EFFECTIVENESS OF SOYA BEANS VERSUS DIAPHRAGMATIC BREATHING EXERCISE ON LEVEL OF MENOPAUSAL SYMPTOMS AMONG POST MENOPAUSAL WOMEN

DISSERTATION SUBMITTED TO

THE TAMILNADU Dr. M.G.R MEDICAL UNIVERSITY, CHENNAI

IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

OBSTETRICS AND GYNAECOLOGICAL NURSING

OCTOBER-2019

CERTIFICATE

Certified that this is a bonafide work of **Mrs. ASHA**. **S** second year, M.Sc (Nursing) student of St. Xavier's Catholic College of Nursing, Chunkankadai, submitted in partial fulfilment of the requirement for the degree of Master of Science in Nursing to The Tamil Nadu Dr.M.G.R. Medical University, Chennai under the Registration No.**301721901.**

College seal:

Signature of the Principal: ----------

Dr . (Mrs).A. Reena Evency, M.Sc., (N), Ph.D., (N),
Principal,
St. Xavier’s Catholic College of Nursing,
Chunkankadai,
Kanyakumari district,
Pin code -629 003.

CERTIFICATE

This is to certify that the dissertation entitled **"Effectiveness Of Soya beans Versus Diaphragmatic Breathing Exercise On Level of Menopausal Symptoms Among Postmenopausal Women in Selected Villages, Kanyakumari District"** is a bonafide work done by **Mrs. S.Asha , St.Xavier's Catholic College of Nursing** in partial fulfillment of the university rules and regulations for award of **M.Sc Nursing Degree Course** under my guidance and supervision during the academic year 2017 – 2019.

Name and Signature of the Guide: _____

Mrs.D .Shiny Mary, M.Sc., (N),
Associate professor,
Obstetrics and Gynaecological nursing,
St.Xavier's Catholic College of Nursing,
Chunkankadai , Nagercoil,
Kanyakumari District, Pin code- 629 003.

Name and Signature of the Head of Department: _____

Mrs.D.Shiny Mary, M.Sc., (N),
Head of the Department,
Obstetrics and Gynaecological Nursing,
St.Xavier's Catholic College of Nursing,
Chunkankadai,Nagercoil,
Kanyakumari District, Pin code- 629 003.

Name and Signature of the Principal :_____

Dr.A . Reena Evency , M.Sc.,(N),Ph.D., (N),
Principal,
St.Xaviers Catholic College of Nursing,
Chunkankadai,Nagercoil,
Kanyakumari District, Pin code- 629 003.

EFFECTIVENESS OF SOYA BEANS VERSUS DIAPHRAGMATIC BREATHING EXERCISE ON LEVEL OF MENOPAUSAL SYMPTOMS AMONG POST MENOPAUSAL WOMEN IN SELECTED VILLAGES KANYAKUMARI DISTRICT.

Approved by the Dissertation Committee on: 19th April 2018.

Professor in Nursing Research: ----------

Dr.A. ReenaEvency, M.Sc., (N), Ph.D., (N),
Principal,
St. Xavier's Catholic College of Nursing,
Chunkankadai, Nagercoil,
Kanyakumari District, Pin code -629 003.

Clinical Specialty Guide : ----------

Mrs.D.Shiny Mary, M.Sc., (N),
Associate professor,
Obstetrics and Gynaecological Nursing,
St.Xavier's Catholic College of Nursing,
Chunkankadai,Nagercoil ,kanyakumari District,
Pin code - 629 003.

Medical Expert : ----------

Dr. F. Caroline Felcia Mary, M.D.DGO,
Obstetrician and Gynaecologist,
Caroline John Hospital,
Asaripallam Road, Nesamony nagar,
Kanyakumari district, Pin code -629 001.

Signature of the Internal Examiner with date

Signature of the External Examiner with date

ACKNOWLEDGEMENT

I, wish to express my humble thanks to God Almighty for his endless grace, love, care, and blessing showered on me to complete and in presenting this dissertation successfully.

I ,extend my heartfelt thanks to **Rev. Fr. S. Jeya Prakash ,Correspondent** of St. Xavier's Catholic College of Nursing for the encouragement at every time which enabled me to complete this dissertation successfully.

I, express my heart felt and sincere gratitude to **Dr.(Mrs).A.Reena Evency M.Sc.,(N), Ph.D.,(N),Principal**, St. Xavier's Catholic College of Nursing for her valuable support, suggestions and directions for conducting the study in a successful way.

I, wish to express my heartful thanks to **Dr.(Mrs).Feby .M.Sc., (N), Ph.D.,(N), Vice Principal** for her valuable suggestions which helped me to complete the study.

At this moment I convey my profound gratitude and sincere thanks to **Mrs. D. Shiny Mary, M.Sc., (N) Associate professor Cum Head of Obstetrics and Gynaecological Nursing** for her constructive suggestions and continuous guidance and support which helped me to complete my study successfully.

I, express my greatful thanks to **Dr.F.Caroline Felcia Mary.M.D,DGO, Director and consultant,** Caroline John Hospital, Nagercoil for her guidance and suggestion to complete my study .

I, extend my sincere thanks to **Dr.Anish ,M.D., Medical Officer, Primary Health Center, Kodhanalloor** for granting permission to conduct the study in the villages coming under Block upgraded Primary Health Center, Kodhanalloor.

I ,wish to express my sincere thanks to the **participants** of this study from **Kanjirathukonam, Gnaravilai, Chemparuthivillai** and **R.C street villages** in **kodhanalloor, Primary Health Center.**

I, would like to extend my heartfelt gratitude to Mr.Joseph **Edwin, M.Sc, Yoga Master** who gave guidance and training on Diaphragmatic breathing exercise.

I, extent my humble gratitude and honor to **Dr.Anto, Ph.D.,** Bio statistician for his guidance in analysis and presentation of the data

I, am very much grateful to **Mrs.F.Sweety, M.L.I.Sc.,** Librarian of our college for the help in procuring books whenever required

I, express my special thanks to **Shalom Computers** for the excellent and untiring effort in materializing my dissertation work.

Word cannot express my happiness, love and sincere thanks to my mother **Mrs. S. Mallika**, Brother's **S.Muthu Vel**, **S. Seenivasan** and my husband **Mr. Sahaya Prince** for their endless support throughtout the study.

(ASHA.S)

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ANNEXURES

ABSTRACT

A quasi experimental study to compare the effectiveness of Soya beans versus Diaphragmatic breathing exercise on level of menopausal symptoms among postmenopausal women in selected villages, Kanyakumari district.

Quasi experimental design was adapted for this study .Simple random sampling technique(Lottery method) was used to select the samples out of 70 samples 35 were in study group I and 35 samples were in study group II . Modified Greene climacteric Scale was used to assess the level of menopausal symptoms among postmenopausal women. Pretest was done among postmenopausal women in study group I and study group II and soya beans was given to study group I, diaphragmatic breathing exercise was given to study group II. The Post test was carried out after the intervention with the same scale in study group I and study group II.

The findings revealed that the mean score of level of menopausal symptoms among postmenopausal women in study group I was 39.25 in pre test and 36.34 in posttest respectively. The paired 't'value of 1.69 which is significant at $p<0.05$ .It shows that soya beans was effective in reducing the menopausal symptoms. In study group II the mean score on level of menopausal symptoms among postmenopausal women was 36.71 in pre test and 29.62 in posttest respectively .The estimated paired 't' value was 1.69which was also significant at $p<0.05$. Hence the research hypothesis (H_1)is accepted .In post test , mean score of level of menopausal symptoms in the study group I was 35.48 and the study group II was 29.62.There was significant difference between the study group I and study group II which was computed through unpaired 't' test (4.57)which is significant at $p<0.05$ which represents the effectiveness of diaphragmatic breathing exercise on menopausal symptoms. So the second hypothesis of the study was accepted (H_2). In study group I, the calculated value of the selected demographic variables such as age , previous knowledge on Soya beans and Diaphragmatic breathing exercise and clinical variables type of delivery and history of medical illness except education, occupation, marital status, dietary pattern and the clinical variables such as Body Mass Index, age of attained menarche ,number of children, treatment of menopausal symptoms is greater than the table value which indicates that there is a significant association between the level of menopausal symptoms and the demographic and

clinical variables .In the study group II , the calculated value of the demographic variables such as education, previous knowledge on Soya beans and Diaphragmatic breathing exercise and clinical variables such as Body Mass Index except age, occupation, marital status, dietary pattern and clinical variables such as age at menarche, age at menopause, number of children, type of delivery , history of medical illness and treatment of menopausal symptoms is greater than the table value which indicates there is a significant association between the level of menopausal symptoms and demographic and clinical variables. Hence the research hypothesis (H_3) accepted.

In this study the investigator concluded that soya beans and diaphragmatic breathing exercise are effective in reducing menopausal symptoms, but diaphragmatic breathing exercise was more effective than soya beans

CHAPTER I
INTRODUCTION

Women experience various turning points in their life cycle, which may be development or transitional. Midlife is one such transitional period which brings about important changes in women. Menopause is a unique stage of female reproductive life cycle, a transition from reproductive to non-reproductive stage .All women who live up to 50 years or more go through a period of transition from reproductive to non-reproductive stage of life **(P.Allatt,et.al.2018) .**

Menopause is a greek word typically means " meno"- month ; "pausis"-stop; that means the cessation of menses .It is the point at which the mensturation caeses. Menopause is the end result of cessation of ovarian function. Menopause is defined as the state of an absence of menstural periods for 12 months. The menopausal transition starts with varying menstural cycle length and ends with the final menstrual period **(Mifflin ,H.2016)**

World menopause day is celebrated on 18th October every year. World Menopause Day started in 1984 and was instituted by the international Menopause Society and the World Health Organization (WHO) .The Menopause day is devoted to creating awareness about one of the most difficult time in a women's life .Every woman experiences menopause in her lifetime .Yet most of them feel uncomfortable while talking about the changes they are going through.**(International Menopause Society, 2018).**

The average age of reaching menopause ranges anywhere between 45 to 55 for Indian women. Menopause brings along several problems with itself which and the number of women in India who ignore it for normal is alarming **(Bansal,B. 2018).**

There are 37.5 million women reaching or currently at menopause. The average age of menopause is 51 years, however there is a wide age distribution that ranges from 40 years to 58 years. The average life expectancy for US women today is 84 years which means that many women spend around 50% of their adult life as a postmenopausal female **(Cone Health, 2019).**

The main symptoms persist during menopause are irregular vaginal bleeding ,Hot flush and night sweats, vaginal symptoms, urinary symptoms, emotional and cognitive symptoms and other physical changes such as weight gain ,wrinkles and acne. Out of these

symptoms the major symptoms revealed that hot flush is the most common symptom **(Brito,J.2017).**

