EFFECTIVENESS OF PRANAYAMA IN REDUCTION OF STRESS AMONG NURSING STUDENTS IN SELECTED SCHOOL OF NURSING AT KANYAKUMARI DISTRICT.

DISSERTATION SUBMITTED TO

THE TAMILNADU DR.M.G.R.MEDICAL UNIVERSITY

CHENNAI

IN PARTIAL FULFILLMENT FOR THE DEGREE OF

MASTER OF SCIENCE IN NURSING

APRIL 2012

EFFECTIVENESS OF PRANAYAMA IN REDUCTION OF STRESS AMONG NURSING STUDENTS IN SELECTED SCHOOL OF NURSING AT KANYAKUMARI DISTRICT.

BY

Mrs. K. S. KRISHNA VENI

DISSERTATION SUBMITTED TO

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MASTER OF SCIENCE IN NURSING

APRIL 2012

SRI K. RAMACHANDRAN NAIDU COLLEGE OF NURSING

Affiliated To The Tamil Nadu Dr. M.G.R. Medical University,

K.R.Naidu Nagar, Sankarankovil, , Tirunelveli District-627 753

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CERTIFICATE

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COLLEGE SEAL

A QUASI EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF PRANAYAMA IN REDUCTION OF STRESS AMONG NURSING STUDENTS IN SELECTED SCHOOL OF NURSING AT KANYAKUMARI DISTRICT

APPROVED BY THE DISSERTATION COMMITTEE ON _____

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DISSERTATION SUBMITTED TO

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APRIL 2012

ACKNOWLEDGEMENT

At the outset, I the researcher of this study thank ***God Almighty*** and my immense belief on him which helped me in each and every step for enabling me to undertake this programme and to complete my dissertation to my optimal satisfaction.

I express my heartfelt gratitude to **Mr.R.Vivekanandan**, Chairman and **Mrs.G.Prem Santha**, Managing Trustee of Sri.K. Ramachandran Naidu College of Nursing for the precious opportunity given for me to be a part of this esteemed institution.

I consider myself to be esteem fortunate to express my deepest gratitude to **Prof (Mrs) N. Saraswathi,** Principal, Sri.K.Ramachandran Naidu College of Nursing who taught the concept of research and her constant support, encouragement, enlightening ideas and expert guidance throughout my research.

I am indeed greatly indebted to **Associate Prof** (**Mrs) Subbalakshmi**, class coordinator M.Sc(N) 2nd year, for her constant supervision, patience and valuable suggestion which helped me in completion of my study successfully.

My deepest gratitude and immense thanks to **Associate Prof. (Mr). S. Anand,** Head of the Department, Department of Mental Health (Psychiatric) Nursing for his constant source of inspiration, guidance and encouragement, which was a key for the successful completion of the study.

I express my humble gratitude to **Mrs. A. Kavitha** and **Mr. C. Selgin Leons,** Lecturer in mental health nursing department for their guidance and suggestions for the completion of the study.

I extend my grateful thanks and honor to all the Medical and Nursing Experts for giving their valuable guidance and suggestion towards modification of the tool for data collection.

I extend my sincere thanks to **Mr.Senthil Kumar**, statistician for his guidance in analysis and presentation of the data.

I extend my deep sense of gratitude and thanks to the nursing students and teachers for their cooperation in completion of the study.

I owe my thanks to the **librarians** of Sri. K. Ramachandran Naidu College of Nursing for their help in procuring books whenever required.

My immense and deep gratitude to all my teachers who taught me the concepts of nursing.

I am very much grateful to **Mrs.J.Ramani Bai,** for editing this manuscript and tool in English patiently.

I extend my deep gratitude to **Mr.Wilson,** Principal, Grace School of Nursing for granting permission to conduct the study.

Word cannot express my happiness, love and sincere appreciation to my **Husband Mr. SRN. Kumar and my family members** for their constant support throughout the study.

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ABSTRACT

"A Quasi experimental study to assess the effectiveness of pranayama in reduction of stress among nursing students in selected School of Nursing at Kanyakumari district" was done by Mrs. K.S. Krishna veni as a partial fulfillment of the requirement for the degree of Master of Science in Nursing at Sri. K. Ramachandran Naidu College of nursing, Thirunelveli under the Tamil Nadu Dr. M.G.R medical university, Chennai during the year of april 2012.

The objectives of the study were

- To assess the pre test level of stress among the nursing students in experimental group and control group
- To assess the effectiveness of pranayama to reduce stress among the experimental group and control group
- To compare the pre and post test level of stress among experimental group.
- To associate the post test level of stress among nursing students in experimental group and control group with their selected demographic variable.

The following hypotheses were formulated for the study.

$H_{1:}$ The mean post test level of stress among nursing students in experimental group was lower than the mean post test level of control group.

$H_{2:}$ The mean post test level of stress among nursing students in experimental group was lower than their mean pre test level of stress.

H_3: There was a significant association between the post test level of stress among experimental group with their selected demographic variables.

H_4: There was a significant association between the post test level of stress among control group with their selected demographic variables.

The study was based on Sister Calista Roy's stress adaptation model. The quantitative approach was used in this study. The study was conducted in Grace School of Nursing at Kanyakumari district. The design adopted for this study was quasi experimental pre test and post test control group design to evaluate the effectiveness of pranayama to reduce stress of nursing students. The quata sampling technique was used to select 30 samples for experimental group and 30 samples for control group.

The data collection tool used for the study was the Lovibond stress assessment scale. The content validity of the tool was obtained from five clinical experts. The reliability of tool (r=0.87) was established by test retest method. The tool was accepted as reliable by the clinical experts Pilot study was conducted to find out the feasibility of the study and to plan for data analysis.

Data collection was done and the data obtained were analyzed in both in terms of descriptive and inferential statistics.

The Major findings of the study were

- The mean post test level of stress among nursing students in experimental group was lower than the mean post test level of control group $t = 4.09$, $p < 0.05$.
- The mean post test level of stress among nursing students in experimental group was lower than the mean pre test level of experimental group $t = 4.88$, $p < 0.05$.
- There was no significant association between the post test level of stress among Experimental group with their selected demographic variables except in year of study.

- There was no significant association between the post test level of stress among Control group with their selected demographic variables.

On the basis of the findings of the study is recommended that:

1. The following studies can be undertaken to strengthen pranayama as well as remedy for the problems of nursing students.
2. A study can be conducted to manage the other problems of students such as Anxiety and cognitive problems.
3. A study can be conducted in other professions also to enhance the wellbeing.
4. A study can be performed in all the age groups to improve individual's cognition.

Recommendation based on suggestion of the study subjects

Conduct instructional module programme regarding pranayama which enables the nursing students to become aware of pranayama and its benefits.

A further study can be conducted to assess the knowledge, attitude and practice of nursing personnel in pranayama.

CONCLUSION

On the basis of the study findings the investigator has reached a conclusion that application of interventions like pranayama every day for about 20 minutes was very useful as a compliment to pharmacologic management. This reduced the stress of the nursing students. Hence interventions like pranayama can be used as an effective nursing intervention.

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APPENDIX-A

LETTER SEEKING AND GRANTING PERMISSION FOR CONDUCTING THE STUDY

SRI K. RAMACHANDRAN NAIDU COLLEGE OF NURSING

Approved by Govt. of Tamilnadu and Indian Nursing Council / T.N.C
Affiliated to the Tamilnadu Dr. M.G.R. Medical University

K.R. Naidu Nagar - 627 753, Paruvakudi Village, Post Bag No.1, Karivalam (via)
Sankarankovil (Tk), Tirunelveli (Dt), Ph. : 04636 - 260950, Fax : 04636 - 260377. E - Mail : srikrncon@yahoo.com

31.03.2011

To

The Chairman,
Grace School of Nursing,
P.P.M Junction,
Kaliyakkavilai,
Kanyakumari District.

Mrs. K.S.Krishnaveni is a bonafide student of our college studying in M.Sc (N) programme. As a partial fulfillment of the university requirement for the award of M.Sc (N) degree, She needs to conduct research project.

Her chosen research project is as follows **"A study to assess the effectiveness of pranayama on reducing stress among nursing students of selected school of nursing on April 2011."**

She will abide by the rules and regulations of the school and adhere to school policies during her period of data collection. Permission may kindly be granted to her for conduction of the study at your school.

Further details of the proposal project will be furnished by the student personally, Confidentiality will be ensured in the research project.

Thanking you

Yours faithfully

Principal
Sri K. Ramachandran Naidu
College of Nursing
K.R. Naidu Nagar - 627 753. Karivalam (Via)
Sankarankovil (T.K.) Tirunelveli Dt.,

PRINCIPAL
Grace School of Nursing
KALIAKKAVILAI

APPENDIX-B

LETTER SEEKING EXPERT OPINION FOR CONTENT VALIDITY

From

Mrs.K.S. Krishna veni.
M.Sc.(N) I year,
Sri.K.Ramachandran Naidu College Of Nursing,
Sankarankovil, Tirunelveli District.

To

Subject: Requisition for expert opinion on suggestion for content validity of the tool.

Respected Sir/ Madam,

I am M.Sc.Nursing student of Sri. K. Ramachandran Naidu College of Nursing, Sankarankovil. As a part of my course, I am doing the study on the topic mentioned below.

"A Quasi Experimental Study to assess the effectiveness of pranayama in reduction of stress among nursing students in selected school of nursing at Kanyakumari District."

The research project is to be submitted to the Tamilnadu Dr.M.G.R. Medical university as a fulfillment for the requirement of M.Sc.(N) programme.

I request you to kindly evaluate the tool item and give your valuable opinion and suggestion for improvement of the tool.

I would be highly obliged and thankful to hear from you.

Thanking you in anticipation.

Yours sincerely,

Enclosures:

- Statement of the problem.
- Research tool.
- Scoring key.
- Self addressed envelope.

APPENDIX-C

LIST OF EXPERTS FOR CONTENT VALIDITY

1. **Dr.Paneer Selvan**
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   Chennai.

5. **Ms. Meera**
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   Coimbatore-641004.

6. **Ms. Shanthi,**
   Professor in Mental health nursing,
   Faculty of nursing
   Sri Ramachandran University,
   Chennai-60011.

APPENDIX-D

CERTIFICATE OF ENGLISH EDITING

TO WHOMSOEVER IT MAY CONCERN

This is to certify that the dissertation work "A study to assess the effectiveness of pranayama in reduction of stress among nursing students of selected school of nursing, kaliyakavilai, April 2011, done by Mrs.K.s.Krishna veni, II year M.Sc Nursing, in Sri. K. Ramachandran Naidu College of Nursing, Tirunelveli is edited for English language appropriateness by _____.

T. RAMANI BAI, P.G. ASST
GOVT HR. SEC. SCHOOL,
KULASEKHARAM.

Signature:

Seal:

APPENDIX-E

INFORMED CONSENT

Dear Students,

I **Mrs.K.S.Krishna veni.** M.Sc (N) II year student from Sri. K. Ramachandran Naidu College of Nursing, Thirunelveli is conducting a study to assess the effectiveness of Pranayama in reduction of stress among nursing students of selected school of nursing at kaliyakavilai, April 2011, as a partial fulfillment of the requirement for the degree of M. Sc. Nursing. Under the Tamil Nadu Dr. M.G.R. Medical University. The students will be assessed for stress using structured questionnaire. I assure that the responses given by you will be used only for my study purpose. Then I will administer pranayama. There is no right or wrong answers. So please feel free in answering the questions. This will be promoting your welfare.

