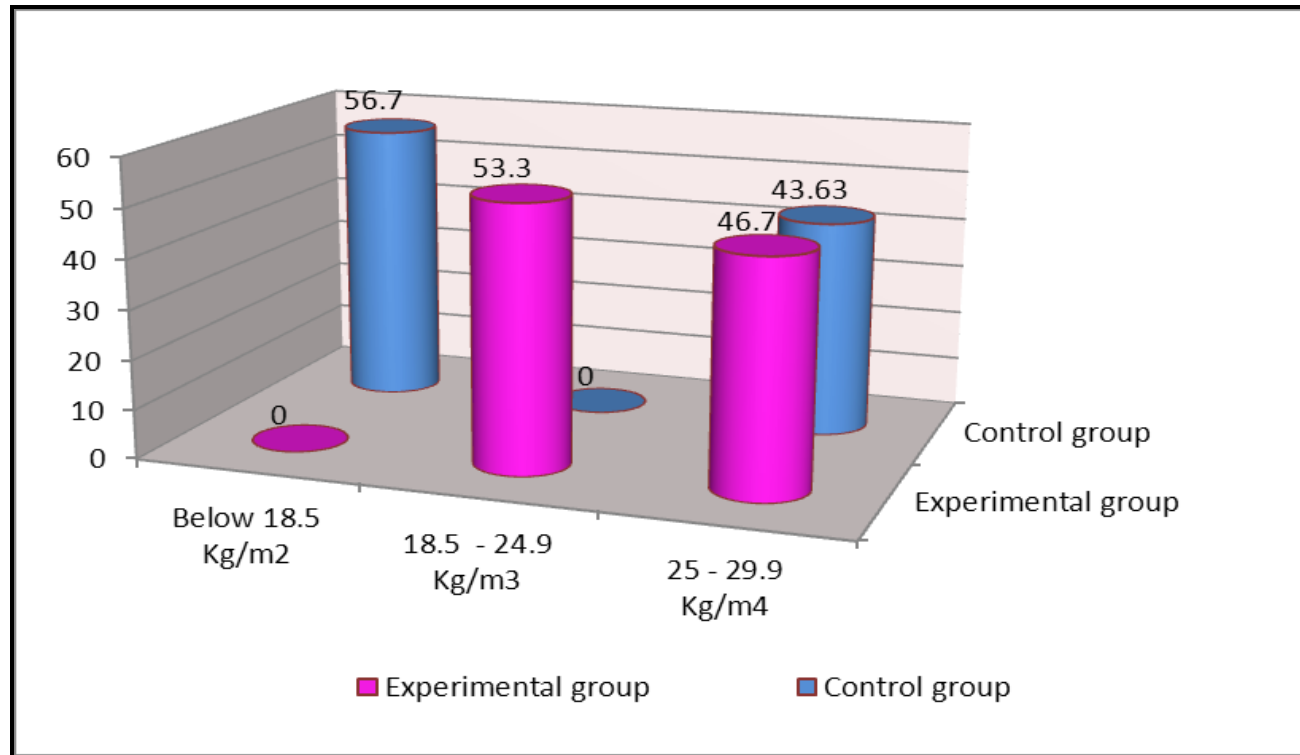
## WEIGHT



*Figure 4.8 Percentage Distribution of Weight*

*Considering the weight of the sample, 13(43.3%) in experimental group and 12(40%) in control group were the weight in between 40-50Kg, 13(43.3%) in experimental group and 13(43.3%) in control group were the weight in between 51-60Kg, 4(13.3%) in experimental group and 5(16.7%) were above 60Kg.*

## BMI



*Figure 4.9 Percentage Distribution of BMI*

*Regarding the BMI of the samples,17(56.7%)in control group were the BMI below 18.5Kg,16(53.3%)in experimental group were 18.5-24.9Kg,14(46.7%)in experimental group and 13(43.63%)were 25-29.9Kg .*

**Section B: Analysis of the pre test level of anxiety among adolescent girls in experimental and control group.**

**Table 4.2 Frequency and percentage distribution of pre test level of anxiety among adolescent girls in experimental and control group**