Alternative and complementary therapies are considered as the treatment approach to treat menopausal problems. Behavioral modifications such as relaxation therapies , meditation, breathing exercise and dietary supplements like soya protein, red clover and black cohash, and other alternative therapies like acupuncture and physical exercise particularly aerobics are of best approached treatments for menopausal problems **(Wort, J.2018).**

Now Indian women normally live between 10%- 20% of their lives in the post-menopausal state. The mean age at menopause was 45.1 years .The mean age of postmenopausal rural south Indian women was found to be 46.5 years .Hence it is imperative that the health care system gears itself to meet the challenges posed by their health needs **(Patel,R.2018).**

Menopause symptoms are as different and individual as women themselves. The duration and severity of the symptoms is variable. Menopause is a natural part of life that all women go through, some with more difficulty than others .In the western world about 12% of women doesn't experience menopause symptoms and about 14% experience intense physical or emotional problems **(Wilson ,R.2018).**

Main exercise for the relief of menopausal symptoms is the deep breathing exercise. Robert R. Freedman, Ph.D., called the dean of menopausal symptoms research; strongly advocates deep breathing exercises to combat hot flushes. Taking 6 to 8 deep breaths per minute for 15 minutes, twice a day can decrease menopausal symptoms by 40 percent .This technique can be helpful at the onset of a hot flush to shorten its duration, combined with the onward and inward movements help to massage and detoxify inner organs, promote blood flow **(Freedman, R.2015).**

Soy products contain isoflavones are part of a group of plant based chemicals called phytoestrogens .These chemicals act like a weaker form of estrogen in the body. The main isoflavoens in soy are genistein and daidzein. When consuming soy, bacteria in your intestines break it down into its more active forms. Soy isoflavones bind to the same receptors as estrogen .Receptors are like docking stations on the surface of cells. When isoflavones

bind to some receptors, they mimic the effects of estrogen. When is flavones mimic estrogen, they might help reduce hot flashes and other symptoms of menopause **(Lowenstein, K.2008)**.

Diaphragmatic breathing, or deep breathing, is breathing that is done by contracting the diaphragm, a muscle located horizontally between the thoracic cavity and abdominal cavity. Air enters the lungs, the chest does not rise and the belly expands during this type of breathing .Diaphragmatic breathing is also known scientifically as eupnoea, which is a natural and relaxed form of breathing in all mammals **(Wikipedia, 2017).**

BACK GROUND OF THE STUDY

Menopause is the time that marks the end of menstural cycles .It's diagnosed after gone 12 months without a menstural period. Menopause can happen in 40 years or 50 years, but the average age is 51 in the United States and 46 years in india **(Tripti sharan, 2017).**

The lack of estrogen and progesterone causes many changes in women's physiology that affect their health and wellbeing. Changes to the menstural pattern are the first noticeable symptoms of menopause, reducing women becoming pregnant, vaginal atrophy is an inflammation of the vagina that happens as a result of the thinning and shrinking of the tissues as well as lubrication, hot flash is a sudden sensation of heat in the upper body, heart rate may suddenly increase, night sweats and disturbed sleep, urinary problems, Musculoskeletal symptoms characterized by backache, fractures on minimal trauma, decreased height, and mobility are common due to osteoporosis, motor activity of the entire digestive tract is diminished after menopause. The intestine tend to be sluggish resulting in constipation, the tissue lining of the tissue lining of the urethra and the bladder become drier, thinner and less elastic. This can lead to increased frequency of passing urine as well as an increased tendency to develop urinary tract infections.

The uterus become small and fibrotic due to atrophy of the muscles after the menopause .The cervix become smaller and appears to flush with vagina .In older women the cervix may be impossible to identify separately from vagina .The vagina and cervical discharge decreases in amount and later disappear completely .The ovaries become smaller and shriveled in appearance. The vaginal mucous membrane becomes thin and loss its rigidity after the menopause. The vulval area fat in the labia majora and the mons pubis decreases and pubic hair become spare. In breast thin built women the breast become flat and shriveled while in heavy built women they remain flabby and pendulous.

The psychological changes are mainly manifested by frequent headache, irritability, fatigue, depression and insomnia. Although these are often said to be due to changes in the hormonal levels, they are more likely to be related to the loss of sleep due to night sweat. (**Patanval. S, 2015).**

SIGNIFICANCE AND NEED FOR THE STUDY

Many women arrive at their menopause years without knowing anything about what they might expect or when or how they might expect or when or how the process happen and how long it might take .As a result, a woman who happens to undergo hot flushes with large number of different effects may become confused and anxious, fearing that something abnormal is happening to her **(Sharan, 2016).**

A more and more women reach the age of menopause there has been a growing interest in ways of combating the metabolic and physiologic changes that occur during this time. The debate that ranges about the benefits and risks of 'medical treatments, such as hormone replacement therapy often reaches the conclusion that each woman must decide for herself .Many women are looking to other more natural ways to deal with the drop in estrogen production that accompanies ageing **(Encyclopedia, 2017).**

A study was conducted to assess the effect of soya milk with the sample of 203 women with menopausal symptoms. The women were divided by random allocation into 3 groups for receiving 25 grams of soya protein without isoflavones, 25 grams of soya protein with 90 mg of isoflavones, and 25 grams of protein control) for 4 weeks respectively. The researcher concluded that soya protein with isoflavones was effective, and can be taken as supplementation **(Hellier , Jenifer, G. Bemi , (2012).**

Isoflavones bind to the estrogen receptors in certain cells in the body and produce weak estrogenic effects, especially when an inadequate amount of estrogen is present in the body .Over 20 human studies have tested the hypothesis that soy products alleviate postmenopausal symptoms .Perimenopausal women as well as postmenopausal women who suffered menopausal symptoms consumed soy proteins for 4 weeks or longer .Soy isoflavone have the beneficial health effects on menopausal symptoms **(Glycine Max, (2000).**

A study was conducted to assess the participant's perspectives on a deep breathing intervention for menopausal symptoms such as night sweats, hot flush. A sample of 80 menopausal women were selected to assess the effect of deep breathing exercise for 10 week.

The study results revealed that, 70% of women after the exercise reported that they feel relaxed and physically better .The study concluded that the participants had a good view about deep breathing exercise in relieving the hot flush symptoms during menopause **(John, (2012).**

(Thomas, 2013). Was conducted to evaluate the effects of deep breathing exercise on menopausal symptoms in a sample of women in age group of 45-55 years for 8 weeks. Results showed that post treatment, women who received the deep breathing exercise showed significantly greater improvement relative to the control condition in hot flush frequency, severity and total scores and in levels of joint pain, fatigue, sleep disturbance.

When the investigator had the community postings, found that most of the women in the age between 45 to 60 years are suffering with hot flashes, night sweat, sleep disturbances, mood changes and unaware about management of menopausal symptoms .So the investigator, had the interest to compare the effectiveness of soya beans and diaphragmatic breathing exercise on menopausal symptoms among postmenopausal women.

STATEMENT OF THE PROBLEM

A Quasi experimental study to compare the effectiveness of soya beans versus diaphragmatic breathing exercise on level of menopausal symptoms among postmenopausal women in selected villages at Kanyakumari district

OBJECTIVES OF THE STUDY

1. To assess the pretest and posttest level of menopausal symptoms among postmenopausal women in study group I and study group II.
2. To evaluate the effectiveness of Soya beans and Diaphragmatic breathing exercise on level of menopausal symptoms among postmenopausal women in study group I and study group II.
3. To compare the effectiveness of Soya beans and Diaphragmatic breathing exercise on level of menopausal symptoms among post postmenopausal women in study group I and study group II.
4. To find out the association between pretest level of menopausal symptoms among postmenopausal women with their selected demographic and clinical variables in study group I and study group II.

HYPOTHESES

H_1-There is a significant difference between pre and posttest level of menopausal symptoms among postmenopausal women in study group I and study group II.

H_2- There is a significant difference between posttest level of menopausal symptoms among postmenopausal women in study group I and study group II.

H_3- There is a significant association between pretest level of menopausal symptoms in study group I and study group II among postmenopausal women with their selected demographic and clinical variables.

OPERATIONAL DEFINITIONS

COMPARE

To examine (two or more objects, ideas, people, etc.) in order to note similarities and differences.

(Oxford Dictionary 2016)

In this study, it refers to the identification of difference between effect of Soya beans and Diaphragmatic breathing exercise on level of menopausal symptoms among postmenopausal women by using Modified Greene Climacteric Scale.

EFFECTIVENESS

Successful in producing a desired or intended result

- (Oxford dictionary 2017)

In this study, it refers to the desired change in the level of menopausal symptoms after consuming Soya beans and performing Diaphragmatic breathing exercise among postmenopausal women in study group I and study group II and can be measured by Modified Greene Climacteric Scale

SOYA BEANS

The bean of an Asian plant that contains a large amount of protein and used as a food

- (Webster.com2016)

In this study ,it refers to the 50 grams of soya beans soaked overnight in water for 8 – 10 hours.In the morning , heat it with water in a mud pot for 20 minutes and add salt for

taste . 50 grams soya beans can be given to each postmenopausal women in study group I for 21 days before breakfast.

DIAPHRAGMATIC BREATHING EXERCISE

A type of breathing exercise that patients are taught to promote more effective aeration of the lungs , consisting of moving the diaphragm downward during inhalation and upward with exhalation .

- (Medterms Medical dictionary 2019)

In this study, it refers to the process of inhaling air through left nostril for 5 seconds and exhaling through right nostril for 10 seconds and the same has to be repeated through right to left for 21 times twice a day for 21 days.

MENOPAUSAL SYMPTOMS

The period leading up to the menopause during which some of the symptoms associated with menopause may be experienced

- (Collins dictionary 2018)

In this study, it refers to the s physical and psychological changes experienced by the postmenopausal women and is measured through Modified Greene Climacteric Scale developed by Berline center for Epidemiology and Health Research.

POSTMENOPAUSAL WOMEN

Women who have cessation of menstrual cycle more than one year.

(Angel 2016)

In this study ,it refers to women who had complete absence of menses for more than a year residing in R.C street and Chemparuthivilai villages under Block Upgraded Primary Health Center, Kodhanalloor.

ASSUMPTIONS

- Menopausal symptoms differ from woman to woman
- Soyabeans has no side effects on women with menopausal symptoms.
- Soyabeans and diaphragmatic breathing exercise may have some effect in reducing menopausal symptoms.

DELIMITATIONS

Study was delimited to

- Who attained natural menopause
- Four weeks only for data collection
- Women with menopausal symptoms residing in R.C street and Chemparuthivillai village

PROJECTED OUTCOME

- The study will enable the nurse to identify the effectiveness of soyabeans and diaphragmatic breathing exercise on level of menopausal symptoms among postmenopausal women.
- It provides an opportunity for the nurse to encourage postmenopausal women to do diaphragmatic breathing exercise and add soya beans in their diet.
- The study will help the postmenopausal women to know the importance of diaphragmatic breathing exercise and soya beans.