So, I request you to kindly give your full co-operation and willingness to conduct this study effectively and successfully.

Thank you.

APPENDIX-F

COPY OF THE TOOL FOR THE DATA COLLECTION

SECTION-A

DEMOGRAPHIC VARIABLES

1. Age in years

a) 17-18 years
b) 19-20 years
c) 21 - 22 years
d) Above 22years

2. Sex

a) Female
b) Male

3. Religion

a) Hindu
b) Christian
c) Muslim

4. Type of family

a) Nuclear
b) Joint

5. Year of study

a) First year
b) Second year
c) Third year

6. Medium of instruction in previous education.

a) English
b) Tamil
c) Malayalam

SECTION -B

LOVIBOND MODIFIED STRESS SCALE

S. No	Questions	Did not apply to me at all	Applied to me some degree or some of the time	Applied me a considerable degree or a good part of the time	Applied to me very much or most of the time
1	I found myself getting upset by quite trivel things	1	2	3	4
2	I could not seem to experience any positive feeling at all				
3	I tended to over react to situation.				
4	I had a feeling of shaking.				
5	I found it difficulty to relax.				
6	I found my self in situations that made me so anxious I was most relieved when they ended.				
7	I felt that I had nothing to look forward to.				
8	I found my self getting upset rather easily.				
9	I felt that I had lost interest in just about everything.				
10	I perspired noticeable in the absence of high temperature of physical exertions.				
11	I found it hard to wind down.				

12	I seem like all the things forgot what I studied.				
13	I felt difficulty in understanding the subject matter.				
14	I found that I was very irritable.				
15	I found it I hard to calm down after something upset me.				
16	I feared that I would be fail in achieving the task.				
17	I was unable to become enthusiastic about anything.				
18	I found it difficult to tolerate interruptions to what I was doing.				
19	I was intolerant of anything take kept me in the future to be hopeful about.				
20	I found it difficult to work up the initiative to do things.				
21	I was worried about situations in which I might panic and make a fool of myself.				
22	I found it difficult to work up the initiative to do things.				
23	I felt terrified.				
24	I felt I was pretty worthless.				
25	I felt that I was close to panic.				

APPENDIX-G

DESCRIPTION OF THE TOOL AND SCORING KEY

THE MODIFIED STRESS ASSESSMENT SCALE

The modified stress assessment scale is self administered questionnaire that focuses on one's subjective feelings of stress. The scale assesses how the students feels in her/his stressful situations. It consists of 25 items to estimate the level of stress among nursing students.

SCORE INTERPRETATIONS

Score	**-**	**Level of stress**
25		No stress
26-50		Mild stress
51-75		Moderate stress
76-100		severe stress

APPENDIX-H

CERTIFICATE OF PRANAYAMA

வாழ்க வையகம்! வாழ்க வளமுடன்!

Marthandam Manavazhakalai Mantam Trust

Manavazhakalai Yoga Centre, Fletcher Street,
Main Road, Marthandam - 629 165.
Ph : 04651- 270056, Cell : 9443277888

T. Krishnaraj Managing Trustee	P. Krishnankutty Vice President	D. Sulif Secretary
M.R. Jayakumar Treasurer	P. Sivananthan Master - in - Charge	N.R. Vinoth Kumar Vision Co- Ordinator

Date :..... April, 2011

CERTIFICATE

This is to certify that **Mrs. K.S. KRISHNA VENI**, has been attended **Pranayama Class** in Manavazhakalai Yoga Centre, Marthandam.

MARTHANDAM MANAVAZHAKKALAI MANTAM TRUST

T. KRISHNARAJ
MANAGING TRUSTEE

CHAPTER I

INTRODUCTION

"Give your stress wings and let it fly away"

-Terri Guillemets.

BACKGROUND OF THE STUDY

Many college students find very stressful situations in academic experience in recent years. Life is a continuous struggle every day. Adaptation is a healthy response to minimize. It has been defined as restoration of homeostasis to the internal environmental system. The reaction to stress occurs at different stages, the alarm stage, stage of resistance and the stage of exhaustion. Domains of adaptation will restrain occur headache, mental disorders, coronary artery diseases, ulcers, and colitis. Without intervention reversal, exhaustion and even death can occur.

Stress is more likely to occur in situations where the demands are high, and the amount of control is low, when there is limited support or help available for the individual. Stress is a dynamic process that changes in quality and quantity in response to internal and external factors. It has been suggested that the nature of the profession facilitates an inflexible response to pressure due to the culture of personal responsibility rather than delegation, and also, the need to provide best care for each patient rather than making trade-offs in a resource constrained environment.

Experience of stress does not necessarily result in pathological changes or damages. Stress may be contained within the body's normal homeostatic limits. The adaptive coping strategies are awareness, relaxation, meditation, problem solving, better communication with significant others and taming of pets.

Executive research shows stress, feeling rushed and lower life satisfactions are all factors associated with an increased risk of violent impact. Now a day, it is quite easy to fight with stress, if one starts practicing Pranayama. Since Pranayama has an ability to make an individual concentrate, improve good oxygen circulation in the body, spiritual benefits of breathing and removes excess CO2 from the body.

The level of perceived stress among baccalaureate mansora nursing students to highlight the possible predicting factors. Method of study is cross- sectional study and sample size is large that is with 373 samples, Data were obtained from samples by using a questionnaire to assess the perceived stress level Prevalence of high stress level was 40.2%, respectively. On an average each student reported a mean of 4.6 stressors and academic pressures were the most frequent stressors. In regression analysis the number of stressors and global sickness index score were predictors of high stress level. **Abdel-hady et al (2011)**

The relationship between perceived stress and academic performance among dental students enrolled in an Australian dental school. In this study, four key stress factors labelled "self-efficacy beliefs," "faculty and administration," "workload," and "performance pressure" previously identified as principal components analysis of the Dental Environment Stress (DES). They have assessed the stress level by questionnaire method and the sample size is 202. Three measures of academic performance were entered as dependent variables. Regression analysis revealed little support for the assumption that chronic stress predicted academic performance. **AE Sanders and K Lushington (2002).**

NEED FOR THE STUDY

It was disappointing that in the era of rapid development of human advancement stress still exists in our surroundings. We can assess that it has its own effect, more on the people who are studying. Cooper and others found that 70% nursing students are getting stress due to increased requirements in practical and theory. That is statistics on stress level of nursing students reveals that 5% students are poor in managing stress. While 58% reported feeling worried about their grades additionally, 71% state that their grades have a direct effect on their stress level. It is proved that one can change his life by consciously relaxing his own breathing.

The amount of stress an individual is facing can be reduced, if Pranayama is practiced. Stress produces a state of physical and mental tension. Yoga developed thousands of years ago, It is recognized as a form of Mind-Body medicine. Yogic breathing is a unique method for balancing the autonomic nervous system and influence psychological and stress related disorders.

The research has however demonstrated a greater understanding that specific stressors result in certain physical (Cardio Vascular Disease, G.I. Disorders, Musculoskeletal problems, fatigue). Psychological (depression, stress PTSD) and behavioral outcomes (substance abuse). The practice of Pranayama help the person to clear the mind's clutter and the tensions in his body, so that he feel more alert, and have greater access to emotional material.

Pranayama reduces stress, one of our first responses is to hold the breath or breath very shallowly. This is a "flight or fight '' primitive response that may have served us at one point in our evolutionary development. It has better emotional control

and equilibrium. Pranayama increases the rate of metabolism, strengthens the immune system. Calms and steadies the mind, improve focus and concentration. It can raise or lower blood pressure, depending upon the technique chosen and the desired result. Pranayama uses oxygen more efficiently, increasing our health and increase Lung Capacity. As a researcher felt that the study to be conducted on the level of stress of nursing students because community psychiatric nursing is a part of psychiatric nursing and nurses should try to decrease the level of stress of the people around who are at high risk. Health check up is done periodically for the nursing students but due to various factors still there is no much facilities for stress reduction and hence it is the main continuing factor leading to many other health related problems. The investigator strongly believes that psychiatric nurses can play a main role in reducing stress among nursing students as they have inadequate utilization coping mechanism and pranayama (Nadi-Shodana) is believed to relieve the stress effectively at any given point of time.

Investigated that the extent to which approaches to work, workplace climate, stress, burnout and satisfaction with medicine as a career among medical students. The samples were first studied when they were applied to five UK medical schools. Postal questionnaires were sent to all doctors with a traceable address on the current or a previous medical register. The conducted study showed that doctors perceive their workplace climate and workload let to be high level stress, burnout and satisfaction with medicine. **MC Manus et al (2004).**

Studied about Yogic breathing, which is a unique method for balancing the autonomic nervous system and influencing psychological and stress related disorders. They proved that combination of yogic breathing (Pranayama), yoga postures and

meditation can be used as beneficial, low-risk, low-cost adjunct to the treatment of stress, anxiety, Post-Traumatic Stress Disorder (PTSD), depression, stress related medical illnesses, substance abuse, and rehabilitation of criminal offenders. Pranayama techniques enhance well being, mood, attention, mental focus, and stress tolerance. Proper training by a skilled teacher and a 30-minute practice every day will maximize the benefits of pranayama. **Brown RP, Gerbarg PL (2001)**

STATEMENT OF THE PROBLEM

"A Quasi experimental study to assess the effectiveness of pranayama in reduction of stress among nursing students in selected school of nursing at Kanyakumari district.

OBJECTIVES

- To assess the pre test level of stress among the nursing students in experimental group and control group
- To assess the effectiveness of pranayama to reduce stress among the experimental group and control group
- To compare the pre and post test level of stress among experimental group.
- To associate the post test level of stress among nursing students in experimental group and control group with their selected demographic variables.

RESEARCH HYPOTHESIS

H_1: The mean post test level of stress among nursing students in experimental group will be lower than the mean post test level of control group.

H_2: The mean post test level of stress among nursing students in experimental group will be lower than their mean pre test level of stress.

H_3: There will be a significant association between the post test level of stress among Experimental group with their selected demographic variables.

H_4: There will be a significant association between the post test level of stress among control group with their selected demographic variables.

OPERATIONAL DEFINITIONS

Assess

It is the process of systematically and continuously collecting, validating and communicating the data regarding reduction of stress among nursing students by using rating scale.

Effectiveness

It is the outcome of pranayama in reducing the stress among nursing students.

Pranayama

Pranayama is the type of breathing exercise which reduce the stress and improve brain function. The investigator given pranayama for 20 minutes every day at once for about 20 days.

Stress

It is a real or interpreted threat to the physiological or psychological or behavioral response by person.

Nursing Students

The students who are studying first year, second year and third year GNM in School of Nursing

ASSUMPTION

1. Nursing students may have stress due to increased requirements in practical and theory.
2. Pranayama may reduce stress.

DELIMITATION

- The study is delimited to nursing students who are studying in selected school of nursing.
- The study is delimited to 4 weeks.

PROJECTED OUTCOME

1. Administration of pranayama will reduce the stress.
2. The findings of study will help the nurse to provide pranayama in reducing stress level of nursing students.

CONCEPTUAL FRAMEWORK

The conceptual framework for research study presents the measure on which the purpose of the proposed study is based. The framework provides the perspective from which the investigator views the problems.