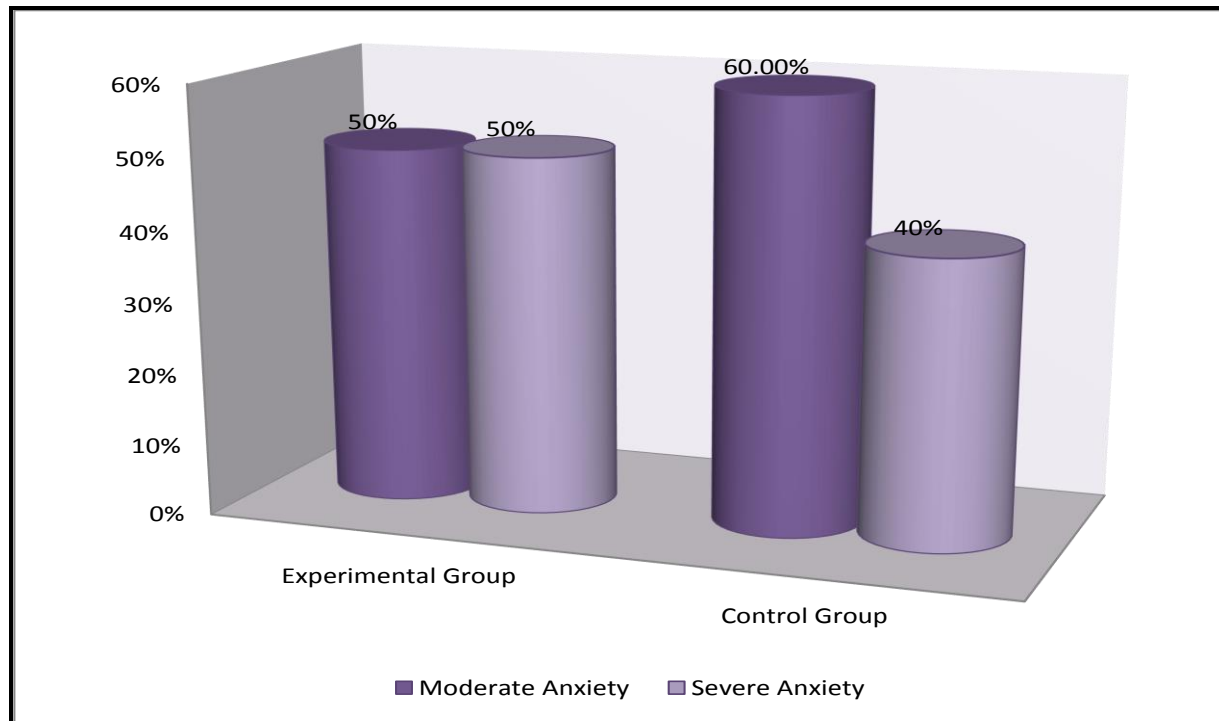
**N=60**

S.No	Level of Anxiety	Experimental Group Frequency		Control Group Frequency	
		n	%	n	%
1.	Moderate Anxiety	15	50	18	60
2.	Severe Anxiety	15	50	12	40

Table4.2: Shows the frequency and percentage distribution of pre-test level of anxiety in experimental and control group.

In pretest the experimental group 50% of moderate level of anxiety and 60% in control group were having moderate level of anxiety, 50%in experimental group and40% were having severe anxiety.

## PERCENTAGE DISTRIBUTION OF PRE TEST LEVEL OF ANXIETY AMONG ADOLESCENT GIRLS IN EXPERIMENTAL AND CONTROL GROUP



*Figure 4.10: Percentage distribution of pre-test level of Anxiety*

**Section C: Analysis of the post test level of anxiety among adolescent girls in experimental and control group.**

**Table 4.3 Frequency and percentage distribution of Post test level of anxiety among adolescent girls in experimental and control group**

**N=60**

S.No	Level of Anxiety	Experimental Group Frequency		Control Group Frequency	
		n	%	n	%
1.	Moderate Anxiety	21	70	14	46.7
2.	Severe Anxiety	9	30	16	53.3

**Table 4.3: Shows the frequency and percentage distribution of post-test level of anxiety in experimental and control group.**

In posttest the experimental group 70% of moderate level of anxiety and 46.7% in control group were having moderate level of anxiety, 30%in experimental group and53.3% were having severe anxiety.

## PERCENTAGE DISTRIBUTION OF POST TEST LEVEL OF ANXIETY AMONG ADOLESCENT GIRLS IN EXPERIMENTAL AND CONTROL GROUP

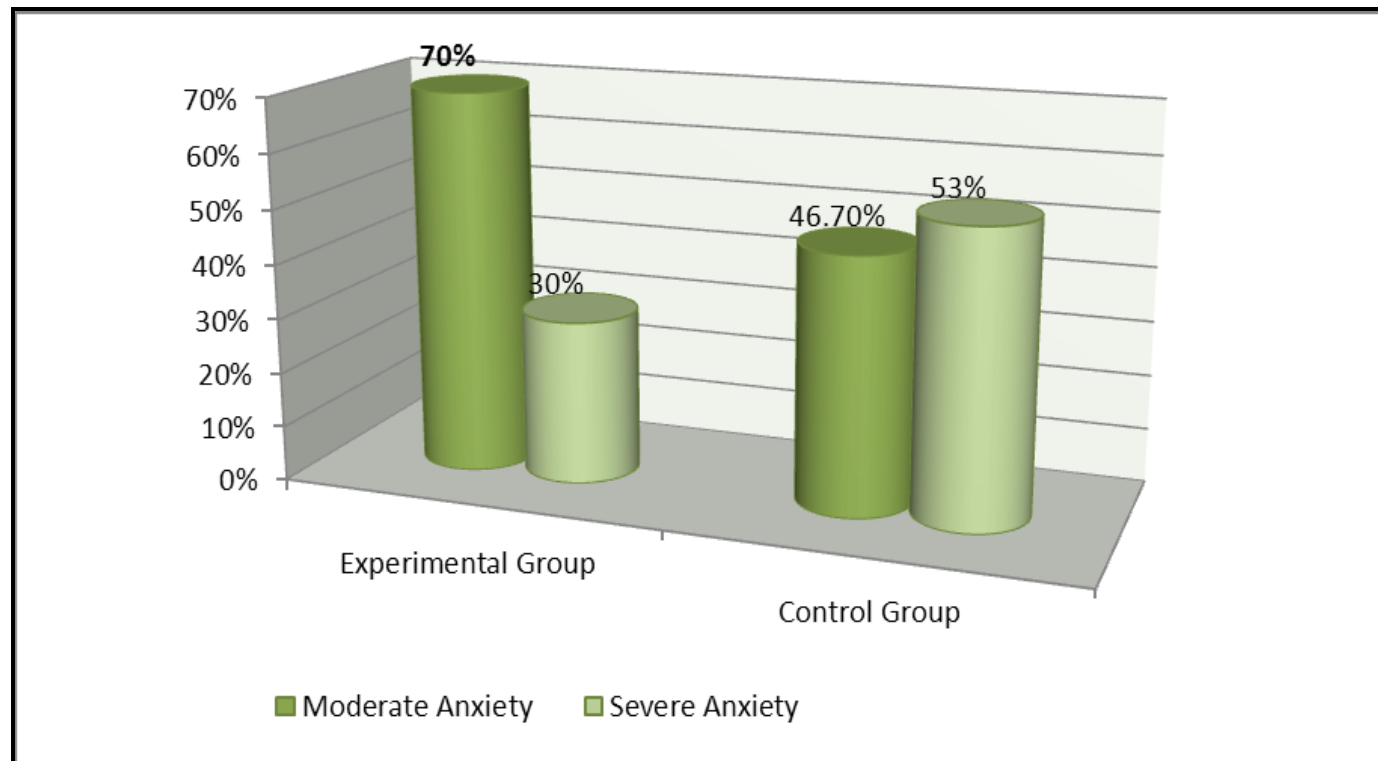


Figure 4.11: Percentage distribution of post-test level of Anxiety



**Table 4.3.1: Mean and Standard deviation of pre and post test level of anxiety among adolescent girls in experimental and control group.**

**N=60**

<b>Group</b>		<b>Pre test – Level of Anxiety</b>			
		<b>Mean</b>	<b>SD</b>	<b>t</b>	<b>P value</b>
Pre test	Experimental	72.30	7.173	0.608	0.546
	Control	73.20	3.791		
Post test	Experimental	53.50	4.041	18.32	0.001
	Control	74.07	4.631		

**Table4.3.1: shows the mean value and standard deviation in pre-test and in post-test and its significant.**

The pre-test mean and standard deviation were 73.20 and 3.791 respectively in control group 72.30 and 7.173 in experimental group.