CONCEPTUAL FRAME WORK

WIDENBACH'S PRESCRIPTIVE HELPING ART OF CLINICAL NURSING THEORY (1964)

The conceptual frame work or model is a phenomenon made up of concepts that are the mental images of a phenomenon .These concepts are linked together to express their relationship between them. A model is used to denote symbolic representation of concepts.

This study intends to evaluate the effectiveness of soya beans versus diaphragmatic breathing exercise on level of menopausal symptoms among postmenopausal women .The investigator adopted the **Ernestine Widenbach's Prescriptive Helping Art of Clinical Nursing Theory(1964).**

Widenbach's prescriptive theory directs action towards an explicit goal .According to this theory, nursing practice consists of three steps which include,

Step1- Identifying need for the help

Step 2-Ministering the needed help

Step 3-validating that the need for help was met.

Step 1-Identifying the need for help

In this study the investigator identifies the need for help by assessing the demographic variables, clinical variables (Annexure VII) and pretest level of menopausal symptoms among postmenopausal women using Modified Greene Climacteric Scale (AnnexureVII).

Step 2 –Ministering the needed help

Ministering the needed help refers to the provision of required help to fulfill the identified needs. It has 2 components: Prescription and Realities:

- Prescription –In this study prescription refers to soya beans and diaphragmatic breathing exercise.
- Realities –Refers to

Agent: The investigator who gave the soya beans and diaphragmatic breathing exercise.

Recipient: The postmenopausal women with menopausal symptoms.

Goal: To reduce the level of menopausal symptoms.

Means and activity: Providing soya beans and diaphragmatic breathing exercise

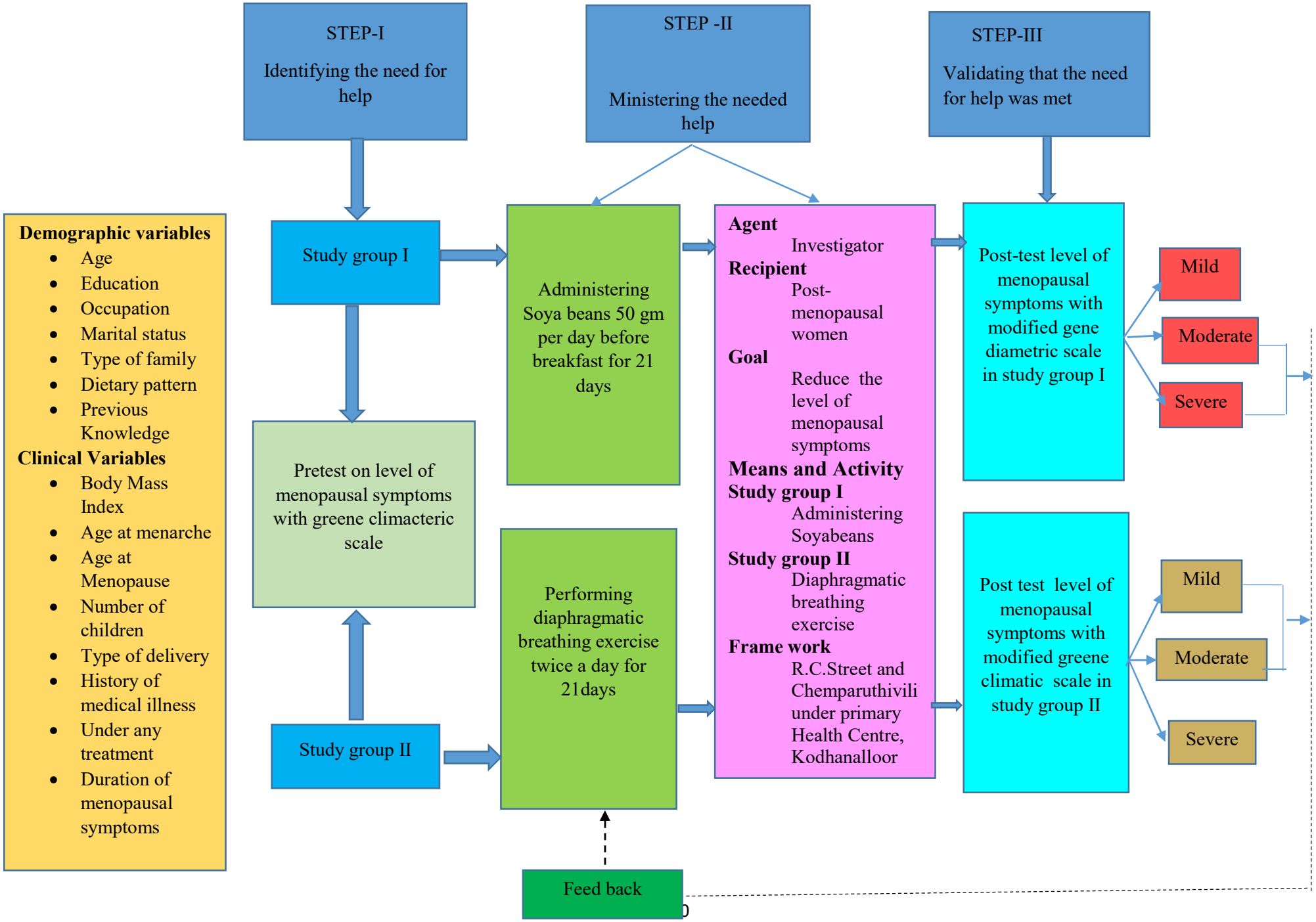
Frame work: Denotes the setting which is in R.C Street and Chemparuthivilai village under Block Upgraded Primary Health Center Kodhanalloor.

Step -3 validating that the need for help was met

This step involves the assessment of level of menopausal symptoms after soya beans and diaphragmatic breathing exercise .Posttest level of menopausal symptoms assessed by using Modified Greene Climacteric Scale. Level of menopausal symptoms is categorized as mild, moderate and severe. Soya beans and Diaphragmatic breathing exercise, which reduced the level of menopausal symptoms but diaphragmatic breathing exercise is more effective than the soya beans.

Feedback

The level of menopausal symptoms had mild, moderate, severe after giving soya beans in study group I and mild, moderate level of menopausal symptoms after Diaphragmatic breathing exercise in study group II. The researcher provided booklet for the above postmenopausal women in the study group I and study group II.



MODIFIED WIDENBACH'S PRESCRIPTIVE HELPING ART OF CLINICAL NURSING THEORY (1964)

CHAPTER II
REVIEW OF LITERATURE

The review of literature is presented under the following headings.

Section A: Studies related to Menopause

Section B: Studies related to Soya beans on Menopausal Symptoms

Section C: Studies related to Diaphragmatic Breathing Exercise on Menopausal Symptoms

STUDIES RELATED TO MENOPAUSE

Manisha and Grish,(2017) Conducted a study to measure the mental health status of 50 women with the age group 45-55 years during menopause and postmenopausal period among working as a teacher in a recognized girls school of Varanasi city , India .The subjects were divided in two groups during menopause and postmenopausal period .An interview schedule ,two general health questionnaires and a psycho social stress scale containing level of anxiety , depression ,somatic symptoms and social dysfunction were used to collect the data . Results revealed that t =1.29 at p>0.05 for anxiety, t=1.93 at p>0.05, depression t=0.10 at p>0.05 social dysfunction, t=1.05 at p>0.05, somatic symptoms and t=1.15 at p>0.05 psychologic symptoms. The researcher concluded working women have more depression and anxiety when measuring the mental health status.

Almutairy,H.(2015) Conducted a study to assess the Menopausal symptoms and quality of life among Saudi women visiting primary care clinics in Riyadh, Saudi Arabia. A cross sectional study was conducted from October to November 2010. In total , randomly interviewed questionnaire used among 119 women aged 45-60 years. Participants were divided into three categories: premenopausal (n=31),perimenopausal (n=49) and postmenopausal (n=39).Assessed the prevalence and severity of eleven menopausal symptoms with Menopausal Rating Scale the reported to be most prevalent were joint and muscle pain (80.7%), physical and mental exhaustion (64.7%), and hot flushes and sweating (47.1%).Results showed that Saudi women has milder severity of menopausal symptoms , reflecting better quality of life and ability to cope with climacteric symptoms.

Jeyabharathi, (2014) Conducted a study to assess the knowledge and attitude on menopause among women attending Gynaecological outpatient department at Chrompt Government Hospital, Chennai. 40 samples were selected through convenience sampling technique .Structured questionnaire was used to assess the knowledge and, rating scale was used to assess the attitude of menopausal women .The findings revealed that the maximum number of women 18 (45%) women had inadequate knowledge , 13 (32.5%) women had moderate knowledge on menopause .Regarding their attitude maximum number of women 19(47.5%)had moderately favourable attitude ,14(35%)women had favourable attitude and 7(17.5%) of them had unfavourable attitude towards menopause .The study concluded that, nurses must to create awareness on symptoms and management of menopause among menopausal women

White Comb ,et al., (2014) Conducted a study to findout the relationship between level of physical activity , frequency and severity of hot flushes among perimenopausal women at Baltimore , USA .512 peri menopausal women were selected through random sampling technique .Questionaire and self-reported physical activity were used to collect the data . The data were analyzed using multiple logistic regression .The study findings revealed that highly active women between the age of 35 and 40 were significantly more likely to report moderate to severe hot flushes (OR =1.70,P=0.01).

Joseph, et al .,(2014) Conducted a cross sectional study to assess the patterns and severity of menopausal symptoms and find out the factors associated with these symptoms at Kasturba Medical College , Mangalore. Convenient sampling method was used among 40-65 years women. Menopausal symptoms was assessed by Menopausal Rating Scale questionnaire .Results showed that somatic and urogenital symptoms were mostly noted among perimenopausal women and somatic symptoms were more among postmenopausal women. There was no severe level noted among the women from premenopausal stage.

Sagar. A,(2013) Conducted a cross sectional house to house survey, to find out the prevalence of menopausal symptoms at Anjara kandy, Kerala. Around 106 postmenopausal women selected by random sampling method. Result showed that the mean age of attaining menopause was 48.26 years, 90.7% had emotional problem, 72.9% had

headache, 65.4% had lethargy, 58.9% had dysuria, 57% had forgetfulness, 53.3% musculoskeletal problems, 31.8% sexual problems, 9.3% genital problems and changes in voice 8.4%.Only 22.4% of women know the correct cause of menopause. The study concluded that all women were suffering from one or more number of menopausal symptoms.