The study is based on the concept that administration of selected nursing measures [pranayama] to nursing students of selected school of nursing will reduce the stress. The investigator adopted the Roy's stress adoptation model (1976) as a base for developing the conceptual framework.

Sister Calista Roy proposes "Roy's" Adaptation model in 1976 for nursing which describes the ability of person to adopt major changes.

The theory focused on 3 areas.

- Input
- Through put
- Output

Input:

Input refers to the stimuli. Here the input is stress which can come from the internal fear about the education and examination. The students' level of stress assessed by using stress is assessment scale as pretest and also the demographic variables.

Throughput:

According to this model throughput refers to the procedure by which the person adopting. This study includes administration of pranayama to reduce the stress of nursing students.

Output:

Output is the outcome of the system. In this study output is the effectiveness of pranayama in reduction of stress. This effective response demonstrates reduced stress and feedback assessed by post assessment level of stress by using stress assessment scale.

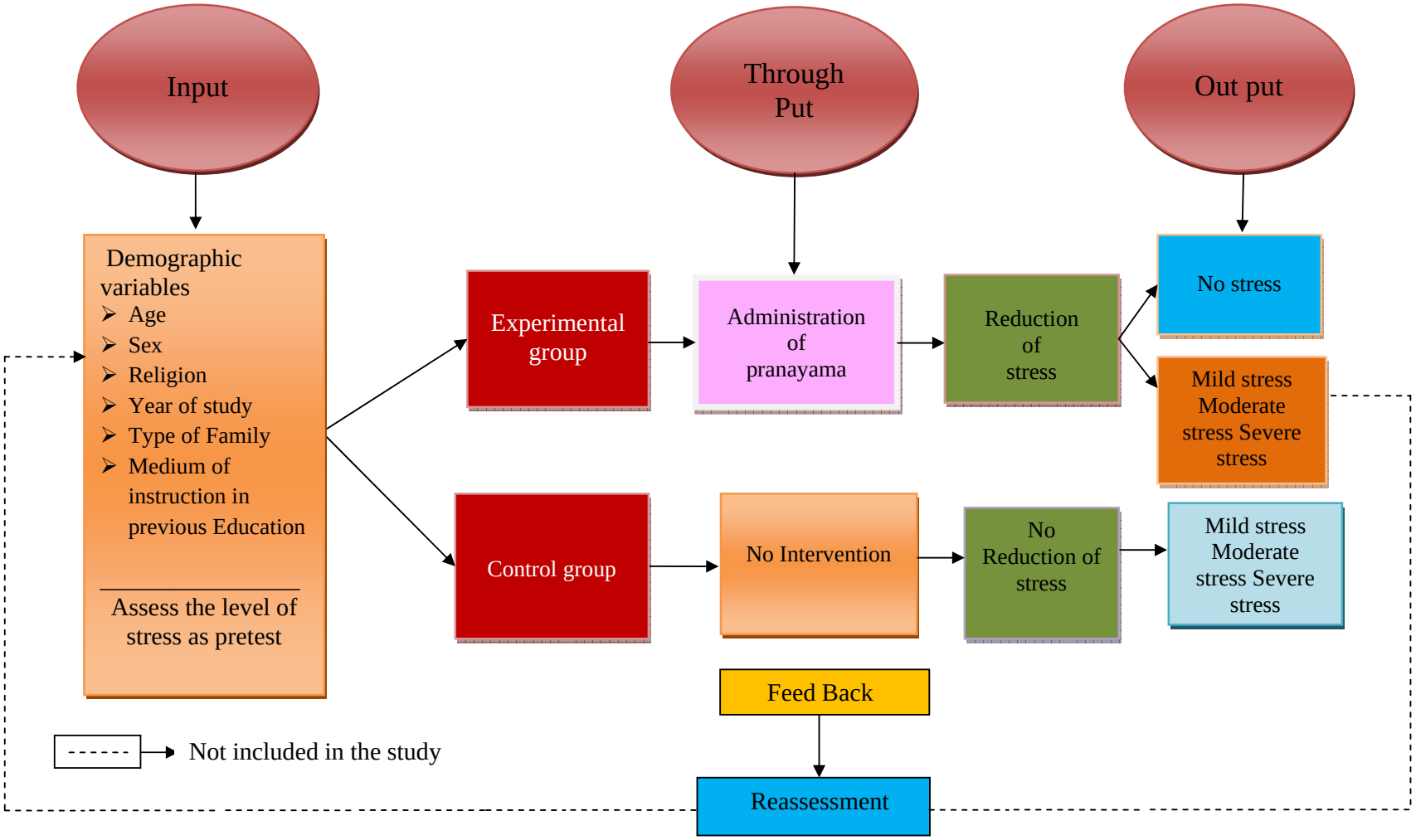

Fig1: MODIFIED ROY'S STRESS ADAPTATION MODEL

CHAPTER-II

REVIEW OF LITERATURE

Review of literature is an essential component of the research process**.** It aids the researcher in the formulation of the research plan or proposal and condition of the study**.** It aids in relating the outcomes of the study to the findings of other investigations**.**

Section A: Literature related to stress among Nursing Students.

Section B: Literature related to effectiveness of pranayama in reducing stress

Section C. Literature related to effects of pranayama in reducing stress among nursing students.

SECTION A: Literature related to stress among nursing students.

Jimenez C et al (2011) conducted a study to identify the differences in novice and experienced nursing students' reports of stress of Ata Spanish Nursing College. Investigator performed cross-sectional research. This study was carried out with 357 students from all 3 years of a nursing diploma programme. The data were collected over an 8-month period in 2004-2005. Nursing students from all 3 years perceived moderate stress at similar levels. Experienced students perceived more academic stressors than novices. The group suggests that students about possible stressors associated with their profession and introducing interventions to support development of professionalism, social skills and coping capacity for clinical practice.

Shi Kan et al., (2010) conducted a study to associate the social anxiety with stress and mental health of college students. In this study 1430 college students were tested by stress assessment questionnaire and social anxiety rating scale. The study

results and analysis suggest the college student's stressors were related to social anxiety and mental health. Social anxiety had intermediate effect on college students' stress and mental health. There were demographic differences between stressors, social anxiety and mental health. The research report concluded that most popular stressors of college students included stress of punishment, stress of external expectation, stress of learning and living adaptation, stress of interpersonal relations, and stress of loosing relatives.

Amado M Padila (2007) determines the effect of generational status on stress, 247 university students were selected and stress level assessed by stress scale questionnaire method. Students were divided into four generational groups consisting of Late Immigrants (immigration after the age of 14), Second-generation, and Third/Later generation individuals. Results revealed that the Late Immigrant Group experienced the highest stress and scored lowest on self-esteem. Second-generation subjects resembled Late Immigrants on stress.

Nicole Lake (2005) conducted a qualitative study to assess the stress level of college students. The method of data collection in this study is structured questionnaire. The samples were selected randomly male and female students. The research report concludes that the students in these samples have moderate stress. Investigation suggests that the students should improve their coping skills to deal with stress.

Honglin chen (2002) conducted a quantitative approach study to evaluate stress among 342 students in six universities in Shanghai. Differences of college stress and coping strategy with reference to gender, year of study, etc. The study has proved that stress has a positive relationship with college stress and positive coping

strategies have significant effects on psychological health problems. Male students reported higher level of stress, worse psychological well-being, and having less inclination towards using positive coping strategies. Intervention should be given to the high-risk college students groups. Research finding suggest that college social workers shall play an important role in cultivating proper coping strategies to future college students.

Hector f Myers et al., (2001) conducted a study on multivariate stress and health risk model to test the contribution of stress on blood pressure in Black college students. Measures of stress reaction pattern, level of stress exposure, and personal level of distress, availability of social supports, personal and family health history, and health status were obtained from a sample of 191 Black university students. Multiple regression analyses predicting systolic and diastolic blood pressure overall and by gender supported the hypothesis that stress interacts with prior familial health history, personal health status, and level of subjective distress to predict blood pressure. Stress affected health and blood pressure differently for Black males and females.

Hussan tunio (2000) conducted a study to know the causes of stress among college students. The design of this study is descriptive and causal. Further data collection method used for this study is stress assessment scale questionnaires method to obtain from students. The sample is designed for 30 students, and there will be random sampling technique is applied for this research. Data analyses are done through SPSS in order to know the level of stress of students. This analysis helps the investigator to make decision and to know the most important causes of stress among students.

Hudd et al., (2000) conducted a comparative study to assess the level of stress in college. Students both athletes and non athletes. The participants in this study were 235 females and 127 males were assessed the stress level by questionnaire method. In regression analysis report concludes that 95% of male athletes and 80% of female athletes were stressed by many factors than non athletes.

SECTION B: Literature related to effectiveness of pranayama in reducing stress.

Bhimani et al., (2011) conducted a study to assess the effectiveness of pranayama to reduce stress among medical students. The subjects were first M.B.B.S students and the sample size was 59 consisting of 27 males and 32 females. After the orientation session, informed written consent was taken, stress questionnaire was put and the autonomic function tests were done. This was followed by practice of Pranayama for 2 months, 1 hour/day for 5 days/week and again stress questionnaire was put and the autonomic function tests were performed on the study group. The results and analysis were done before and after the practice of Pranayama. The results obtained were analyzed using SPSS software. Conclusion for this study is that stress level has reduced after 2 months of practicing various pranayama as evident by decrease in total stress score which is highly significant.

Gaurav jain et al., (2011) Conducted an experimental study to assess the effectiveness of pranayama to reduce the stress related disorders of medical students. The study group comprised of 54 healthy medical students of 18 to 24 yrs age group. Initially there were 21 volunteers students who were assessed the stress level previously. This after 3 months of regular practice of pranayama to reduces stress. In regression analysis report concluded that regular practice of pranayam for 3 months were reduced 81% of stress of medical students.

Shirely et al., (2010) A study conducted to assess the effectiveness of pranayama to reduce the stress among the people those who were affected by flood in the state of Bihar in north India. Twenty-two volunteers (group average age ± S.D 31.5 ± 7.5 years; all of them were males) were randomly assigned to two groups, pranayama and a non-pranayama control group. The experimental group practiced pranayama for an hour daily while the control group continued with their routine activities. Both groups' heart rate variability, breath rate, and four symptoms of emotional stress using visual analog scales, were assessed on the first and eighth day of the program. There was a significant decrease in stress in the pranayama group ($p < 0.05$, paired t-test, post data compared to pre) and an increase in stress in the control group ($p < 0.05$, paired t-test, post data compared to pre). A week of pranayama can reduce feelings stress and possibly prevent an increase in stress in flood survivors a month after the calamity.

Ciramitaro et al., (2010) conducted an experimental study to identify the benefits of pranayama to reduce the stress among college students. In this study samples were selected by using randomization. The stress level was assessed by stress assessment scale. Pranayama practiced by experimental group for 1 month,30mts/day. After the session again stress questionnaire were given to the study group. Results suggest that the stress level reduced and behaviour that could be improved by implementing a pranayama programme.

Arvind kumar (2009) A study to investigate the effect of pranayama in the reduction of stress. Samples were selected for this study is 12 practioners of swami ram dev yoga and non practioners were analyzed by the spss package. The results and findings concluded that the experimental group were reduced the level of stress after practice pranayama for 4weeks when compared to control group.