The post-test mean and standard deviation were 74.07 and 4.631 respectively in control group 53.50 and 4.041 in experimental group and updated T value 18.32 at (p<0.001) was significant.

**Section D: Comparison of mean and standard deviation of pre-test and post-test over all level of anxiety among adolescent girls in experimental and control group**

**Table 4.4 : Comparison of Mean and Standard deviation of pre-test and post-test over all level of anxiety among adolescent girls in experimental and control group**

**N=60**

Group		Level of Anxiety			
		Mean	SD	t	P value
Experimental	Pre-test	12.30	7.1	11.313	0.001
	Post-test	53.50	4.4		
Control	Pre-test	73.2	3.8	0.818	0.420
	Post-test	74.07	4.6		

**Table 4.4 shows the mean value and standard deviation in pre-test and in post-test and its significant.**

The pre-test mean and standard deviation were 73.2 and 3.8 respectively in control group 12.30 and 7.1 in experimental group.

The post-test mean and standard deviation were 74.07 and 4.6 respectively in control group 53.50 and 4.4 in experimental group and updated T value 0.818 at (p<0.001) was significant.

**Section E: Association of demographic variables with the level of anxiety among the experimental group in post test**

**Table 4.5 Association of demographic variables with the level of anxiety among the experimental group in post test**

**N=60**

SI No	Demo graphic variables		Level of anxiety				Chi square	P Value	
			Moderate		Severity				
			n	%	n	%			
1	Age	15 - 16 Years	8	57.10%	6	37.50%	2.143	0.343	
		16 - 17 Years	4	28.60%	9	56.30%			
		17 - 18 Years	2	14.30%	1	6.30%			(NS)
2	Religion	Hindu	0	-	5	31.30%	1.714	0.424	
		Christian	12	85.70%	11	68.80%			(NS)
		Muslim	2	14.30%	0	-			
3	Type of Family	Nuclear Family	9	64.30%	4	25.00%	1.38	0.502	
		Joint Family	5	35.70%	11	68.80%			
		Extended family	0	-	1	6.30%			(NS)
4	Monthly income	Rs 2000 - 3000	5	35.70%	5	31.30%	1.987	0.37	
		Rs 3000 - 5000	4	28.60%	7	43.80%			
		Above 5000	5	35.70%	4	25.00%			(NS)
5	Occupation of Head of Family	Farmer	5	33.70%	7	43.80%	0.074	0.963	
		Daily wage earner	6	42.90%	7	43.80%			
		Clerical work	3	21.40%	2	12.50%			(NS)

SI No	Demo graphic variables		Level of anxiety				Chi square	P Value
			Moderate		Severity			
			n	%	n	%		
6	Area of Residence	Urban	7	50.00%	7	43.80%	2.066	0.151
		Rural	7	50.00%	9	56.30%		(NS)
7	Medium of Education	English	-	-	-	-		
		Tamil	14	100%	16	100%	0.236	0.15
8	Weight	40 - 50 Kg	5	35.70%	7	43.80%		(NS)
		51 - 60 Kg	5	35.70%	8	50.00%	3.626	0.163
		60 Above	4	28.60%	1	6.30%		(NS)
9	Height	140 - 145 Cm	7	50.00%	8	50.00%		
		150 - 155 Cm	1	7.10%	1	6.30%	1.088	0.58
		160 Cm Above	6	42.90%	7	43.80%		(NS)
10	BMI	Below 18.5 Kg/m <sup>2</sup>	10	71.40%	7	43.80%		
		18.5 - 24.9 Kg/m <sup>3</sup>	-	-	-	-	0.26	0.873
		25 - 29.9 Kg/m <sup>4</sup>	4	28.60%	9	56.30%		(NS)

*\*significant at p<0.01      s – significant      NS – Not significant*

*Table 4.5 shows the association of demographic variables with the level of anxiety among the samples in post-test.*

The chi-square test was used to find out the association and findings revealed that there was no significant association between selected demographic variables and the level of anxiety in post-test.

## **CHAPTER – V DISCUSSION**

This chapter deals with the discussion of the result of data analysed based on the objectives, the frame work and hypothesis of the study.

Every one experience anxiety, it is a natural and important emotion, signalling through stirring of worry, fearfulness and alarms that danger or a sudden, threatening change is near. Anxiety during adolescent period is typically centred on change in the way the adolescent's body looks and feels, social acceptance, and conflicts about independence. When flooded with anxiety, adolescent may appear extremely shy. They may avoid their usual activities or refuse to engage in new experiences.

The aim of this study was to assess the effectiveness of Aerobic dance movement therapy on anxiety level among adolescent girls in selected schools at tiruvannamalai.

The study findings are discussed in this chapter with reference to the objectives and hypothesis stated in chapter I. girls in the control The tool used for the study (STAS) assessed the level of anxiety of adolescent girls.

### **MAJOR FINDINGS OF THE STUDY AND DISCUSSION:**

*Analysis of the frequency and percentage of demographic variables the study reveals that,*

Regarding Age, Among 60 samples,12(40.0%) in experimental group and 14(46.7) in control group were 15-16years of age,15(50%)in experimental group and 13(43.3%) in control group were16-17years of

age ,3(10.0%)in experimental group and3(10.10%) in control group were17-18 years of age.

Regarding Religion, Among 60 samples,25(83.8%) in experimental group and 5 (16.7) in control group were Hindu,3(10%)in experimental group and 23(76.7%) in control group were Christian, 2 (6.7%) in experimental group and 2 (6.7%) in control group were Muslim.