STUDIES RELATED TO EFFECTIVENESS OF SOYABEANS ON MENOPAUSAL SYMPTOMS

Padma Priya,(2016) Conducted a study to evaluate the effects of soya milk on menopausal symptoms among women .Sample comprised of 125 postmenopausal women who met inclusion criteria, purposive sampling technique was used to select the samples. Data was collected using demographic proforma, and menopausal rating scale . The experimental group was given daily supplements of 200 ml of homemade soya milk for the period of six weeks .The control group participants did not receive any intervention. The study results revealed that an experimental group who received soya milk shows significant difference in the reduction in menopausal rating scale.

Rukumani,(2014) Conducted a study to assess the effectiveness of soya beans on somatic and vasomotor symptoms among menopausal women at Pachampalayam village, Namkakal district .Thirty menopausal women who fulfilled the inclusion criteria were selected by snowball sampling technique .15 women were in control group and 15 women were in experimental group .Only the experimental group women received soybeans supplementation .Pre and post test done with Modified Greene Climacteric Scale to assess the somatic and vasomotor symptoms for both groups .The paired 't' value was 21.35 when compared to table value 2.145, unpaired 't' value 3.53 when compared to table value 2.05 .It seems there is significant relationship between soya beans and somatic and vasomotor symptoms. The researcher concluded those who took soya beans they got relieved from somatic and vasomotor symptoms.

Maya .C.Koshy, (2013) Conducted a Quasi experimental study to evaluate the effectiveness of soya beans on menopausal problems among 60 women was done in selected rural villages, at salem , Tamil Nadu .The Samples were selected using purposive sampling technique, 30 each in experimental and control group .Soya beans 50 grams given

to experimental group. Data were collected using structured interview schedule . The findings revealed that there was significant reduction in menopausal problem after administration of soya beans in experimental group.

Michael J. Murray, (2012) Conducted a study to evaluate the effect of soy isoflavone supplementation on quality of life among postmenopausal women. A multicenter, randomized , double –blind , placebo controlled 24 month trial was conducted to assess the effect of 80 or 120 mg of daily aglycone hypocotyl soy isoflavone supplementation on quality of life in 403 postmenopausal women using a validated menopause specific quality of life questionnaire. Menopause specific quality of life domain scores at 1 year and 2 years were similar to baseline .There were no differences in domain scores among treatment groups. The study concluded that soy isoflavone supplementation offers better benefit to quality of life among postmenopausal women .

Manubakiam,(2014) Conducted a study to assess the effectiveness of soya bean upon menopausal symptoms among 60 menopausal women in the age group of 45 -56 years. Soya beans was administered 50 g once daily for 30 days. Posttest mean 11.5 was lesser than pretest mean 14.5 in experimental group. The obtained 't' value 7.761 was highly significant at 0.05 level .Soya beans consumption was effective on menopausal symptoms among women between 45-56 years .Hence it was concluded that soya consumption was effective , upon menopausal symptoms.

STUDIES RELATED TO DIAPHRAGMATIC BREATHING EXERCISE ON MENOPAUSAL SYMPTOMS

Sreerenjini, (2018) Conducted a study to assess the effectiveness of deep breathing and walking exercise in reducing menopausal symptoms , one group pretest and posttest design was adopted for the study , the sample size was 30, Menopausal symptoms were assessed by Menopausal Rating Scale. The researcher found that the majority of the woman (80%) had moderate menopausal symptoms before practicing of deep breathing and walking exercise. After practicing exercises only four women had mild menopausal symptoms and 70% of the woman relieved from joint pain. Result showed that deep breathing and walking exercise are helpful in reduction of menopausal symptoms among postmenopausal women.

Vincy Bala ,(2017) Conducted a study to assess the effectiveness of deep breathing exercise on hot flushes among of menopausal women in Coimbatore .30 menopausal women were randomly selected and provided deep breathing exercise to the experimental group for 15 minutes in twice a day for 4 weeks. The symptoms were measured through menopausal rating scale .The researcher found that , there was a significant difference between experimental and control group after the intervention .(t-test=20.56,p>0.05).The researcher concluded that , deep breathing exercise is effective in reducing hot flushes among menopausal women.

Rajasoundari, Thamil mani, (2015) Conducted a study to assess the effectiveness of soya protein versus diaphragmatic breathing exercise on menopausal problems among 40 working women in selected schools at Palayamkottai, Tirunelveli district . The design was factorial design, a standardized menopausal problems rating scale was used to assess the menopausal problems before and after the intervention namely 50 gram soya protein once daily and diaphragmatic breathing exercise twice daily for 21 days. Diaphragmatic breathing exercise was independently effective than soya protein in the reduction of menopausal problems (p=0.001). The study concluded that diaphragmatic breathing exercise is powerful technique in reducing menopausal problems.

Mouloud AD, (2016) Conducted a study to evaluate the effectiveness of deep breathing exercise on menopausal symptoms .47 menopausal women were selected between the ages of 45 -63 , practiced 12 weeks yoga intervention .The menopausal symptoms were assessed through 20 items checklist .The women who had the score of 15 and above were selected for deep breathing practice which included breathing technique, posture and relaxation process .The researcher found significant improvement from pretest to posttest mean hot flushes score (p=0.001). The researcher concluded that deep breathing is powerful technique which relieved menopausal symptoms.

CHAPTER III

RESEARCH METHODOLOGY

RESEARCH APPROACH

A quantitative research approach was used in this study

RESEARCH DESIGN

Quasi experimental design was adopted for the study, the diagrammatic representation of this study is as follows

Group	Pre test	Intervention	Post test
RS_1	O_1	X_1	O_2
RS_2	O_1	X_2	O_2

RS_1- Study group I

RS_2- Study group II

X_1 – soya beans

X_2- Diaphragmatic breathing exercise

O_1- Assess the level of menopausal symptoms with Modified Greene Climacteric Scale before intervention.

O_2- Assess the level of menopausal symptoms with Modified Greene Climacteric Scale after intervention.

(R – Random selection, X Manipulation, O observation)

VARIABLES

Independent variable: soya beans and diaphragmatic breathing exercise

Dependent variable: level of menopausal symptoms

RESEARCH SETTING

The setting was adopted for this study comprised of two villages Chemparuthivilai and R.C Street coming under Block Upgraded Primary Health Centre, Kodhanalloor. Which is situated 20 kilometers away from St.Xavier's Catholic College of Nursing, Chunkankadai. Chemparuthivilai village selected as study group I and R.C Street selected as study group II.

Chemparuthivilai is situated 22 Kilo Meters away from St. Xavier's Catholic College of Nursing and R.C street is situated 18 Kilo Meters away from St. Xavier's Catholic College Nursing . It has all the facilities like education, electricity, communication, water supply and transportation. 317 women at chemparuthivilai and 252 women in R.C Street among them 43 postmenopausl women in study group I and 50 menopausal women in study group II. The setting was chosen on the basis of feasibility, practicability and availability of samples.

POPULATION

Target population

The population under study constituted postmenopausal women with menopausal symptoms

Accessible population

The population under study constituted postmenopausal women with menopausal symptoms residing in Chemparuthivilai and R.C. Street under Block Primary Health Center at Kanyakumari district

SAMPLE

Prevalence was assessed through survey for 3 days. Among 317 women at Chemparuthivilai and 252 women in R.C Street. Among them, 43 postmenopausl women in study group I and 50 samples in study group II were selected.

SAMPLE SIZE

The sample size (n) calculated using solvin's formula ($n= N/1+Ne^2$) n=70. 35 postmenopausal women in study group I and 35 postmenopausal women in study group II.

SAMPLING TECHNIQUE

Simple random sampling technique (lottery method) was used to select the postmenopausal women in study group I and study group II.

CRITERIA FOR SAMPLE COLLECTION

Inclusion criteria

- Postmenopausal women with menopausal symptoms between the age group of 40 to 60 years.
- Postmenopausal women who are willing to participate.
- Postmenopausal women who attained natural menopause

Exclusion criteria

- Postmenopausal women who are all doing exercises , yoga and meditation regularly
- Postmenopausal women who had underwent surgery related to orthopedic and coronary artery bypass graft.
- Postmenopausal women who are under hormone replacement therapy
- Postmenopausal women who had soya beans allergy
- Postmenopausal women who are not available during data collection.

DESCRIPTION OF TOOL

The tool used in the study consisted of three parts

PART I AND PART II: Demographic and Clinical variables

In this part, structured questionnaire was used to collect the demographic variables such as age, education, occupation, marital status ,type of family, dietary pattern, previous knowledge on soyabeans and diaphragmatic breathing exercise and the Clinical variables such as Body Mass Index, age at menarche, number of children, type of delivery, history of medical illness, under any treatment and duration of menopausal symptoms(ANNEXURE VII).

PART III: Modified Greene Climacteric Scale

Modified Greene Climacteric Scale was used to assess the level of menopausal symptoms among postmenopausal women (ANNEXURE VII).The total score was 66 and it was categorized as follows

Range	Level of Menopausal Symptoms
0-22	Mild
23-44	Moderate
45-66	Severe

DESCRIPTION OF INTERVENTION

Study group I : Soyabeans

1,750 grams of soya beans soaked overnight in water for 8 – 10 hours. In the morning add water heat it in a mud pot for 20 minutes and add salt for taste. 50 grams soya beans can be given to each postmenopausal women in study group I (6-9.30am) and consuming in front of the investigator for 21 days before breakfast.

Study group II: Diaphragmatic breathing exercise

Investigator gathered all 35 postmenopausal women (study group II) in a house (Door no : 20/171)at 10.00 am in the morning and 4.00 pm in the evening, Diaphragmatic breathing exercise was taught, demonstrated and made them to perform infront of the investigator for 21 times twice a day for 21 days. 10.5 minutes was taken to complete the diaphragmatic breathing exercise in each morning and evening session.

CONTENT VALIDITY

The content was validated by five experts including two senior doctors of Obstetrics and Gynaecology and three Nursing personnel from Obstetrics and Gynaecological Nursing were requested to give their opinion about the content and its relevance for the appropriateness of the item .The investigator underwent training for diaphragmatic breathing exercise and obtained consent (ANNEXURE V) for the study .As per their suggestions modification were done.

RELIABILITY

The reliability of the scale was checked by inter rater reliability and the calculated r value was 0.6 which concluded that Modified Greene Climacteric Scale was reliable for this study.

Weighing machine was tested and calibrated with the clinical standards by Mr.Bravin (BE), Biomedical Engineer, Holy cross Hospital, Nagercoil on 24-11-2018. Hence the instrument was considered as a tool for preceding the study (ANNEXURE XI).