Santhosh Yaduvanshi (2009) conducted a study to assess the Effect of pranayama on mental stress and job satisfaction of teachers of Banaras Hindu University. Thirty teachers were selected for the study. In this study two separate questionnaires were used for assessing the mental stress and job satisfaction. In analysis t test was applied to find out the effect of effect of 12 week training of pranayama. For testing the difference between the mean gain of initial test and final test the level of significance was set at 0.05 level of confidence. The result of this study on the basis of findings, it can be concluded from the study that the pranayama practice among teachers was significantly improved from the 12 week training of pranayama on mental stress and job satisfaction of teachers from Banaras Hindu University.

Dr.Rajesh et al., (2009) conducted a study to assess the effectiveness of pranayama to reduce stress among the swimmers who were having the problem of Stress and Tension. The subjects were selected for this study was divided randomly into two groups. The total number of subjects was 100. Each group had 50 subjects. The experimental group was chosen to perform pranayama for a period of six months. The control group was not given any sort of training. They did their daily routine work. The obtained data from pre and post tests were, analyzed by one way analysis of variance, the positive effects and changes were found in reduced stress and tension etc after doing the yoga and pranayama exercise and the changes were found in the behavior of the individual too. The results of the study have indicated that the pranayama have proved to be the best for removal of Stress and Tension of swimmers.

Britta K Holzel et al., (2008) conducted a longitudinal MRI study to investigate the relationship between changes in perceived stress with changes in amygdala gray matter density following a pranayama. Samples selected were (N = 26) healthy individuals participated in an 8-week pranayama stress reduction intervention. Perceived stress was rated on the perceived stress scale (PSS) and anatomical MR images were acquired pre- and post-intervention. PSS change was used as the predictive regresses for changes in gray matter density within the bilateral amygdale. Following the intervention participants reported significantly reduced perceived stress. Reductions in perceived stress correlated positively with decrease in right basolateral amygdala gray matter density. Whereas prior studies found gray matter modifications resulting from acquisition of abstract information, motor and language skills, this study demonstrates that neuroplastic changes associated with improvements in a psychological state variable

S**indal amar singh (2007)** conducted a quasi experimental study to assess the effectiveness of pranayama in the reduction of stress among bus drivers in Bangalore. In this study methodology the data were generated by using structured questionnaire. Simple random sampling technique was adopted to select 30 subjects .Descriptive and inferential statistics were used for data analysis the level was set at 0.05 .Results of study the mean pre test score 46.47 is greater than and mean post score 37.10.This denotes that pranayama is effective and the interpretation and conclusion of this study reveals that the stress level of bus drivers was decreed after practicing pranayama.

Quintino et al., (2006) conducted a study to assess the effectiveness of pranayama to reduce stress among college students. In this study design one group pretest post test design was selected. A group of subjects who are volunteered to

practice pranayama for three months. Investigator applied the subjective observation method psychology and analyzed the various traits on Likerts five point psychometric scale. Investigator applied t-test for statistical investigation. Report concludes that 80% of students have experienced better state of memory power and 75% students has been decreased stress level after pranayama.

Vinoth kochupillai (2006) conducted a study to assess the effectiveness of pranayama to reduce the stress among the cancer patients those who are having the habit of tobacco consumption. In this study samples are selected randomly into one control group and one experimental group. Data obtained from the subjects using stress assessment questionnaire. Pranayama was practiced up to 6months for experimental group and routine treatment for control group. After six months report concludes that 60% of patients were reduced stress level linked with the habit of tobacco consumption significantly [$p<0.05$] compared to control group.

N.K. Subbalakshmi et al., (2005) conducted a study to assess the effectiveness of pranayama to reduce stress among the physiotherapy students in Manipal Institute of Medical Science in Gongtok. Fifty healthy volunteers were selected as samples for this study and they have separated into two groups. They were aged between 17-20 years. The samples were selected randomly. The experimental group was performed pranayama for six weeks and control group did not practice pranayama. The statistical analysis of this study all values obtained before and after performing Pranayama. The Student paired t' test was used to compare parameters within groups. P value of less than 0.05 indicates a significant difference. The report suggests that the pranayama improves perfection of the body and mind reduce stress of students.

Sivapriya et al., (2005) conducted a study to create awareness in the health benefits of pranayama and to inculcate yoga in school students so that they can reduce the stress and gain healthy life in future. In this study 115 school students aged 8 – 14 years studying in Visa Nursery & primary school, Chennai were recruited for the study. Healthy students with no history of present and past illness were selected. The participants were trained to perform Nadi Shodhana Pranayama and the study was done for 45 days .The data were obtained before and after practice of Pranayama. The results of this study showed significant improvement. The stress was reduced after the practice of Nadi Shodhana Pranayama. Conclusion of this study is the positive results found in the present study can be applied to all schools to improve the behavioral pattern of the students. A few minutes practice daily may help in setting the mind better on works and studies. The daily practice could maintain better physical and mental health to have a better future.

Dr.Lynne young et al., (2000) conducted a study to assess the effectiveness of pranayama to reduce the stress among Uvics School of nursing students. After an assessment the instructor noted that high level of stress reported among nursing students. In this study second and third year students were selected as samples. Students were given credit for the time spent the eight weekly sessions. They learned meditation, pranayama and relaxation techniques and wrote a journal as part of the program. The results were very positive and Young reported on the program's effectiveness at the International Conference and she hopes to expand her research on stress-reduction among nursing students.

David Shapiro (2000) conducted a study on the effects of the life-force Pranayama program on mood. He measured the mood change before and after an

intervention of a five-day retreat in Tuscon and two-day retreats at Kripalu. 60 samples were selected by radamization method. The participants in the five-day retreat showed a 62 percent increase in happiness, 61 percent decrease in sadness, 76 percent decrease in anger and 53 percent decrease in anxiety. Whereas participants in two two-day retreats showed a 39 percent increase in happiness, 34 percent decrease in sadness, 54 percent decrease in anger and 62 percent decrease anxiety, which represents that the more number of practice of Pranayama reduces the stress levels.

Singh .v. et al., (2000) conducted a study to assess the effects of pranayama exercise to reduce stress among the patients with mild asthma. The samples were assessed in a randomized, double-blind. The data were obtained by using stress assessment scale. After baseline assessment over 1 week, 18 patients with mild asthma practiced pranayama for 15 min twice a day for two consecutive week periods. After the active period, subjects were asked to the assessment of stress. The result of investigator suggests that there was a statistically significant difference after the pranayama session.

SECTION C. Literature related to effects of pranayama in reducing stress among nursing students.

Deshkar et al., (2009) conducted a study to assess the effectiveness of pranayama to reduce stress among nursing students of Chhattisgarh Institute of Medical Sciences, Bilaspur. The study was carried out over 40 preclinical nursing students after informed consent. The subjects were categorized in two groups, Group I (n =20) which performed, Nadi-shodhana, chanting for seven days daily. After training they were assessed on the basis of the questionnaire. They observed that students were reduced stress level and increased attention span during training in

Group I as compared to Group II. Investigator suggest that after pranayama, the difference was statistically insignificant ($p > 0.05$).

Jeffrey Brantley (2005) conducted a study to assess the effectiveness of pranayama to reduce the stress of nursing students both at personal and professional level. The study samples were 100 nursing students. They were divided into two groups; experimental group and control group. Stress was observed by using stress assessment scale. Pranayama was practiced 8-weeks by the experimental group. Findings indicate that participation in the intervention can effectively reduce stress. These results replicated in the wait-list for control group.

Farkhondeh sharf et al., (2005) conducted a study to assess the effectiveness of pranayama to reduce stress among baccalaureate nursing students at Shiraz University of Medical Science. In this study 90 samples were selected randomly. Pre assessment was done by questionnaire and pranayama practiced for 2 months. Study result reveals that there were marked responses in pranayama and stress reduction of nursing students.

Esther Beck (2004) conducted a study to assess the effectiveness of pranayama to reduce the stress level of Wayne State University, College of Nursing. In this study 60 nursing students were selected as samples. Participating students overwhelmingly offered information and instruction regarding pranayama. The project involved teaching stress management pranayama to campus students. After teaching pranayama students were requested to answer the questions. Research report reveals that the stress management techniques used by the students in this project give great response.

Admi.H. et al., (2000) conducted an exploratory longitudinal study to assess the effectiveness of pranayama to reduce the stress among nursing students in a

hospital setting of Rambam Medical Centre. The data were assessed by a Nursing Student's Stress Scale. The scale was developed that include six subscales: adequate knowledge, close supervision, causing pain, insufficient resources, and reality conflict. The Nursing Students Stress Scale was administered three times during the clinical experience to 46 nursing students. Nurse educators were encouraged to perform pranayama for six months as a basis for stress reduction intervention. Results showed significant differences between the Theoretical, methodological, and practical implications of the findings were discussed with 't'test. Result showed that Significant differences between the preclinical expected stress levels and the post test levels of stress. The investigator suggests that the Students must first cope with their own stress in the clinical reality.

Jones et al., (2000) conducted a study to assess the effectiveness of pranayama to reduce stress among of first year nursing students. In this study 60 samples were selected randomly. Pre assessment done by questionnaire after assessment, pranayama was practiced by experimental group for 3months. After the intervention post assessment was carried out. The study result reveals that significant difference between control group and experimental group and the first year nursing students stress level reduced.

CHAPTER-III

RESEARCH METHODOLOGY

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

RESEARCH APPROACH

The Quantitative approach was used in this study.

RESEARCH DESIGN

The research design adopted for this study was quasi experimental pre test and post test control group design. This can be represented as:

GROUP	PRE TEST	INTERVENTION	POST TEST
EXPERIMENTAL	O1	X	O2
CONTROL	O1	_	O2

Fig2 : Schematic representation of Quasi experimental design

O1 - Pretest level of stress in experimental group.

O2 - Post test level of stress in experimental group.

X - Administration of pranayama.

O1 - Pretest level of stress in control group.

O2 - Post test level of stress in control group.

VARIABLES

Independent Variable

The independent variable of the study was pranayama.

Dependent Variable

The dependent variables of the study were stress.

SETTING OF THE STUDY

The study was conducted at Grace School of Nursing in kaliakkavilai at Kanyakumari district. The school is affiliated by Tamil Nadu Board of nursing. Totally 70 GNM students are studying. Out of 70 students 30 of them from first year, 20 of them from second year and 20 of them from third year. They are availing their clinical practice in their own Hospital.

POPULATION

The population comprises nursing students with stress.

SAMPLE

Nursing students who are studying in Grace School of Nursing having stress and those who fulfilled the inclusive criteria.

SAMPLE SIZE

The sample size was sixty. Thirty students were taken to experimental group and thirty were taken to control group.

SAMPLING TECHNIQUE

The samples were selected from Grace School of Nursing The samples were selected by using non probability sampling technique under which the investigator

selected the 60 students from three batch of nursing students, based on the year of study, the first 10 students from each batch were selected for experimental group and second 10 students from each batch were selected for control group by Quata sampling technique.

INTERVENTION

Pranayama is a type of breathing exercise to reduce the stress and improve the brain function. Pranayama was given for 20mts every day for about 20 days. The Pranayama when beginning start out with normal steady breathing and sit with erect spine, relaxed shoulders and abdomen. Use hand gesture called Vishnu mudra to place on one nostril at a time. Vishnu mudra is done by pressing index and middle finger ends to palm as extend ring and pingy finger with thumb. Using ring and pinky finger to hold down one side of nose and thumb to hold down other side when alternating side to side.