Regarding the type of family15 (50%) in experimental group and 13 (43.3%) in control group were Nuclear family, 13(43.3%) in experimental group and16 (53.3%) in control group were Joint family, 2(6.7%) in experimental group and 1(3.3%)were Extended family.

Considering the Monthly income in experimental group 11 (36.7%) and 10(33.3%) were in the income group Rs2000-3000, 9 (30%) in experimental group and 11(36.7%)in control group were in the income group of Rs 3000-5000, 10 (33.3%) in experimental group and 9 (30%) in control group were in the income group of Rs above 5000.

Regarding occupation of head of family 13(43.3%)in experimental group and 12(40%)in control group were Farmer, 11 (36,7%) in experimental group and 13(43.3%) in control group were Daily wage earner,6(20%) in experimental group and 5(16.7%) in control group were clerical work.

### **THE FINDINGS OF THE STUDY BASED ON THE OBJECTIVES ARE:**

*The first objective of the study was to assess the pre test level of anxiety among adolescent girls in experimental and control group.*

The analysis depicted that in the experimental group 50% of adolescent girls were having moderate anxiety and 50% were severe anxiety and 60% of moderate anxiety and 40% were having severe anxiety in control group.

The analysis reveals that in experimental group ,the mean and SD value for anxiety level 73.20 and 3.791 respectively in control group and 72.30 mean value ,7.173 SD value in experimental group. Thus the findings of the present study showed that the pre-test level of anxiety among the adolescent girls in experimental and control group. It is evident that the samples in both group experienced moderate and severe anxiety.

***The second objective of the study was to assess the post- test level of anxiety among adolescent girls in experimental and control group***

The analysis depicted that in the experimental group 75% of adolescent girls were having moderate anxiety and 30% were severe anxiety and 46.7% of moderate anxiety and 53.3% were having severe anxiety in control group.

The analysis reveals that in experimental group ,the mean and SD value for anxiety level 74.07 and 4.631 respectively in control group and 53.50 mean value ,4.041 SD value in experimental group. Thus the findings of the present study showed that the post-test level of anxiety among the adolescent girls in experimental and control group.

***The third objective of the study was to compare the pre-test and post – test level of anxiety among adolescent girls between experimental and control group.***

In control group , the comparison of the pre test mean value 73.2 and SD value 3.8 and in experimental group mean value 72.30 and SD value 7.1. In post test ,mean value 74.07 and SD value 4.6 in control

group ,53.50mean value and SD value 4.4 in experimental group, t value in control group is 0.0818 and 11.313 in experimental group, which is not significant at  $p < 0.001$  level. Hence the hypothesis(H1) showed there is significant difference between pre test and post test level of anxiety score in the experimental group was accepted.

The study strongly reveals that Aerobic dance movement therapy was effective in reduce the level of anxiety.

A similar study, *Silvetri,lynette (2007)* Ninety high schools girls were assessed to determine if aerobic dance alone or in combination with relaxation training had an effect on anxiety level. State and trait anxiety scores measured by the state trait anxiety inventory where used as pre test and post test measures. Aerobic dance or in combination with relaxation training was administrated during the school physical education classes. High and low anxiety subjects were identified to determine if treatment had differential effects on anxiety level over time depending on the initial level of anxiety.

***The fourth objective of the study was to associate the post-test anxiety levels of adolescent girls in the experimental Group with their selected demographic variable.***

The analysis reveals that in experimental group ,there is statically not significant association between demographic variable like age , religion, area of residence ,occupation of head of family, monthly income, type of family, medium of education ,weight ,height, and body mass index. Hence the stated hypothesis (H2) was rejected.



## **CHAPTER – VI**

### **SUMMARY, CONCLUSION, IMPLICATION, RECOMMENDATION**

This chapter contains the summary of the study and conclusion drawn. It clarifies the limitations of the study and the implication; recommendations are given for the different areas like nursing education, administration and health care delivery system (nursing practices) and nursing research.

#### **SUMMARY OF THE STUDY**

The focus of the study is to assess the effectiveness of aerobic dance movement therapy on anxiety level among adolescent girl in selected schools. Data collection was done at Tiruvannamalai ,Tamil Nadu. Purposive sampling method was used to select the sample. The duration of data collection was 4weeks.

#### ***The objectives of the study:***

To assess the pre-test level of anxiety among adolescent girls in the

#### ***Experimental group and control group.***

- To assess the post test level of anxiety among adolescent girls in the experimental and control group.
- To evaluate the effectiveness of aerobic dance movement therapy on anxiety among adolescent girls in experimental group
- To associate the post test anxiety levels of adolescent girls in the experimental group with their selected demographic variable.

The investigator reviewed the literature to support the study. The conceptual framework applied for this study was based on Modified

Wiedenbach's Helping Art of Clinical Nursing Theory (1964) of psychiatric nursing care.

The design used in this study was true experimental design (experimental and control group). The sample composed of 60 samples. The instrument used for the study consists of two parts.

Part I : Demographic variables

Part II : State trait anxiety scale

The data collected from the subjects were analysed using descriptive (mean, percentage, frequency, and standard deviation) and inferential (paired t' test and chi-square test) statistical methods.

The pilot study was conducted in government school, tiruvannamalai district, among adolescent girls and the findings confirmed the feasibility , reliability and practicability for the main study.

The main study was conducted in government girls school and government higher secondary school, tiruvannamalai district. Purposive sampling technique was used to select the sample. The data was analysed and interpreted based on the objectives using descriptive and inferential statistics.

Study findings revealed that the analysis of pre test score of anxiety level among adolescent girls did not show any statistically significant difference between experimental and control group. That the analysis of post test score of anxiety level showed statistically difference in experimental and control group.

## **IMPLICATION FOR NURSING**

### *Nursing practice*

The study findings revealed the importance of the nurse's role in managing anxiety among the adolescent girls using cost effectiveness, safe, non- pharmacological treatment that is aerobic dance movement therapy.