PILOT STUDY

Pilot study was conducted at Kanjirathukonam and Gnaravilai villages coming under Block Upgraded primary health center Kodhanalloor in Kanyakumari district for study group I and II .After obtaining formal permission from the Principal of St.Xavier's Catholic College of Nursing ,Chunkankadai, and Block medical officer of Primary Health Center, Kodhanalloor, survey was conducted for 2 days in Kanjirathukonam and Gnaravilai villages.The investigator selected 8 samples using simple random sampling (lottery) method based on criteria for sample selection. 4 postmenopausal women were selected in study group I residing at Kanjirathukonam and 4 postmenopausal women were selected in study group II, residing at Gnaravilai village .Pretest was conducted with Modified Greene

Climacteric Scale Soya beans (50grams) was given to study group I once a day before breakfast for 21 days ,diaphragmatic breathing exercise was taught ,and demonstrated to study group II, they have performed in front of the investigator for 21 days .Post test was conducted on 21st day with Modified Greene Climacteric Scale .Findings of the pilot study showed, that in study group I the pretest mean value was 39.5 and the posttest value 35.5.The study group II pretest mean value was 37.25 and the posttest value was 33.1.Hence the investigator concluded soya beans and diaphragmatic breathing exercise were effective in reducing menopausal symptoms, comparing with Soya beans Diaphragmatic breathing exercise is more effective. No changes were made and the investigator proceeded to the main study. The pilot study findings reveals that the study was feasible relevant and practicable to conduct the main study.

METHOD OF DATA COLLECTION

Phase I: Pretest

After obtaining formal permission from the Principal of St. Xavier's Catholic College of Nursing, Chunkankadai (Annexure I) and the Block Medical Officer, Block Primary Health Centre, Kodhanalloor (Annexure II)**.** Structured interview schedule was used to collect the demographic and clinical variables.

Pretest was conducted from the selected postmenopausal women with Modified Greene Climacteric Scale in study group I and study group II.

Phase II: Intervention

The investigator explained the postmenopausal women about the importance of soyabeans and diaphragmatic breathing exercise to reduce the menopausal symptoms. 50 gram of boiled soyabeans, once daily for 21 days before breakfast for 35 women in study group I and diaphragmatic breathing exercise twice a day for 21 days for 35 women in study group II.

Phase III: Post test

The post test was conducted on 21st day with Modified Greene Climacteric Scale. Analysis of the data was done by using descriptive and inferential statistics.

PLAN FOR DATA ANALYSIS

Data collected were analyzed by using both descriptive and inferential statistics such as mean, standard deviation, chi square, paired and unpaired‘t’ test.

Descriptive statistics

- Frequency and percentage distribution was used to analyze the demographic and clinical variables of postmenopausal women with menopausal symptoms.
- Mean and standard deviation were used to assess the effectiveness soya beans and diaphragmatic breathing exercise on level of menopausal symptoms among postmenopausal women.

Inferential statistics

- Paired ‘t’ test was used to compare pre and posttest level of menopausal symptoms among postmenopausal women in study group I and study group II .
- Unpaired ‘t’ test was used to compare the posttest level of menopausal symptoms among postmenopausal women between study group I and study group II .
- Chi –square test was used to find out the pretest level of menopausal symptoms in study group I and study group II with the selected demographic and clinical variables.

ETHICAL CONSIDERATION

The proposed study was conducted after the approval of the Dissertation Committee of St . Xaviers Catholic College of Nursing , Chunkankadai. Formal permission was obtained from the Block Medical Officer, Block Upgraded Primary Health Center at Kodhanalloor. Oral consent was obtained from each postmenopausal women before starting the data collection. Assurance was given to the study samples regarding the confidentiality of the data collected.

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

SECTION A:

1. Distribution of demographic and clinical variables of postmenopausal women with menopausal symptoms in study group I and study group II.

SECTION B:

2. Pretest and posttest level of menopausal symptoms among postmenopausal women in study group 1 and study group II

2.1 Pretest frequency and percentage distribution on level of menopausal symptoms among postmenopausal women in study group I and study group II.

2.2 Posttest frequency and percentage distribution on level of menopausal symptoms among postmenopausal women in study group I and study group II.

SECTION C:

3. Comparison of pre and posttest level of menopausal symptoms among postmenopausal women.

3.1Comparison of pretest and posttest level of menopausal symptoms on soya beans versus Diaphragmatic breathing exercise among postmenopausal women with menopausal symptoms in study group I and study group II.

3.2 Comparison of posttest score of Soya beans and Diaphragmatic breathing exercise level on menopausal symptoms among postmenopausal women in study group 1 and study group II.

SECTION D:

4. Association between pretest level of menopausal symptoms with selected demographic and clinical variables among postmenopausal women in study group I and study group II.

4.1 Association between the pretest level of menopausal symptoms among Postmenopausal women in study group I with their selected demographic and clinical variables

4.2 Association between the pretest level of menopausal symptoms among postmenopausal women in study group II with their selected demographic and clinical variables.

SECTION – A

1. FREQUENCY AND PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC AND CLINICAL VARIABLES OF POSTMENOPAUSAL WOMEN WITH MENOPAUSAL SYMPTOMS

Table 4.1: Frequency and percentage distribution of demographic and clinical variables of postmenopausal women with menopausal symptoms in study group I and study group II N=70

S.No	Demographic variables	Study group I n = 35		Study group II n = 35	
		f	%	f	%
1	Age				
	a) 40- 44 years	3	8.5	2	5.71
	b) 45- 49years	1	2.85	1	2.85
	c) 50- 54 years	9	25.71	7	20
	d) above 54 years	22	62.85	25	71.42
2	Education				
	a) Illiterate	15	42.85	11	31.42
	b) School education	16	45.71	19	54.28
	c) Undergraduate	3	8.5	5	14.28
	d) Postgraduate	1	2.85	0	0
3	Occupation				
	a) Unemployed	25	71.42	7	20
	b) Self employed	7	20	21	60
	c) Government employed	3	8.5	5	14.28
	d) Private employed	0	0	2	5.71

4	Marital status				
	a) Married	33	94.28	31	88.57
	b) Unmarried	0	0	0	0
	c) Widower	2	5.71	3	8.5
	d) Separated	0	0	1	2.85
5	Dietary pattern				
	a) Vegetarian	0	0	10	28.57
	b) Non vegetarian	35	100	25	71.42
6	Previous knowledge on Soya beans and Diaphragmatic breathing exercise				
	a) Media	1	2.85	7	20
	b) Elder person	21	60	8	22.85
	c) By reading books	0	0	3	8.5
	d) None	13	37.14	17	48.57
CLINICAL VARIABLES					
1	Body Mass Index				
	a) Underweight< 18.5	0	0	0	0
	b) Healthy weight 18.5 – 24.9	25	71.42	24	68.57
	c) Over weight 25.0 – 29.9	9	25.71	10	28.57
	d) Obese 30.0 – 39.9.	1	2.85	1	2.85
2	Age of at menarche				
	a) 12 – 13 years	26	74.28	3	8.5
	b) 14 – 15 years	9	25.71	23	65.71

	c) 16 - 17 years d) Above 18 years	0 0	0 0	9 0	25.71 0
3	Age at menopause a)40-44 years b)45-50years c)51-55 years d)above 56 years	 2 13 20 0	 5.71 37.14 57.14 0	 1 24 10 0	 2.85 68.57 28.57 0
4	Number of children a) 1 b) 2-3 c) Above 3 children e) No children	 2 18 15 0	 5.71 51.42 42.85 0	 1 12 22 0	 2.85 34.28 62.85 0
5	Type of delivery a) Lower segment caesarian section b)Normal vaginal delivery c) Forceps delivery d) Vento use delivery	 13 20 2 0	 37.14 57.14 5.71 0	 11 20 4 0	 31.42 57.14 11.42 0
6	History of medical illness a) Hypertension b)Diabetes mellitus c) Arthritis d) Cardiac diseases	 5 12 17 1	 14.28 34.28 48.57 2.85	 6 14 15 0	 17.14 40 42.85 0
7	Treatment for menopausal symptoms. a) Medical Treatment b) Dietary Treatment C) Natural Treatment D) None	 25 2 0 8	 71.42 5.71 0 22.85	 4 9 12 8	 11.42 25.71 34.28 22.85

Table 4.1 represents the frequency and percentage distribution of demographic and clinical variables among postmenopausal women with menopausal symptoms

According to age in study group I 22(62.85%) belonged to age group of above 56 years, 3(8.5%) belonged to age 49 to 52 years. In study group II 25(71.42%) belonged to age above 56 years, 1(2.85%) belonged to age 49 to 52 years.

With regard to education in study group I, 16(45.71%) had completed school education and 1(2.85%) were postgraduate. In study group II 19(54.28%) had completed school education and 0(0%) of them were postgraduate.

Regarding occupation in study group I, 25(71.42%) were unemployed, 0(0%) of them were private employed. In study group II 21(60%) were self-employed, 0(0%) of them were post graduate.

Considering the marital status in study group I 33(94.28%) were married, 0(0%) of them were separated. In study group II 31(88.57%) were married 0(0%) of them were unmarried.

With regard to dietary pattern in study group I 35(100%) were non vegetarian, 0(0%) of them were vegetarian. In study group II. 25(71.42%) were non vegetarian and 10(28.57%) were vegetarian

Regarding previous knowledge on Soya beans and Diaphragmatic breathing exercise in study group I 21(60%) learnt from an elderly person, 0(0%) of them were reading books. In study group II 17(48.57%) were none, 3(8.5%) from books

Considering the Body Mass Index in study group I 25(71.42%) had healthy weight, 0(0%) of them were underweight. In study group II 10(28.57%) were overweight, 0(0%) of them were underweight.

With regard to age at menarche in study group I 26(74.28%) were 12 to 13 years, 0(0%) were above 18 years. In study group II 9(25.71%) were 16 to 17 years, 0(0%) of them were above 18 years.

According to age at menopause in study group I 20(57.14%) were 51 to 55 years, 0(0%) were above 56 years. In study group II 24(68.57%) were 45-50 years, 0(0%) of them were above 56 years.

Analyzing the number of children in study group I 318 (51.42%) were having 2 children, 0(0%) of them were without children. In study group II 22(62.85%) were having 3 children, 0(0%) of them were without children.

Regarding the type of delivery in study group I 20(57.14%) had normal delivery, 0(0%) of them had Vento use delivery. Likewise in study group II 20(57.14%) had normal delivery, 0(0%) of them had Vento use delivery.

With regard to history of medical illness in study group I 17(48.57%) were suffering from arthritis, 1(2.85%) had cardiac disease. In study group II 15(42.85%) were suffering from arthritis, 0(0%) of them had cardiac disease.

Regarding Treatment of menopausal symptoms in study group I 25(71.42%) were under medical treatment and 0(0%) of them had natural treatment. In study group II 12(34.28%) had natural treatment, 4(11.42%) were undergoing medical treatment.