Pranayama begins with normal breathing to relax and settle. Start by pressing down right nostril and slowly inhale through the left nostril. As soon as exhale through right nostril, inhale through the same right nostril. Close the right nostril and exhale through left. Continue this pattern of inhale, exhale. Always finish with exhale through left nostril.

CRITERIA FOR SAMPLE SELECTION

The samples were collected based on the following criteria.

Inclusive Criteria

- Students who are willing to participate.
- Students who are available at the time of data collection.
- Students who are studying in first year, second year and third year of GNM Students.

Exclusive Criteria

- Students who are familiar with pranayama.
- Students who are free from stress.

DEVELOPMENT AND DESCRIPTION OF THE TOOL

The tool consists of 2 sections:

Section-1

Section 1 consists of demographic data such as age, sex, type of family, medium of instruction in previous education, religion, and year of study.

Section-2

Section 2 consists of Lovibond modified stress assessment scale which consists of 25 items to estimate the level of stress among nursing students.

SCORING

Score	Level of stress
25	No stress
26-50	Mild stress
51-75	Moderate stress
76-100	severe stress

RELIABILITY OF THE TOOL

Reliability of the tool was established by test-retest method in which the same tool was administered in first and fifth day. The reliability score was r =0.87 which showed a highly positive correlation of the tool. Hence the tool was considered reliable for preceding the main study.

CONTENT VALIDITY

Content validity of the tool was established after obtaining certification from 3 nursing experts and 1 medical expert in the field of Mental Health Nursing. The suggestions given by the experts were in-corporated in the final tool after consultation with the research guide.

PILOT STUDY

The pilot study was conducted at Saraswathy School of nursing at Parasala, after obtaining formal permission from the principal and research committee of Sri. K. Ramachandran Naidu College of Nursing and from the Director of Saraswathy School of Nursing at Parasala, the study was conducted from 15-03-2011 to 03-04-2011 at 4-5pm.

The investigator introduced herself to the students and established rapport with the students. They were assured that no physical or emotional harm would be done in the course of study. Explained about the study and got informed consent. The investigator selected 6 samples by using quata sampling technique. Out of 6 samples 3 were allotted for experimental group, and 3 were allotted for control group. Data pertaining to demographic variables were collected by questionnaire. Investigator assessed pre test level of stress by using Lovibond modified stress assessment scale. After assessing the pre test level of stress for both the groups. Pranayama is demonstrated for 5 days 20minutes and from 6^{th} day till 20^{th} day the students were practiced pranayama and the investigater supervised the students for to experimental group and no intervention given for control group. At the end of the intervention, post test level of stress was assessed by using the stress assessment scale and scored for both the groups.

The findings showed that pranayama was effective in reducing the level of stress among nursing students.

The result of pilot study showed that the study was feasible and practicable to conduct the main study. There was no modification made in the tool after the pilot study.

DATA COLLECTION PROCEDURE

Formal permission was obtained from the authority of Grace School of Nursing for conducting the main study. Data collection period was 4 consecutive weeks from 04-04-2011 to 30-04-2011.The investigator has collected the data for six days in a week (i.e.) from Monday to Saturday from 4-5pm.

During the data collection procedure the investigator introduced herself to the students and established rapport with them. They were assured that no physical or emotional harm would be done in the course of study. Explained about the study and got informed consent.

Based on inclusive criteria the samples were selected. Using quata sampling technique 60 nursing students were selected from three batch of nursing students. Based on the year of study, the first 10 students from each batch were selected for experimental group and second 10 students from each batch were selected for control group.

Data pertaining to the demographic variables were collected by questionnaire. The investigator assessed the pre test level of stress for both groups by using the stress assessment scale and scored. After this the investigator demonstrated Pranayama for 5 days 20minutes and from 6^{th} day till 20^{th} day the students were

practiced pranayama and the investigater supervised the students to experimental group**.** No intervention was given for control group. At the end of the 21st day the post test level of stress was assessed by using the stress assessment scale and scored.

PLAN FOR DATA ANALYSIS

Both Descriptive statistics and inferential statistics were used for data analysis.

Descriptive Statistics

1. Demographic variables were analyzed by using frequency and percentage distribution.
2. Frequency and percentage distribution was used to assess the level of stress among nursing students.
3. Mean and standard deviation was used to assess the level of stress among nursing students.

Inferential Statistics

1. Unpaired ’t’ test was used to compare the pre test and post test level of stress among experimental group and control group of nursing students.
2. Paired ’t’ test was used to compare the pre test and post test level of stress among experimental group and control group of nursing students.
3. Chi- square test was used to find out the association between the pre test and post test level of the stress with their selected demographic variables among experimental group and control group.

PROTECTION OF HUMAN RIGHTS

The proposed study was conducted after obtaining formal permission from the Principal and ethical committee of Sri.K. Ramachandran Naidu College of Nursing

and from the Principal of Grace School of Nursing. The informed consent was obtained from each study participants. The participants were informed that the responses provided by them will be kept confidential. The assurance of the no harm also given to the study participants.

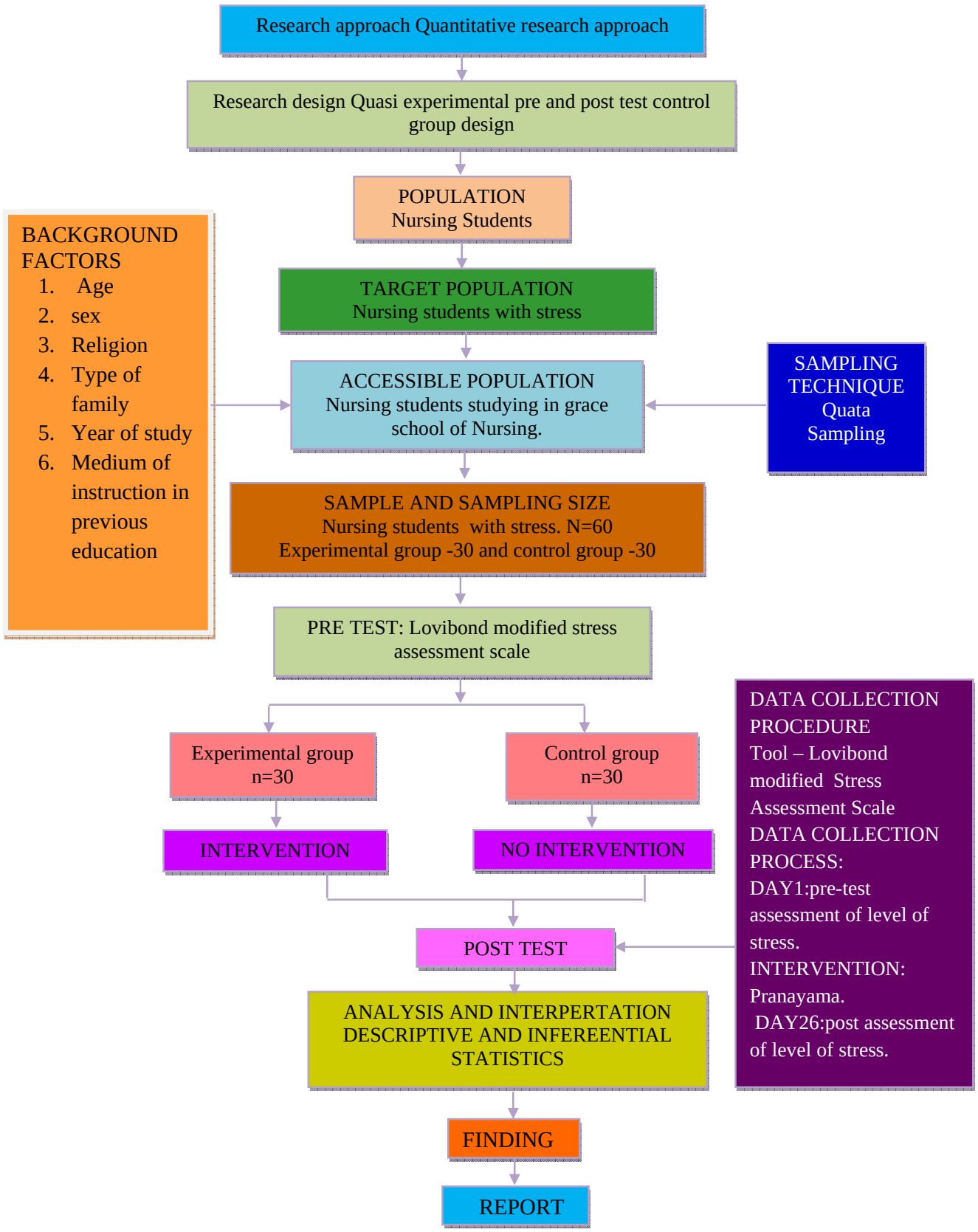

Fig 3: Schematic Representation of Research Methodology

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

This chapter deal with the analysis and interpretation of data related to assess the effectiveness of pranayama in reducing stress among nursing students in selected school of nursing at Kanyakumari district.

Descriptive and inferential statistics were used for analyzing the data on the basis of the objectives of the study. The data has been tabulated and organized as follows.

ORGANIZATION OF DATA

Section A: Description of demographic variables of the Nursing students.

- Frequency and percentage distribution of demographic variables of the nursing students with respect to age, sex, religion, type of family, medium of instruction in previous education and year of study

Section B: **Assessment of the level of stress among experimental and control group of nursing students.**

- Frequency and percentage distribution of pre test level of stress among experimental and control group of nursing students.
- Frequency and Percentage distribution of post test level of stress among experimental and control group of nursing students.

Section C: Comparison of effectiveness of pranayama on reducing stress among experimental and control group.

- Mean and standard deviation of pre and post test level stress among Experimental group and control group.

- Mean and standard deviation of the post test level of stress between experimental group and control group.

Section D: Association of the post test level of stress among experimental group with their selected demographic variables.

- Association of the post test level of stress among experimental group with their selected demographic variables.
- Association of the post test level of stress among control group with their selected demographic variables.

SECTION A: DESCRIPTION OF DEMOGRAPHIC VARIABLES OF THE NURSING STUDENTS.

Table 1: Frequency and percentage distribution of demographic variables of the nursing students with respect to age, sex, religion, type of family, medium of instruction in previous education, and year of study

(N=60)

S. NO	DEMOGRAPHIC VARIABLES	EXPERIMENTAL GROUP		CONTROL GROUP	
		f	%	f	%
1	**Age in years**				
	a)17-18 years	16	53.34	13	43.33
	b)19-20 years	9	30.00	5	16.67
	c)21 - 22 years	3	10.00	12	40.00
	d)Above 22years	2	6.66	-	-
2	**Sex**				
	a)Female	27	90.00	26	86.67
	b)Male	3	10.00	4	13.33
3	**Religion**				
	a)Hindu	16	53. 34	13	43.34
	b)Christian	12	40. 00	17	56.66
	c)Muslim	2	6. 66	-	-
4	**Type of family**				
	a)Nuclear	15	50. 00	17	56. 67
	b)Joint	15	50. 00	13	43. 33
5.	**Year of study**				
	a) First year	10	33. 34	10	33. 34
	b) second year	10	33. 33	10	33.33
	c)Third year	10	33. 33	10	33. 33
6.	**Medium of instruction in previous education.**				
	a) English	10	33.33	9	30. 00
	b) Tamil	13	43.34	14	46. 67
	c) Malayalam	7	23.33	7	23. 33

Table 1 describes the frequency and percentage distribution of demographic variables of nursing students with respect to age, sex, religion, and type of family, year of study, medium of education.