The study findings signify the importance of formulation of guidelines and implementation of aerobic dance movement therapy especially in schools where literature reveals lack of psycho therapeutic interventions. Nurses, specializing in adolescent psychiatry need to be empowered in administering aerobic dance movement therapy. In clinical areas and schools there must be provision for administration of aerobic dance movement therapy.

### **NURSING EDUCATION**

Current concepts and trends in adolescent care should be included in nursing curriculum.

Post graduate nursing student specialising in psychiatric should be trained in administering aerobic dance movement therapy.

Nursing personnel working in adolescent psychiatric should be given in – service education regarding aerobic dance movement therapy. Nurse educator should enhance nursing students by reducing their anxiety with aerobic dance movement therapy. Students should be periodically evaluated for their anxiety level in personnel and professional interaction.

### **NURSING RESEARCH**

The finding of the present study added knowledge to already existing literature and implication for the nursing research are given in the form of recommendation. This study can be a base line for future

studies to build upon and motivate other investigator to conduct further studies.

## **NURSING ADMINISTRATION**

The nursing administrators especially of adolescent girls wards can organize continue nursing education on anxiety and aerobic dance movement therapy.

The administration can encourage the nurses to use different cost effective, safe psychotherapeutic intervention in reducing anxiety among adolescent girls.

A considerable amount in the budget can be allocated for organizing the continuing nursing education program and training in aerobic dance movement therapy.

A staff can be trained an especially to administrator aerobic dance movement therapy.

## **LIMITATION**

- The limitation of the study is as follow:
- The study was conducted among the adolescent girls from selected schools Tiruvannamalai, so generalization must be done with caution.
- The study was done on a small sample (60), hence generalization is possible only for selected participants.
- The study limited to a period of four weeks.

## **CONCLUSION**

These findings of the study has shown ADMT was effective in reducing anxiety among adolescent girls, the present study suggested

that the aerobic dance moment therapy can be administered to all groups of adolescent for reducing the level of anxiety.

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## **STATE TRAIT ANXIETY SCALE**

### SELF EVALUATION QUESTIONNAIRES-I

S.NO	STATEMENTS	NOT AT ALL	SOME WHAT	MODERATELY SO	VERY MUCH SO
1.	I feel Calm				
2.	I feel Secure				
3.	I am tense				
4.	I feel strained				
5.	I feel at ease				
6.	I feel upset				
7.	I am presently worrying over possible misfortunes				
8.	I feel satisfied				
9.	I feel frightened				
10.	I feel comfortable				
11.	I feel self-confident				
12.	I feel nervous				
13.	I am jittery				
14.	I feel indecisive				
15.	I feel relaxed				
16.	I feel content				
17.	I am worried				
18.	I feel confused				
19.	I feel steady				
20.	I feel pleasant				

S.NO	STATEMENTS	NOT AT ALL	SOME WHAT	MODERATELY SO	VERY MUCH SO
21.	I feel pleasant				
22.	I feel nervous and restless				
23.	I feel satisfied with myself				
24.	I wish I could be as happy as others seems to be				
25.	I feel like a failure				
26.	I feel rested				
27.	I am "calm, cool, and collected"				
28.	I feel that difficulties are piling up so that cannot overcome them				
29.	I worry too much over something that really doesn't matter				
30.	I am happy				
31.	I have distributing thoughts				
32.	I lack self-confidence				
33.	I feel secure				
34.	I make decisions easily				
35.	I feel inadequate				
36.	I am content				
37.	Some unimportant thought runs through my mind and bothers me				
38.	I take disappointments so keenly that I can't put them out of my mind				
39.	I am a steady person				
40.	I get in a state of tension or turmoil as I think over my recent concerns and interests				

**பகுதி -1**  
**நீங்கள் தற்பொழுது எப்படி உணர்கிறீர்கள் என்பதனைக் குறிக்கவும் (அ)**

வ. எண்	தன் பகுப்பாய்வு வினாக்கள்	இல்லவே இல்லை	சில நேரங்களில்	அடிக்கடி	எப்பொழுதும் அதிகமாக
1.	நான் மன அமைதியுடன் இருப்பதாக உணர்கிறேன்				
2.	நான் பாதுகாப்பு உணர்ச்சியோடு இருப்பதாக உணர்கிறேன்				
3.	நான் விறைப்பு நிலையில் இருக்கிறேன்				
4.	நான் சோர்வுற்ற நிலையில் இருக்கிறேன்				
5.	நான் நிம்மதியாக இருப்பதாக உணர்கிறேன்				
6.	நான் நிலைகுலைந்து இருப்பதாக உணர்கிறேன்				
7.	நான் இனி வரக்கூடும் கஷ்டங்களுக்காகத் தற்போது கவலைப்பட்டுக் கொண்டிருக்கிறேன்				
8.	நான் மகிழ்ச்சியாக இருப்பதாக உணர்கிறேன்				
9.	நான் பயந்த நிலையில் இருப்பதாக உணர்கிறேன்				
10.	நான் சௌகரியமாக இருப்பதாக உணர்கிறேன்				
11.	நான் தன்னம்பிக்கையோடு இருப்பதாக உணர்கிறேன்				
12.	நான் பதைபதைப்பில் இருப்பதாக உணர்கிறேன்				
13.	நான் அலைபாயும் மனநிலையில் இருப்பதாக உணர்கிறேன்				
14.	நான் எந்த தீர்மானமும் எடுக்க இயலாத நிலையில் இருப்பதாக உணர்கிறேன்				
15.	நான் தளர்வற்ற நிலையில் இருப்பதாக உணர்கிறேன்				
16.	நான் திருப்தியாக இருப்பதாக உணர்கிறேன்				
17.	நான் கவலையாக இருப்பதாக உணர்கிறேன்				
18.	நான் குழப்பமான நிலையில் இருப்பதாக உணர்கிறேன்				
19.	நான் சமநிலையில் இருப்பதாக				

	உணர்கிறேன்				
20.	நான் இனிமையான மனநிலையில் இருப்பதாக உணர்கிறேன்				

நீங்கள் எப்பொழுதும் எப்படி உணர்கிறீர்கள் என்பதனைக் குறிக்கவும்  
(ஆ)