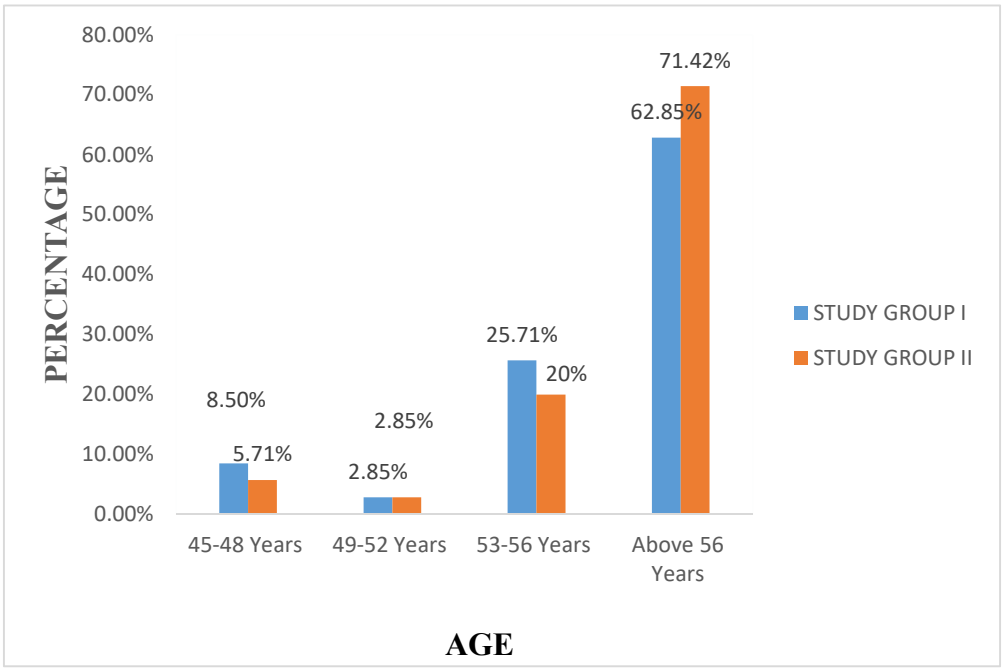


Fig 2. 1 Percentage distribution of age among postmenopausal women with menopausal symptoms

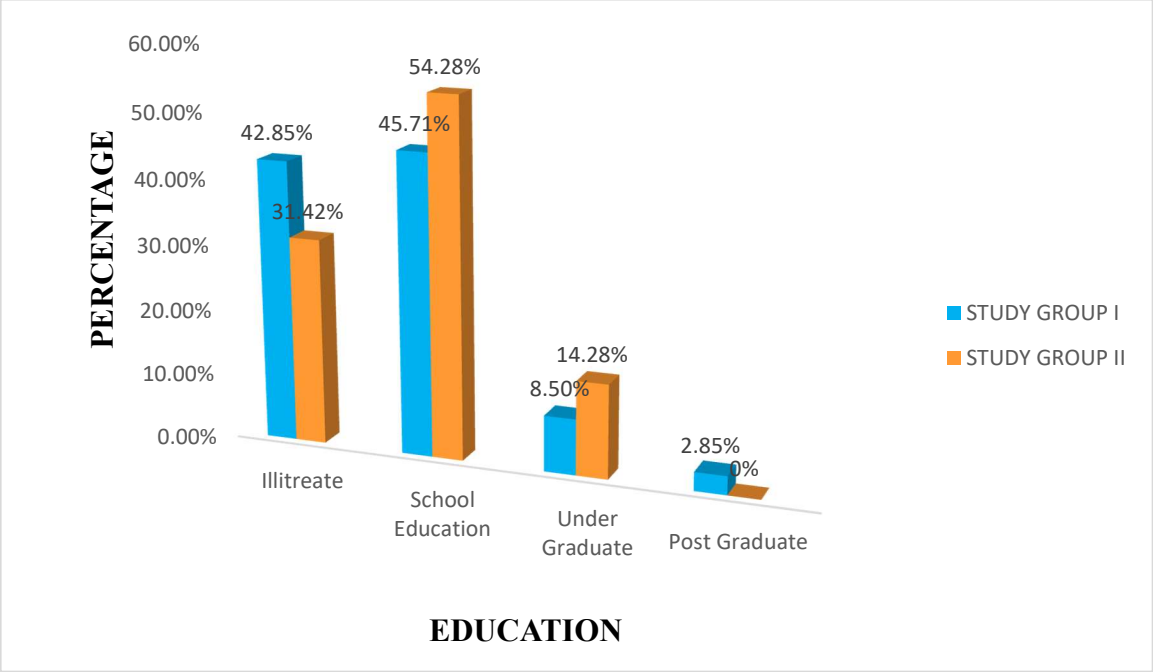


Fig 2.2 Percentage distribution of education among postmenopausal women with menopausal symptoms

Fig 2 .3 Percentage distribution of occupation among postmenopausal women with menopausal symptoms

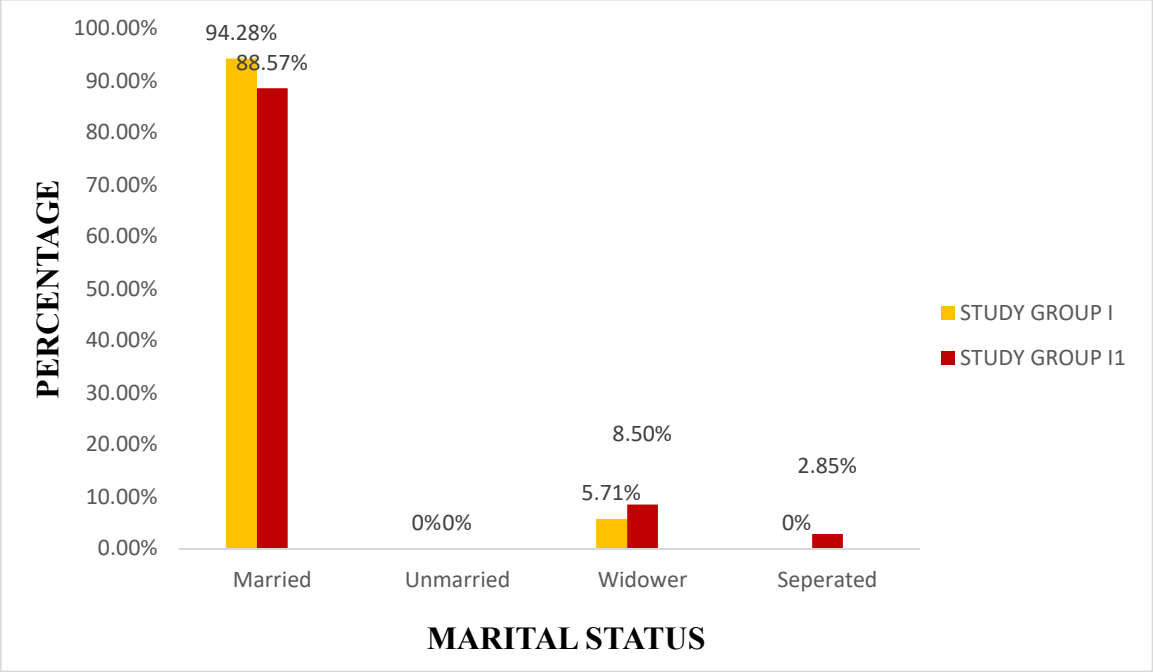


Fig 2.4 Percentage distribution of marital status among postmenopausal women with menopausal symptoms

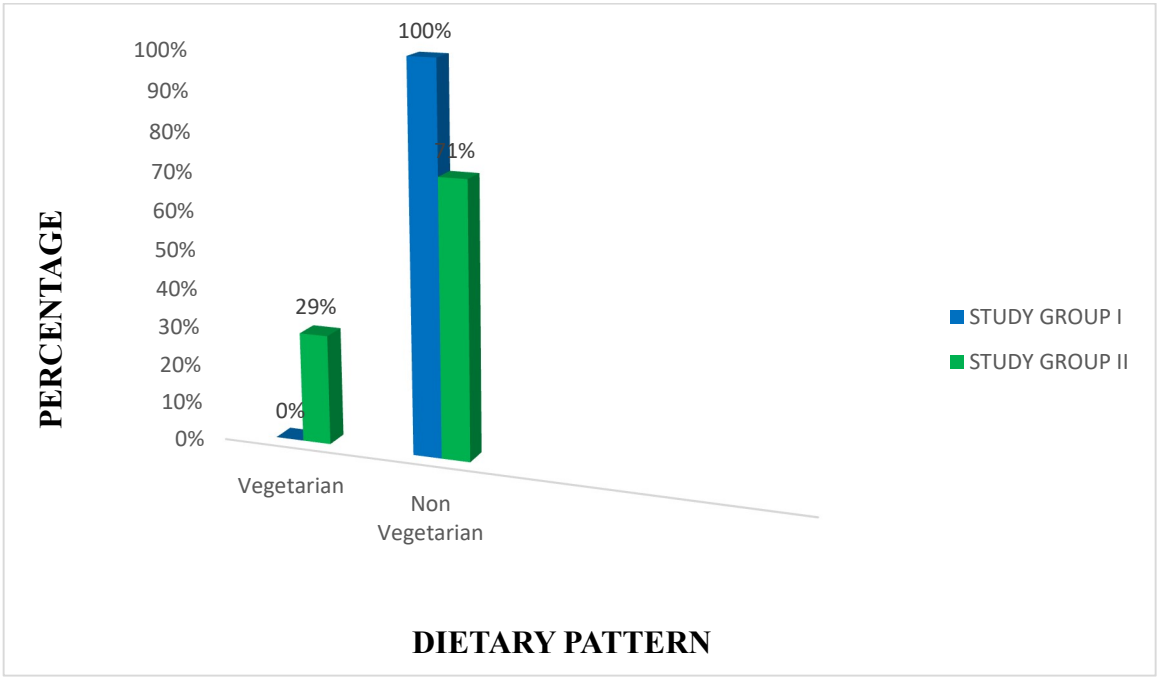


Fig 2.5 Percentage distribution of dietary pattern among postmenopausal women with menopausal symptoms.