Among 60 nursing students 29(48.33%) of nursing students were between 17 - 18 yrs. 53(88%) of nursing students were male, 29(48.33%) of nursing students from Hindu, and 31(51%) of nursing students from nuclear family.

In the experimental group with regard to age out of 30 samples 2(6.66%) of them were above 22 yrs, 3(10%) of them were between 21-22yrs, 9(30%) of them were between 19-20yrs, and 16(53.33%) of them were between 17-18yrs. Where as in the control group, out of 30 samples 12(40%) of them were between the age of 21-22 yrs and. 5(16.67%) of them were the between age of 19-20yrs, 13(43.33%) of them were in the age of 17-18yrs.

In experimental group with regard to gender out of 30 samples 27(90%) of them were males, 3(10%) of them were females and in control group 26(86.66%) of them were females and 4(13.33%) of them were males.

With regard of religion in experimental group out of 30 samples 12(40%) of them from Christian religion, 16(53.34%) of them from Hindu religion, 2(6.66%) of nursing students from Muslim religion. Where as in control group 13(43.34%) of them from Hindu religion, 17(56.67%) of them from Christian and none of them from Muslim religion.

With respect of type of family in experimental group out of 30 samples 15(50. %) of them from nuclear family, 15(50%) of them from joint family. Where

as, control group 17 (56.67) of them from nuclear family. 13(43.33%) of them from joint family.

In experimental group with regard to year of stud, out of 30 samples. 10(33.34%) of them from first year, 10(33.33%) of them second year, 10(33.33%) of them from third year. where as in control group, 10(33.34%) of them from first year, 10(33.33%) of them second year, 10(33.33%) of them from third year.

With regard to medium of instruction in previous education in experimental group out of 30 samples 10(33.33%) of them were English medium, 13(43.34%) of them from Tamil medium and 7(23.33%) of them are Malayalam medium. In control group 9(30%) of them from English medium, 14(46.67%) of them from Tamil medium and 7(23.33%) of them from Malayalam medium.

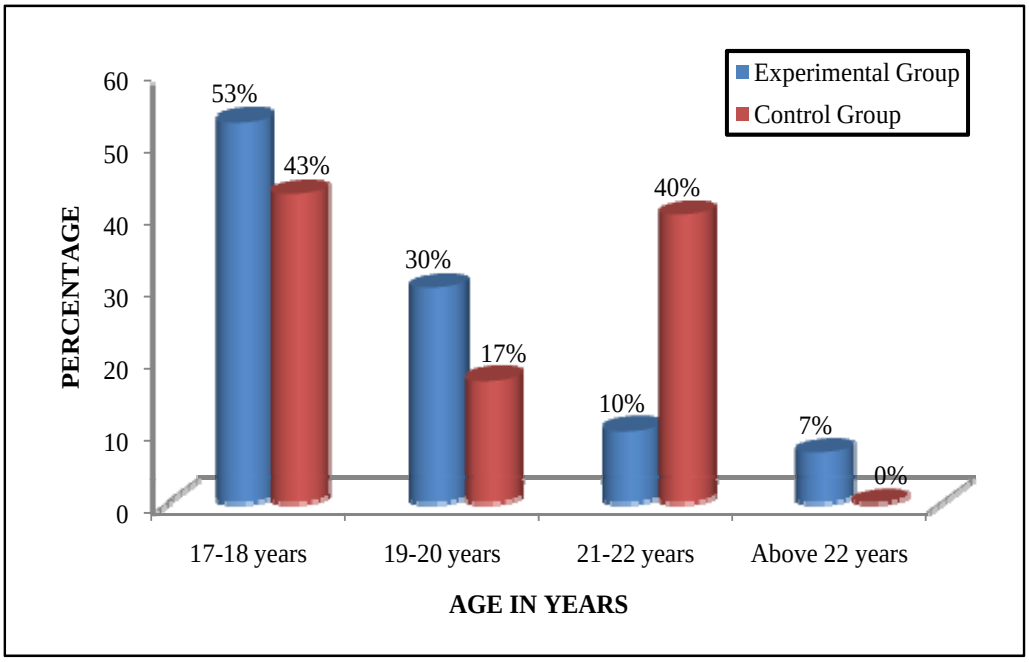

Fig-4: Percentage distribution of Age in years among experimental group and control group.

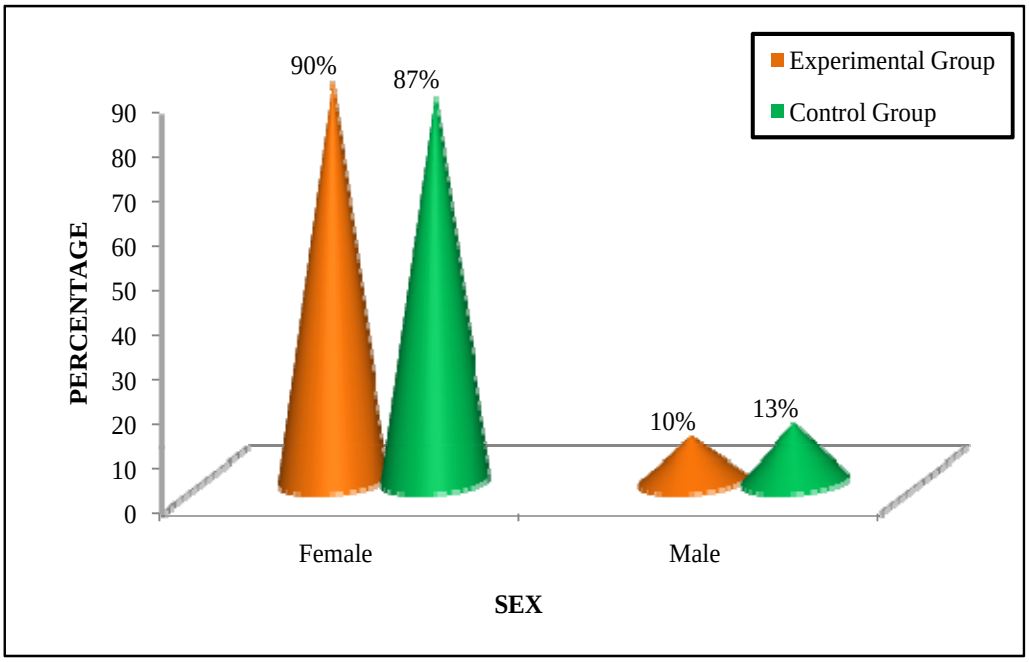

Fig-5: Percentage distribution of sex in experimental and control group

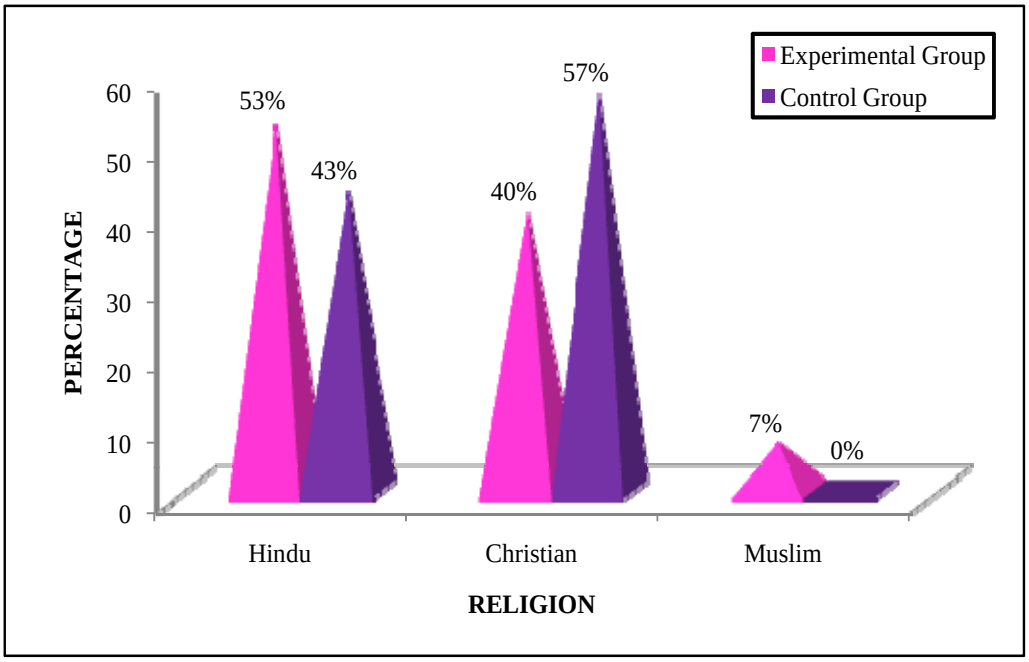

Fig-6: Percentage distribution of Type of family in experimental and control group