வ. எண்	தன் பகுப்பாய்வு வினாக்கள்	இல்லவே இல்லை	சில நேரங்களில்	அடிக்கடி	எப்பொழுதும் அதிகமாக
21.	நான் இனிமையான மனநிலையில் இருப்பதாக உணர்கிறேன்				
22.	நான் பதைபதைப்பாகவும், களைப்பாகவும் இருப்பதாக உணர்கிறேன்				
23.	எனக்கு மகிழ்ச்சியாக இருப்பதாக நான் உணர்கிறேன்				
24.	மற்றவர்கள் சந்தோஷமாக இருக்கும் அளவே நானும் சந்தோஷமாக இருக்க வேண்டும் என்பது என் ஆசை				
25.	நான் தோல்வி அடைவதாகவே உணர்கிறேன்				
26.	நான் ஓய்வாக இருப்பதாக உணர்கிறேன்				
27.	நான் அமைதியுடனும், கிளர்ச்சியற்றும், கட்டுக் கோப்புடனும் இருக்கிறேன்.				
28.	என்னுடைய கஷ்டங்கள் அதிகரித்துக் கொண்டிருப்பதால் நான் அவற்றை தீர்க்க முடியாமல் இருக்கிறேன்				
29.	நான் உண்மையாகவே முக்கியமில்லாத சிலவற்றைப் பற்றி மிகவும் அதிகமாகக் கவலைப்படுகிறேன்				
30.	நான் சந்தோஷமாக இருக்கிறேன்				
31.	நான் மனசுக்கு தொந்தரவு கொடுக்கும் எண்ணங்களுடன் இருக்கிறேன்				
32.	எனக்குத் தன்னம்பிக்கை இல்லை				

33.	நான் பாதுகாப்புணர்ச்சியோடு இருப்பதாக உணர்கிறேன்.				
34.	நான் தீர்மானங்களை எளிதில் எடுக்க முடிகிறது				
35.	நான் போதுமான அளவு ஆற்றல் இல்லாததாக உணர்கிறேன்				
36.	நான் திருப்தியாக இருக்கிறேன்				
37.	என் மனதில் சில முக்கியமில்லாத சிந்தனைகள் ஓடி, என்னை வருத்துகின்றன				
38.	ஏமாற்றங்களை எனது மனதிலிருந்து தள்ள முடியாத அளவுக்கு அவற்றை பெரிதாக எடுத்துக் கொள்கிறேன்.				
39.	நான் சம நிலையான மனிதன்				
40.	சமீபத்தில் எனது விருப்பங்களையும் தொடர்புகளையும் நினைத்து பார்க்கும் போது நான் ஒரு விதவிறைப்பு நிலையையோ அல்லது குழப்ப நிலையையோ அடைகிறேன்				

## **PROCEDURE**

### **AEROBIC DANCE MOVEMENT THERAPY**

#### **Introduction:**

Aerobic dance is known to have powerful effect of the mind, body, and emotions. Aerobic dance movement is a type of therapy that uses movement to further the social, cognitive, emotional and physical development of the individual. Aerobic movement Dance therapy is often an easy way for a person to express emotions, even when his/her experience is so traumatic he or she can't talk about it (**American Dance Therapy Association**).

#### **Aims of aerobic dance movement therapy:**

- Building up an awareness of one's own movement potential.
- Improvisation of movements.
- Establish relationship.
- Willingness to take risks, problem solving capacity.
- Helps in expression of emotion.
- Make the person relax and free from anxiety.

#### **Steps in Aerobic dance movement therapy:**

Aerobic dance movement therapy will be implemented through four phases.

- Preparation Phase
- Incubation Phase
- Illumination Phase
- Evaluation Phase

#### **Preparation phase:**

This phase is carried out in a calm environment.

Step I - Stand at one arm distance and stay calm and relaxed

Step II – Now take a deep breath, hold it and count 1-5 and then exhale.

Step III – Repeat this for 10 times

## **Incubation phase:**

Step I - Each student is given a balloons.

Step II – Now blow your balloons.

Step III – Bounce your balloons in the air and catch for 5 min.

## **Illumination phase**

This phase consists of the following two movements.

The students are asked to follow the investigator.`

### **Guided movement:**

#### ***Step I – March Step***

- ✓ Lift your right leg up and bring it down.
- ✓ Now lift your left leg up and bring it down.
- ✓ Now continue this for 2 min.

#### ***Step II – High Step***

- ✓ Stand in attention position with your hands and your hip.
- ✓ Lift your right leg sideward and upward at an angle of 45° without bending your knees, and then bring it down.
- ✓ Now do the same with your left leg.
- ✓ Now continue this for 3 min.

#### ***Step III – Graspivine***

- ✓ Stand in attention position with both foot touching each other.
- ✓ Lift your right leg and move it away from your left leg and keep it down.
- ✓ Now lift your right leg and bring it back to its former position.
- ✓ Now do the same with your left leg.
- ✓ Now repeat this step for 8 times.

#### ***Step IV – Split V or V Step***



- ✓ Stand in attention position with both foot touching each other.
- ✓ Now move your left leg outward and forward towards your left.
- ✓ Now lift your right leg and follow it to your left leg.
- ✓ From this position do the same for your right leg.
- ✓ Now let your left leg go backward to its second position and let your right leg follow.
- ✓ Now move your right leg backward and right to its first position and let your left leg follow.
- ✓ Now repeat this step for 3 min.

***Step V – Mambo***

- ✓ Stand in attention position with both foot touching each other.
- ✓ Now move your right let straight and forward and place it on the ground.
- ✓ Now move your left let straight and forward and place it next to your right leg.
- ✓ Now move your left leg straight and backward to its first position and then let the right leg follow back to its former position.
- ✓ Now repeat this step for 2 min.

***Step VI – Heel Back***

- ✓ Stand in attention position with both foot touching each other.
- ✓ Lift your right leg up and tap it on the ground and lift it again.
- ✓ Now do the same with your left leg.
- ✓ Now repeat this step for 2 min.

**Spontaneous movements:**

This is an individual session in which each student are asked to make spontaneous movements.

Eg; Now do the heel back step, Now do the V step, Now do the Graspivine step.