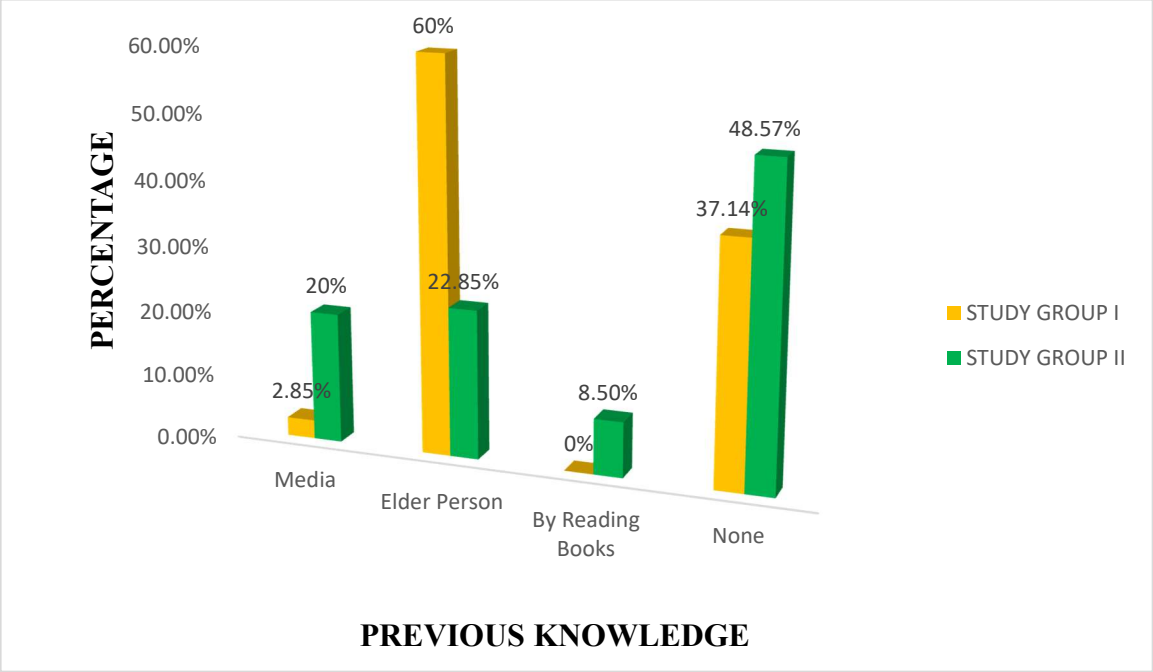


Fig. 2.6 Percentage distribution of previous knowledge on Soya beans and Diaphragmatic breathing exercise among postmenopausal women with menopausal symptoms.

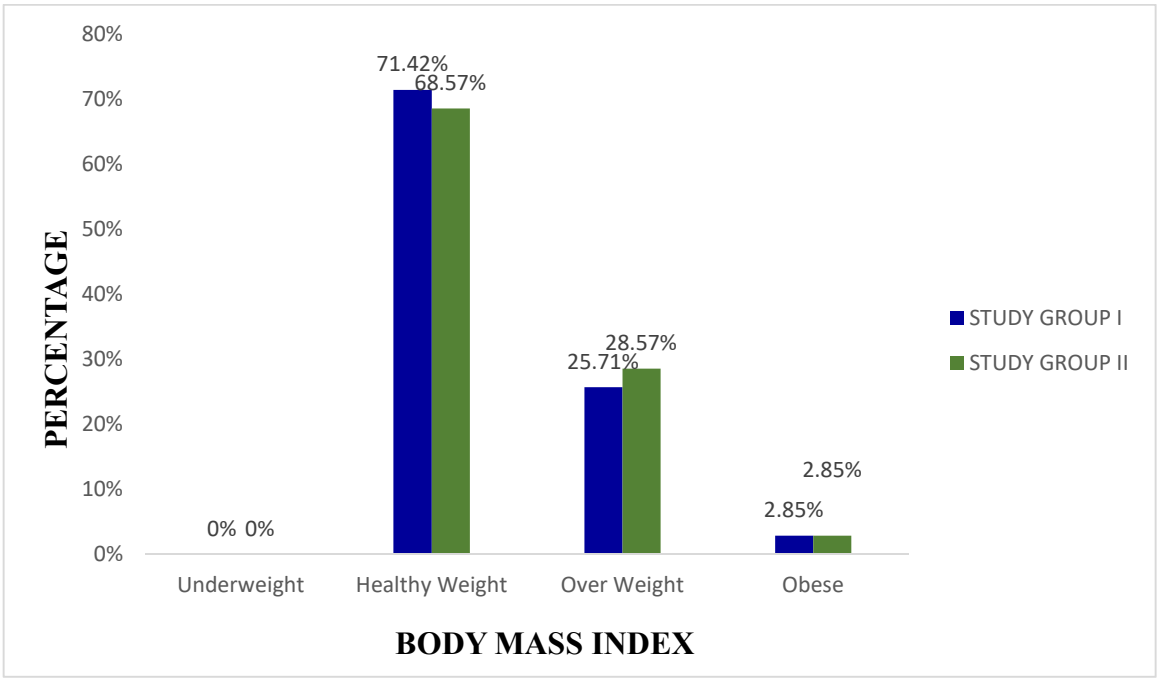


Fig. 2 .7 Percentage distribution of body mass index among postmenopausal women with menopausal symptoms.

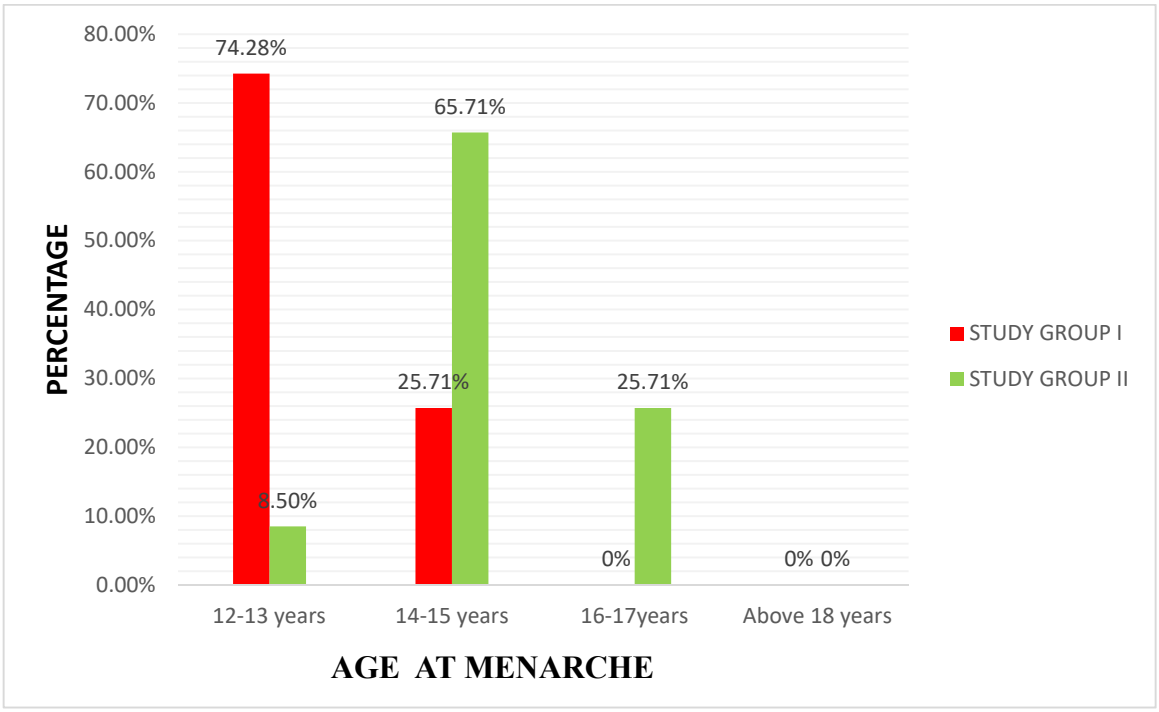


Fig 2. 8 Percentage distribution of age at menarche among postmenopausal women with menopausal symptoms

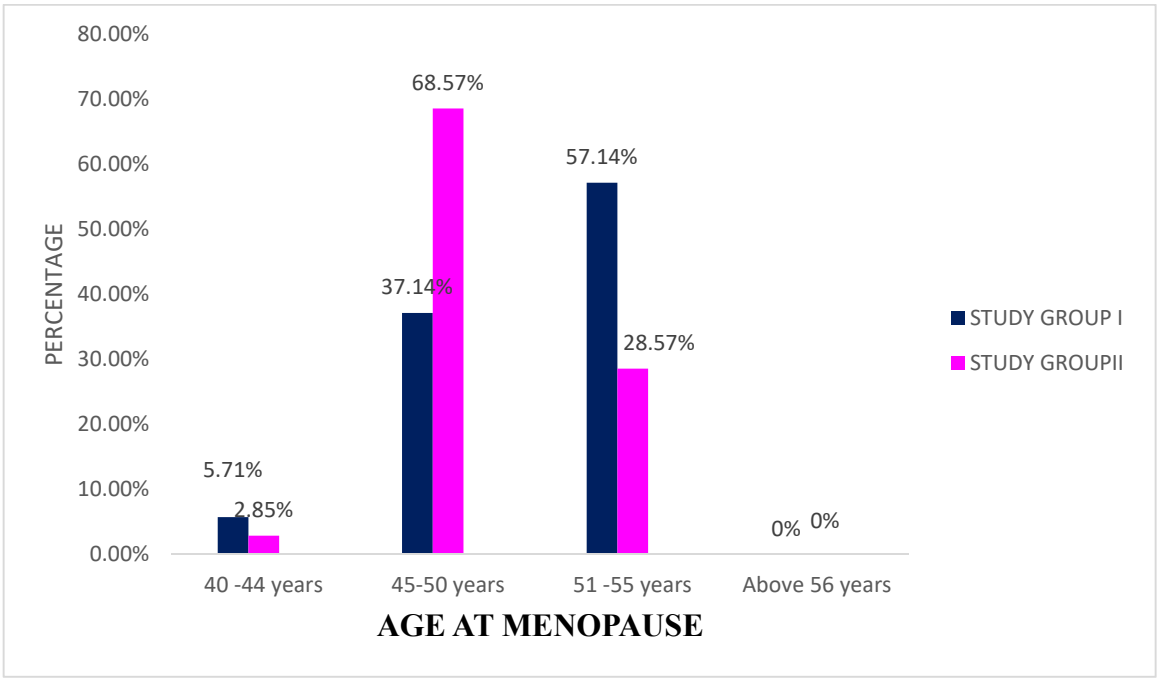


Fig 2.9 Percentage distribution of age at menopause among postmenopausal women with menopausal symptoms.