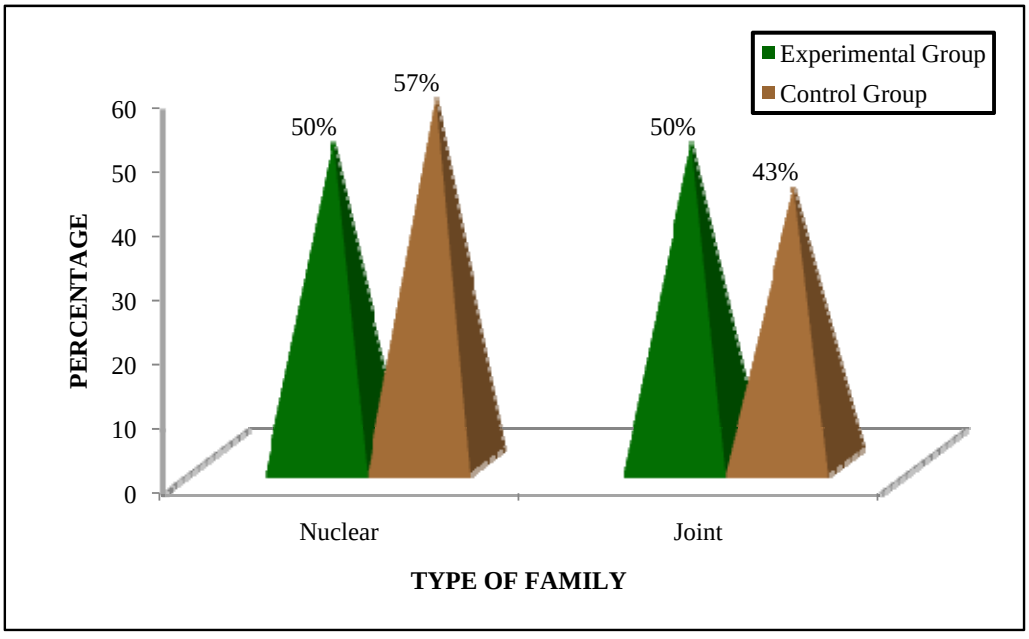

Fig-7: Percentage distribution of Religion in experimental and control group

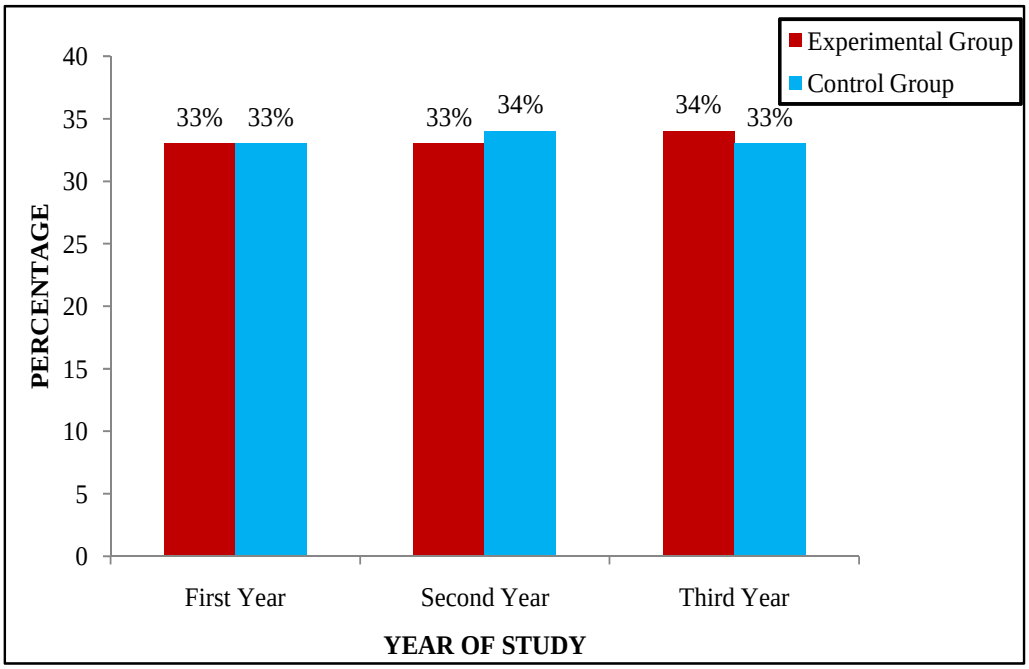

Fig-8: Percentage distribution of year of study in experimental and control group

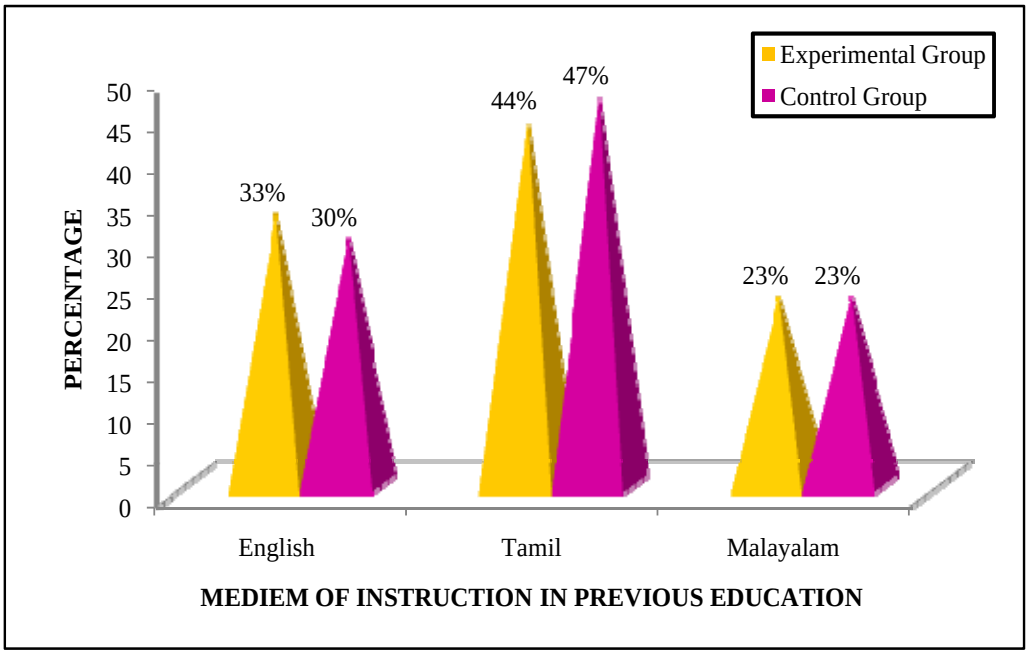

Fig-9: Percentage distribution of medium of instruction in previous education in experimental and control group.

SECTION B: ASSESSMENT OF LEVEL OF STRESS AMONG EXPERIMENTAL GROUP AND CONTROL GROUP OF NURSINGSTUDENTS.

Table 2: Frequency and percentage distribution of pre test level of stress among experimental and control group of nursing students.

(N=60)

S. No	Group	Pre test Level of stress							
		No stress		Mild stress		Moderate stress		Severe stress	
		f	%	f	%	f	%	f	%
1	Experimental group	-	-	20	66.67	7	23.33	3	10
2	Control group	-	-	17	56.67	10	33.33	3	10

Table 2 reveals that the frequency and percentage distribution of pre test level of stress among experimental group and control group of nursing students.

With regard to the pre test level of stress in experimental group, out of 30 samples, 20(66.67%) of them were having mild stress, 7(23.33%) of them were having moderate stress and 3(10%) of them were having severe stress.

With regard to the pre test level of stress in control group, out of 30 samples, 17(50.67%) of them were having mild stress, 10(3.33%) of them were having moderate stress and 3(10%) of them were having severe stress

Table 3: Frequency and Percentage distribution of post test level of stress among experimental and control group of nursing students.

(N =60)

S. No	Group	Post test Level of stress							
		No stress		Mild stress		Moderate stress		Severe stress	
		f	%	f	%	f	%	f	%
1.	Experimental group	17	56.70	9	30.3	3	10	1	3
2.	Control group	-	-	18	60	9	30	3	10

Table 3 reveals the frequency and percentage distribution of post test level of stress among experimental and control group of nursing students.

With regard to the post test level of stress in experimental group, out of 60 samples, 17(56.70%) of them were having no stress, 9(30%) of them were having mild stress, 3(10%) of them were having moderate stress and 1(3%) of them were having severe stress.

With regard to the post test level of stress in control group, out of 60 nursing students, 18(60%) of them were having mild stress, 9(30%) of them were having moderate stress and 3(10%) of them has severe stress.

SECTION-C: COMPARISON OF EFFECTS OF PRANAYAMA IN REDUCTION OF STRESS AMONG EXPERIMENTAL AND CONTROL GROUP.

Table 4: Mean and standard deviation of pre and post test level stress among experimental group and control group.

(N=60)

S. No	Group	Pre test Level of stress		Post test Level of stress		Mean Difference	't' test value
		Mean	SD	Mean	SD		
1.	Experimental group	2.43	0.66	1.6	0.81	0.83	4.88 S
2.	Control group	2.53	0.67	2.5	1.19	0.03	0.67 NS

S-significant **NS-Non significant**

Table- 4 reveals the mean and standard deviation of pre and post test level stress among experimental group and control group.

In experimental group, it showed a mean value of 2.43 with standard deviation of 0.66 in pre test level and a mean value of 1.6 with standard deviation of 0.81 in post test level and calculated t value is 4.88.

In control group, it showed a mean value of 2.53 with standard deviation of 0.67 in pre test level and a mean value of 2.5 with standard deviation of 1.19 in post test level and the Calculated 't' test value is 0.67 which showed that there is significant difference in post test level of stress between experimental and control group at $p<0.05$ level.

Table-5: Mean and standard deviation of the post test level of stress between experimental group and control group.

(N=60)

S. No	Group	Post test		't' test value
		Mean	Standard Deviation	
1.	Experimental group	1.6	0.81	4.09
2.	Control group	2.5	1.99	S

S-Significant

Table 5 shows the comparison of post test level of stress among experimental group and control group.

With regard to the post test level of stress of experimental group the mean value was 1.6 with Standard deviation of 0.81. In control group the mean value was 2.5 with Standard deviation of 1.99. The calculated 't' value was 4.09 which showed that, there is a significant difference in post test level of stress between experimental and control group.

SECTION- D: Association of the post test levels of stress among experimental group with their selected demographic variables.

Table:-6 Association of the post test level of stress among experimental group with their selected demographic variables.

(N=30)

S. NO	Demographic Variables	Level of stress								χ^2 value
		No stress		Mild stress		Moderate stress		Severe stress		
		f	%	f	%	f	%	f	%	
1.	**Age**									
	a) 17-18 years	9	30.03	6	20.00	-	-	-	-	16.10
	b) 19-20 years	6	20.00	2	6.66	1	3.33	1	3.33	d f=9
	c) 21-22 years.	1	3.33	1	3.33	1	3.33	-	-	**NS**
	d) above 22 years	1	3.33	-	-	1	3.33	-	-	
2.	**Sex**									4.79
	a) Female	16	53.36	8	26.66	2	6.66	1	3.33	d f=3
	b) Male	1	3.33	1	3.33	1	3.33	-	-	**NS**
3.	**Type of family.**									4.32
	a)Nuclear	10	33.33	5	16.68	-	-	-	-	d f=6
	b)Joint	7	23.33	4	13.33	3	10.0	1	3.33	**NS**
4.	**Religion**									
	a)Hindu	11	36.69	2	6.66	3	10.0	-	-	11.24
	b)Christian	6	20.00	5	16.66	-	-	1	3.33	d f=9
	c)Muslim	-	-	2	6.66	-	-	-	-	**NS**
5.	**Year of study**									
	a) First year	9	30.00	1	3.33	-	-	-	-	13.6
	b) Second year	5	16.70	3	10.00	2	6.66	-	-	d f=6
	c) Third year	3	9.99	5	16.66	1	3.33	1	3.33	**S**
6.	**Medium of Instruction in previous education.**									9.63
	a)English	6	20.03	3	10.00	1	3.33	-	-	d f=9
	b)Tamil	7	23.33	4	13.33	1	3.33	1	3.33	**NS**
	c)Malayalam	4	13.33	2	6.66	1	3.33	-	-	

S-significant **N.S-Non significant**

Table 6 shows the association between the post test level of stress among experimental group with their selected demographic variables such as age, sex, type of family, religion, year of study, and medium of instruction in previous education.

The findings shows that there was a significant association in the post test level of stress with their selected demographic variables in year of study of experimental group at $p<0.05$ level.

SECTION- D: Association of the post test levels of stress among control group with their selected demographic variables.

Table:-7 Association of the post test level of stress among control group with their selected demographic variables.