**Evaluation phase:**

Each session close with a gentle stretching movements. The students are seated in a circle and ask to express their feeling and emotions.

## **LIST OF EXPERTS**

- 1) **Dr.M.PETER FERNANDEZ, M.D., D.P.M., T.D.D.,FIPS**  
Professor Emeritus (Psychiatry)  
Mugaliwakkam, Chennai-600 125
- 2) **Prof.MRS.KAMALA SUBBIAN, M.Sc (N), M.A (Soc)**  
Principial,  
HOD of Child Health Nursing,  
Venkateswara Nursing College,  
Thalambur, Chennai -600130.
- 3) **Prof.Dr.N.JAYA, M.A., M.Sc (N),Ph.D,**  
HOD of OBGN & Research,  
Venkateswara Nursing College,  
Thalambur, Chennai-600130
- 4) **Dr.RAMACHANDRA**  
Principal, College of Nursing,  
NIMHANS, Hosur Road, Bangalore-560 029
- 5) **Dr.CIBY JOSE,**  
Vice-Principal,  
Hindu Mission College of Nursing, Chennai.
- 6) **Mrs.S.GRACE SAMUEL,**  
Vice Principal, Matha College of Nursing,  
Mangadu, Chennai.

# OMR HEALTH STUDIO

HEALTH BENEFITS OF  
ZUMBA, AEROBIC DANCE, YOGA

## CERTIFICATE

*This is to certify that Ms. Thilagavathy S. M.sc (Nursing)  
77 year, Venkateswara Nursing College Thalambur, had undergone  
an Aerobic Dance Movement Therapy classes from 15<sup>th</sup> May 2014  
to 20<sup>th</sup> June 2014 in OMR health studio, Mettukuppam,  
Chennai-97.*



OMR HEALTH STUDIO  
*Pavan*  
TRAINER

## CERTIFICATE OF CONTENT VALIDITY

This is to certify that the tool developed by **Miss.Thilagavathy. S**, M.sc Nursing,II year student, Venkateswara Nursing College,Thalambur, Chennai- 600 130. For the study "**A study to assess the effectiveness of aerobic dance movement therapy on anxiety level among adolescent girls at selected schools at Thiruvannamalai**", validated by the undersigned and she can proceed with this tool to conduct main study.

Signature :



Name :

Dr. CIBY JOSE

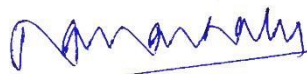
Seal :

Date :



## CERTIFICATE OF CONTENT VALIDITY

This is to certify that the tool developed by **Miss.Thilagavathy. S**, M.sc Nursing,II year student, Venkateswara Nursing College,Thalambur, Chennai- 600 130. For the study “**A study to assess the effectiveness of aerobic dance movement therapy on anxiety level among adolescent girls at selected schools at Thiruvannamalai**”, validated by the undersigned and she can proceed with this tool to conduct main study.

Signature:  30/7/2014

Name : **Dr. RAMACHANDRA**  
Principal  
College of Nursing  
Seal : **NIMHANS**  
Hosur Road, Bangalore-560 029

Date : 30-7-2014 .



# VENKATESWARA NURSING COLLEGE

(A unit of VELS Group, Pallavaram)



Approved by Indian Nursing Council, (Cert. No. 18-29/3458-INC) and Tamil Nadu Nurses & Midwives Council  
Affiliated to The Tamil Nadu Dr. M.G.R. Medical University

Thalambur, Off Old Mahabalipuram Road, Near Navalur, Chennai - 603 103

Phone : (91-44) 3253 7098 / 2743 5060 Fax : (91-44) 2743 5059

## INSTITUTIONAL ETHICS COMMITTEE CERTIFICATE OF APPROVAL

TO,

Ms. S. Thilagavathy,  
M.Sc (N) I year,  
Venkateswara Nursing College,

Dear Ms. S. Thilagavathy,

The Institutional Ethics Committee of Venkateswara Nursing College reviewed and discussed your application for the approval of the proposal entitled **"A study to assess the effectiveness of aerobic dance movement therapy on anxiety level among adolescent girls at a selected School in Thiruvanamalai"**.

The following members of Ethics committee were present in the meeting held on 04.03.14 at Venkateswara Nursing College, Chennai-600 130.

- |                          |   |                    |
|--------------------------|---|--------------------|
| 1. Prof. Kamala Subbian  | - Principal, Venkateswara Nursing College,            | - Chair Person     |
| 2. Dr. N. Jaya           | - Professor & HOD, OBGN & Research,                   | - Member Secretary |
| 3. Dr. G. Ilangovan      | - Medical Director, Shri Isari Velan Mission Hospital | - Member           |
| 4. Dr. Lodd Mahendra     | - Principal, SVDC&H                                   | - Member           |
| 5. Dr. R.S. Rajalakshmi  | - Professor & HOD, SVDC&H                             | - Member           |
| 6. Dr. R. Sivakumar      | - Professor   | - Member           |
| 7. Mr. C. Saravanan      | - Legal Expert  | - Lawyer           |
| 8. Dr. P. Senthil Selvam | - Principal, School of Physiotherapy                  | - Member           |
| 9. Mr. V. S Ravi         | - AO - SVDCH & VNC                                    | - Member           |
| 10. Mr. D. Sathish       | - SIVMH   | - Social Science   |

We approve the proposal to be conducted in its presented form

The Institutional Ethics Committee expects to be informed about the progress of the study, any SAE occurring in the course of the study, any changes in the protocol and patient information /informed consent and asks to be provided a copy of the final report.

  
Member Secretary, Ethics Committee

## **CERTIFICATE OF ENGLISH EDITION**

### **TO WHOMSOEVER IT MAY CONCERN**

This is to certify that the dissertation work "A STUDY TO ASSESS THE EFFECTIVENESS OF AEROBIC DANCE MOVEMENT THERAPY ON ANXIETY LEVEL AMONG ADOLESCENT GIRLS IN SELECTED SCHOOLS AT THIRUVANNAMALAI." Done by Ms.Thilagavathy.S, M.Sc(N) II year, Venkateswara Nursing College, Thalambur, Chennai-600130, has been edited by me and the use of English in this dissertation is found appropriate.



  
**S. JANARTHANAN**  
M.Sc., M.Ed., M.Phil.,  
HEADMASTER  
Govt. Boys Hr. Sec. School  
Thirukkazhukundram-603109  
Kancheepuram Dist.

**Signature**



## CERTIFICATE OF CONTENT VALIDITY

This is to certify that the tool developed by **Miss.Thilagavathy. S**, M.sc Nursing,II year student, Venkateswara Nursing College,Thalambur, Chennai- 600 130. For the study "**A study to assess the effectiveness of aerobic dance movement therapy on anxiety level among adolescent girls at selected schools at Thiruvannamalai**", validated by the undersigned and she can proceed with this tool to conduct main study.



Signature : *S. Grace Samuel*

Name : *S. Grace Samuel*

Seal : *vice principal*

Date : *06/9/2014*

From

HEADMASTER  
MUNICIPAL GOVERNMENT HR.SEC.SCHOOL  
TIRUVANNAMALAI-606 601.

To

PRINCIPAL  
VENKATESWARA NURSING COLLEGE  
THALAMBUR  
OFF OLD MAHABALIPURAM ROAD  
NEAR NAVALUR, CHENNAI-600 130

Sir,

Sub : Permission Granted - Government Higher Secondary School-Permission  
accorded for research Dissertation - regarding

Ref : Your Letter VNC/Thalambur/152/14 dated 27-08-2014

\*\*\*\*\*

With reference to letter cited above wherein you have been seeking permission to take up research Dissertation of your student Ms.Thilagavathy.S in respect of "A study to assess the effectiveness of aerobic dance movement therapy on anxiety level among adolescent girls."

On that pretext, permission has been hereby accorded to take up research Dissertation at our School.



ச. சுவாமி  
Principal 03/09/14  
திருவண்ணாமலை ஆசிரியர்  
அரசு நகராட்சி மேல்நிலைப் பள்ளி  
திருவண்ணாமலை - 606 601

From

HEADMASTER  
MUNICIPAL GOVERNMENT GIRLS HR.SEC.SCHOOL  
TIRUVANNAMALAI-606 601.

To

PRINCIPAL  
VENKATESWARA NURSING COLLEGE  
THALAMBUR  
OFF OLD MAHABALIPURAM ROAD  
NEAR NAVALUR, CHENNAI-600 130

Sir,

Sub : Permission Granted - Government Girls Higher Secondary School-Permission  
accorded for research Dissertation - regarding

Ref : Your Letter VNC/Thalambur/153/14 dated 27-08-2014

\*\*\*\*\*

With reference to letter cited above wherein you have been seeking permission to take up research Dissertation of your student Ms.Thilagavathy.S in respect of "A study to assess the effectiveness of aerobic dance movement therapy on anxiety level among adolescent girls."

On that pretext, permission has been hereby accorded to take up research Dissertation at our School.



Principal  
சுலைமை ஆசிரியர்,  
நகராட்சி மகளிர் மேல்நிலைப் பள்ளி,  
திருவண்ணாமலை - 606 601.

# **ABSTRACT**

## **STATEMENT OF THE PROBLEM**

A study to assess the effectiveness of aerobic dance movement therapy on anxiety level among adolescent girls in selected school at tiruvannamalai

### **Introduction**

Adolescent period is not an age of problems and frustrations, in most of them it is golden age of adventure, romance and creativity. It is the period in life when an individual is having time, energy, creativity and a spirit of trying new things. Adolescents form above nearly one fifth of the total population of India and are significant proportion of the world's adolescent population. It is understandable that the occurrence of various psychosocial stressors during the transition from the adolescent to childhood is inevitable.

### **Objectives**

- a. To assess the pre-test level of anxiety among adolescent girls in the Experimental group and control group.
- b. To assess the post-test level of anxiety among adolescent girls in the experimental and control group.
- c. To evaluate the effectiveness of aerobic dance movement therapy on anxiety among adolescent girls in experimental group.
- d. To associate the post-test anxiety levels of adolescent girls in the experimental Group with their selected demographic variable.

### **Materials and Methods**

A Quantitative Research approach was adopted for this study. A review of literature was done on studies related to aerobic dance movement therapy on psychological condition, Studies related to

Aerobic Dance movement therapy on medical condition, studies related to anxiety. The conceptual framework opted for this study was based on the Model of Widenbach's helping art of clinical nursing theory (1969), in order to achieve the objectives of the study. The Research design adopted was quasi experimental design. The tool adopted for the study is standardized "State trait anxiety scale". The tool was validated by 4 experts.

A pilot study was conducted before under taking the main study. The main study was conducted in, Government Girls Higher Secondary and Government Higher Secondary School, among 60 adolescent girls of age group between 16-18 years. Purposive sampling technique was used to select 30 samples into experimental group and 30 students into control group. The study lasted for a period of 4 weeks during which, pre test was conducted using State trait anxiety scale to access the level of anxiety among adolescent girls in both the schools. The intervention was given from the next day to the subjects in Government Girls Higher Secondary. The intervention had 4 phases; Preparation Phase, Incubation Phase, Illumination Phase, Evaluation Phase. Intervention was given for a period of 4 weeks for 30 min per day. The subjects in the Government Higher Secondary School were used for control group. After 4 weeks post test was given to both the groups. The data was analysed by descriptive and inferential statistics, the hypothesis was tested, the objectives were achieved and the result was presented.

### **Major Findings of the Study**

The analysis revealed that the analysis of pre and post test score of anxiety of adolescent girls were evaluated and showed that the score of anxiety in post test is reduced than the scores in pre test of anxiety. The overall improvement mean showed a un paired T value of 18.329, which was statistically significant at  $p < 0.001$  level. These findings revealed that there was significant difference in the post level between the experimental and the control group.

## **Conclusion**

On the basis of the findings of the study, the investigator felt the aerobic dance movement therapy is effective non – pharmacological therapy for reduction of anxiety. Therefore this aerobic dance movement therapy used as a safe and effective method for giving support, comfort and relaxation to anxiety persons.