(N=30)

S.No	Demographic Variables	Level of stress								χ^2 value
		No stress		Mild stress		Moderate stress		Severe stress		
		f	%	f	%	f	%	f	%	
1.	**Age**									
	a) 17-18 years	-	-	6	20.03	5	16.66	2	6.66	7.6
	b)19-20 years	-	-	3	10.00	2	6.66	-	-	d f=9
	c) 21-22 years.	-	-	9	30.00	2	6.66	1	3.33	**NS**
	d)above 22 years	-	-		-	-	-	-	-	
2.	**Sex**									6.33
	a) Female	-	-	15	50.01	8	26.66	3	10	d f=3
	b) Male	-	-	3	10.00	1	3.33	-	-	**NS**
3.	**Type of family.**									0.67
	a)Nuclear	-	-	10	33.36	5	16.66	2	6.66	d f=6
	b)Joint	-	-	8	26.66	4	13.33	1	3.33	**NS**
4.	**Religion**									
	a)Hindu	-	-	6	20.00	6	20.00	1	3.33	3.19
	b)Christian	-	-	12	40.01	3	10.00	2	6.66	d f=9
	c)Muslim	-	-	-	-	-	-	-	-	**NS**
5.	**Year of study**									
	a) First year	-	-	6	20.03	3	10.00	1	3.33	5.11
	b) Second year	-	-	8	26.66	2	6.66	-	-	d f=6
	c) Third year	-	-	4	13.33	4	13.33	2	6.66	**NS**
6.	**Medium of instruction in previous education.**									
	a)English	-	-	4	13.33	2	6.66	3	10.0	10.01
	b)Tamil	-	-	9	30.03	5	16.66	-	-	d f=9
	c)Malayalam	-	-	5	16.66	2	6.66	-	-	**NS**

S-significant **N.S-Non significant**

Table 7 shows the association between the post test level of stress among control group with their selected demographic variables such as age, sex, type of family, religion, year of study, and medium of instruction in previous education.

The findings shows that there is no significant association in the post test level of stress with their selected demographic variables of control group at $p<0.05$ level.

CHAPTER – V

DISCUSSION

This chapter deals with the discussion of the data analysis based on the objective and hypothesis of the study. The problem stated is "A quasi experimental study to assess the effectiveness of pranayama among nursing students"

Major findings of the study

1. With regard to the pre test level of stress in experimental group, out of 30 samples, 20(66.67%) of them were having mild stress, 7(23.33%) of them were having moderate stress and 3(10%) of them were having severe stress.
2. With regard to the pre test level of stress in control group, out of 30 samples, 17(50.67%) of them were having mild stress, 10(3.33%) of them were having moderate stress and 3(10%) of them were having severe stress
3. With regard to the post test level of stress in experimental group, out of 60 samples, 17(56.70%) of them were having no stress, 9(30%) of them were having mild stress, 3(10%) of them were having moderate stress and 1(3%) of them were having severe stress.
4. With regard to the post test level of stress in control group, out of 60 nursing students, 18(60%) of them were having mild stress, 9(30%) of them were having moderate stress and 3(10%) of them has severe stress.
5. With regard to the post test level of stress in experimental group, Based on the year of study, out of 30 samples, From the first year 9(30.00) of them were having no stress from, 1(3.33%) of them having mild stress, From the second year, 5(16.70%) of them were having no stress, 3(10%) of them were having

mild stress, and 2(6.66%) of them having moderate stress. From the third year 3(9.99%) of them were having no stress,5(16.66%) of them having mild stress, 1(3.33%) of them were having moderate stress, and 1(3.33%) of them were having severe stress..

6. In experimental group, it showed a mean value of 2.43 with standard deviation of 0.66 in pre test level and a mean value of 1.6 with standard deviation of 0.81 in post test level and calculated t value is 4.88.
7. In control group, it showed a mean value of 2.53 with standard deviation of 0.67 in pre test level and a mean value of 2.5 with standard deviation of 1.19 in post test level and the Calculated 't' test value is 0.67.
8. There was a significant association in the post test level of stress with their selected demographic variables in year of study of experimental group.
9. There was no significant association in the post test level of stress with their selected demographic variables of experimental group at $p<0.05$ level.

The first objective was to assess the pre test level of stress of experimental group and control group

The analysis of pre test level of stress among experimental group revealed that the majority 20(66.67%) were with mild stress. The experimental group showed a mean value of 2.43 with standard deviation of 0.66 in pre assessment level.

In pre test level of stress among control group revealed that the majority 17(56.67) were with mild stress. The control group showed a mean value of 2.53 with standard deviation of 0.67 in pre assessment level.

The second objective was to assess the effectiveness of pranayama to reduce stress among the experimental group control group.

In post assessment, the experimental group showed a mean value of 1.6 with standard deviation of 0.81 and the control group showed a mean value 2.5 with a standard deviation of 1.19 in post assessment level. The calculated 't' value was 4.09 which showed that there was a significant difference between the post test level of stress among experimental and control group at $p<0.05$ level.

Hence the research hypothesis stated earlier that H1 denotes "there is a significant difference between post test level of stress among experimental and control group of nursing students was retained at $p<0.05$" level.

The third objective was to compare the pre and post test level of stress among experimental group.

The analysis of pre intervention level of stress among experimental group revealed that the majority of nursing students in experimental group 20(66.67%) were having mild stress.

The analysis of post intervention level of stress among experimental group revealed that the majority of 17 (56.70%) of the nursing students were having no stress.

The experimental group showed a mean value 2.43 with a standard deviation of 0.66 in pre assessment level, and a mean value of 1.6 with a standard deviation of 0.81 in post assessment level. The calculated 't' value was 4.88 which showed that there is a significant difference in the pre and post assessment level of stress in experimental group.

Hence the research hypothesis H_2 denotes that there is a significant difference between the pre test and post test level of stress among nursing students in experimental group was retained at $p<0.05$ level.

The forth objective was to associate the post test level of stress among nursing students in experimental group and control group with their selected demographic variables

Association of post assessment level of stress with demographic variables was done using chi-square test.

Data findings revealed that there was no significant association in the post test level of stress among control group. The data findings revealed that there was no significant association of post test level of stress among experimental group with their selected demographic variables except year of study.

Hence the research hypothesis H_3 stated denotes "there is a significant association of post test level of stress among experimental and control group of nursing students in their selected demographic variables was rejected at $p<0.05$ level.

CHAPTER VI

SUMMARY, CONCLUSION, IMPLICATIONS LIMITATIONS AND RECOMMENDATIONS

This chapter deals with the summary of the study, conclusion, nursing implication, recommendation and limitations of the study.

SUMMARY

This study was undertaken to determine the effectiveness of pranayama in reduction of the stress among nursing students in selected school of nursing at Kanyakumari district.

Stress from many sources has been reported by nursing students. Academic sources of stress include examinations, long hours of study, assignments, lack of free time, faculty response to student need and lack of timely feedback.

Pranayama reduce the stress of nursing students and practicing pranayama for 30 minutes every day will maximize the brain function.

The objectives of the study were

- To assess the pre test level of stress among the nursing students in experimental group and control group
- To assess the effectiveness of pranayama to reduce stress among the experimental group and control group.
- To compare the pre and post test level of stress among experimental group.

- To associate the post test level of stress among nursing students in experimental group and control group with their selected demographic variables.

The research hypothesis stated were

H_1: The mean post test level of stress among nursing students in experimental group was lower than the mean post test level of control group.

H_2: The mean post test level of stress among nursing students in experimental group was lower than their mean pre test level of stress.

H_3: There was a significant association between the post test level of stress among Experimental group with their selected demographic variables.

H_4: There was a significant association between the post test level of stress among Control group with their selected demographic variables.

The assumptions were

- Nursing students may have stress due to increased requirements in practical and theory.
- Pranayama may reduce stress.
- Academic sources may increase level of stress of nursing students, stress include examinations, long hours of study, assignments, lack of free time, faculty response to student need and lack of timely feedback.

THE REVIEW OF LITERATURE COLLECTED FOR THE STUDIES RELATED TO

Section A: Literature related to stress among Nursing Students.

Section B: Literature related to effectiveness of pranayama in reducing stress

Section C. Literature related to effects pranayama in reducing stress among nursing Students.

The conceptual frame work for this study was developed based on the Roy's stress adaptation model theory. This provides comprehensive framework for assessment, implementation and evaluation of the intervention programme.

The research design selected for the study was quasi experimental pre test and post test control group design. The study was conducted in the Grace School of Nursing, Kaliakavilai. The tool used for data collection consisted of demographic variables such as age, sex, type of family, religion, year of study, medium of instruction in previous education. The stress assessment scale was used to assess the level of stress among the nursing students. The pilot study conducted in Saraswathy school of Nursing, Kaliakavilai, and findings revealed that the tool was feasible, reliable and practicable to conduct the main study.

The tool was validated by 4 experts consisting of 3 nursing experts and 1 medical experts and the reliability of the tool was confirmed by test retest method. The value of the reliability was r =0.87, and so the tool was highly reliable. The main study was conducted in Grace School of Nursing, Kaliakavilai. The 60 nursing students who fulfilled the inclusive criteria were selected by using non probability sampling technique under which the investigator selected the 60 students from three batch of nursing students, based on the year of study, the first 10 students from each batch were selected for experimental group and second 10 students from each batch were selected for control group by Quata sampling technique.

FINDINGS

The data was collected and analyzed by using descriptive and inferential statistics. The findings revealed that there was highly significant difference in the stress of nursing students after the administration of pranayama. The calculated ‘t’ value was 4.09 which showed that significant difference in the post test level of stress

between the experimental and control group of the nursing students at P<0.05 level. Hence the research hypothesis stated that that there is a significant difference between the post test level of the stress between the experimental and control group of the nursing students at p<0.05 was retained.

Data findings revealed that there was no statistically significant association of post assessment level of stress among experimental group with their selected demographic variables at P<0.05 level.

CONCLUSIONS

From the result of the study, it was concluded that rendering of pranayama to the nursing students was effective in reducing the stress. Therefore the investigator felt that, more importance should be given for assessment of the stress of the nursing students.

IMPLICATIONS

The researcher has derived the following implications from the study which are of vital concern to the field of nursing service, nursing administration, nursing education and nursing research.

Implication for Nursing Practice

- The nursing personnel should develop an in depth knowledge about pranayama.
- Certification programme for training pranayama for health personnel should be started in hospitals.
- Staff development programs for imparting education and training regarding pranayama.

- The nursing personnel should encourage the hospitals to set up a separate nursing care unit for patients receiving pranayama.
- Pranayama should be included in nursing care especially in psychiatric nursing.

Implications for Nursing Education

- The nurse educators need to be equipped with adequate knowledge regarding complementary and alternative medications.
- The students should be provided with adequate clinical exposure in relation to practice of pranayama.
- Conduct workshops and conferences for students regarding pranayama in day today nursing practice.
- Strengthen the curriculum for nurses to excel them in knowledge and skill in areas of relaxation technique such as pranayama.

Implications for Nursing Administration

- Collaborate with the governing bodies as well as the hospital administration to formulate standard protocol and policy to emphasize complementary and alternative therapies like pranayama in nursing care.
- Conduct in-service education program in effectiveness of pranayama in nursing care.

Implications for Nursing Research

As a nurse researcher:

- Disseminate the findings of research through conferences, seminars, and publishing in nursing journals.
- Nurses should encourage further research to be conducted in the area of pranayama.

LIMITATIONS

- Since there were very few studies done on the effectiveness of pranayama on nursing students, the investigator had a lot of difficulty in collecting the study materials for the review.

RECOMMENDATIONS

The following studies can be undertaken to strengthen pranayama as well as remedy for the problems of nursing students.

- A study can be conducted to manage the other problems of students such as anxiety, and cognitive problems.
- A study can be conducted in other professions also to enhance the wellbeing.
- A study can be performed in all the age groups to improve individual's cognition.
- A study can be performed by developing a self-instructional module which enables the nursing students to become aware of pranayama and its benefits.
- A further study can be conducted to assess the knowledge, attitude and practice of nursing personnel about pranayama.