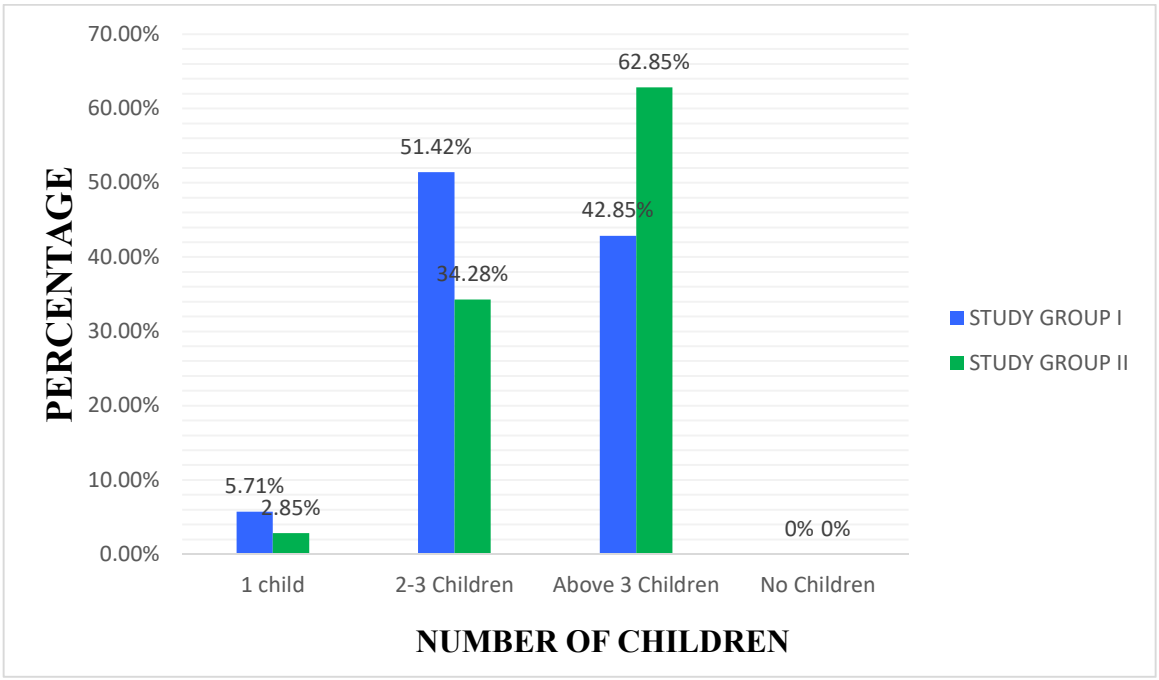


Fig.2 .10 Percentage distribution of number of children among postmenopausal women with menopausal symptoms .

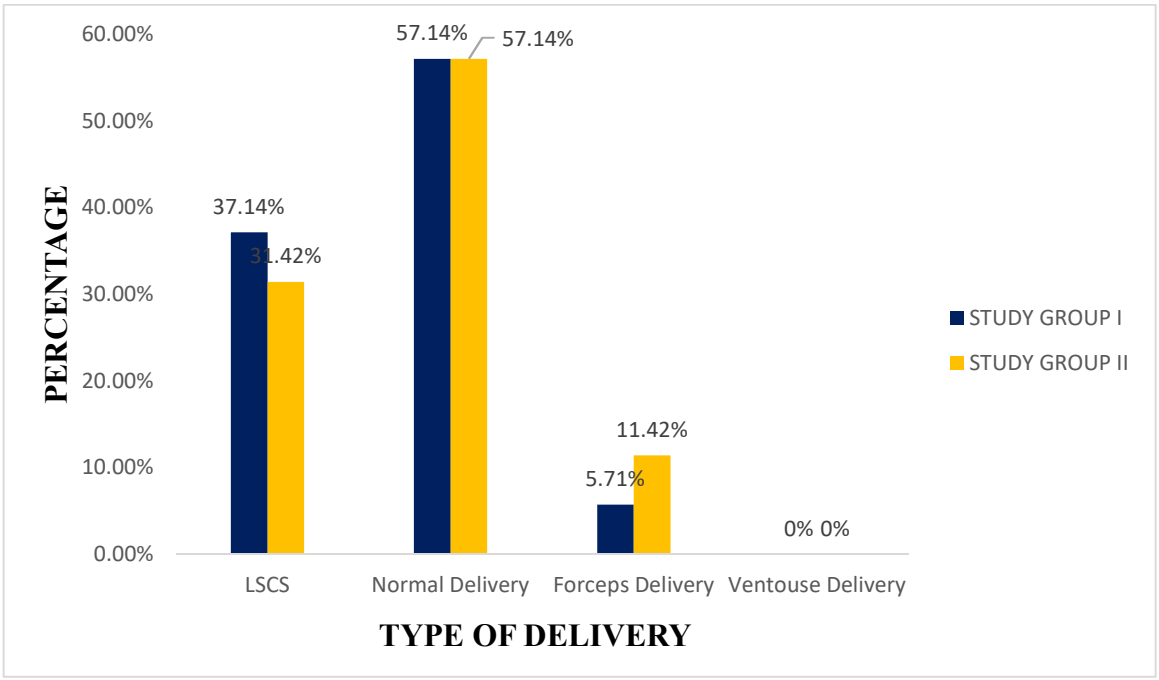


Fig. 2.11 Percentage distribution of type of delivery among postmenopausal women with menopausal symptoms .

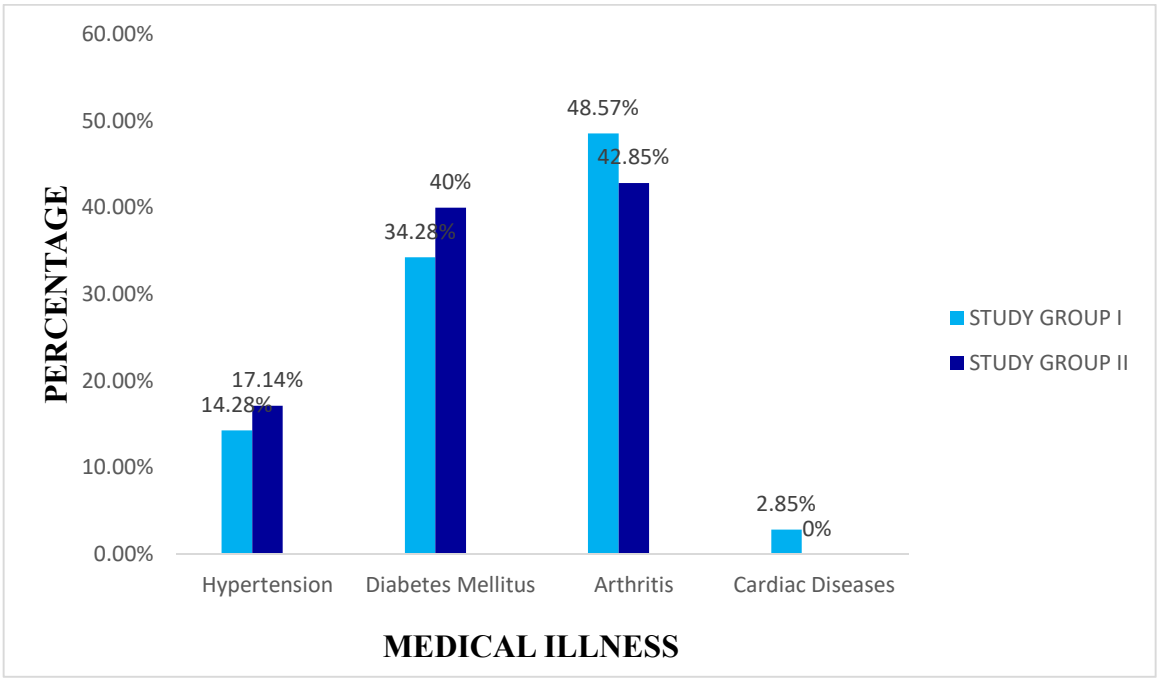


Fig 2 .12 Percentage distribution of history of medical illness among postmenopausal women with menopausal symptoms .

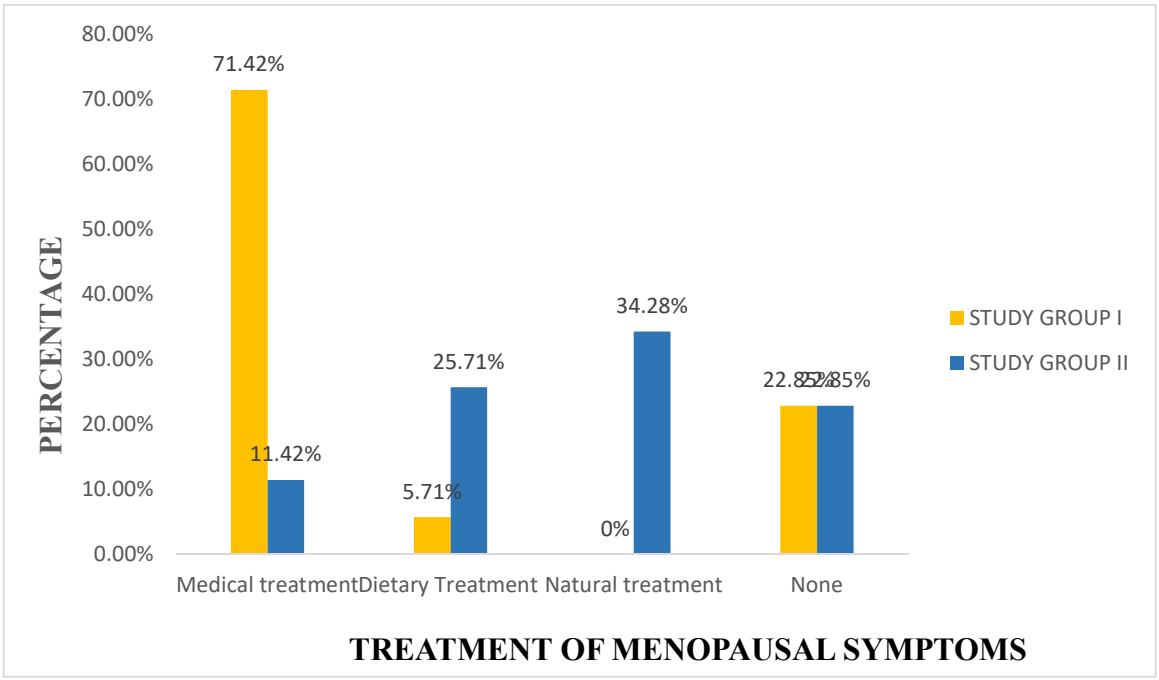


Fig 2. 13 Percentage distribution of Treatment of menopausal symptoms among postmenopausal women with menopausal symptoms.

SECTION – B

PRE AND POST TEST LEVEL OF MENOPAUSAL SYMPTOMS IN STUDY GROUP I AND STUDY GROUP II

Table 4.2 pretest frequency and percentage distribution on level of menopausal symptoms among postmenopausal women

N=70

S.No	Pre test	Mild		Moderate		Severe	
	Level of menopausal symptoms	f	%	f	%	f	%
1	Study group I n=35	0	0	25	71.42	10	28.57
2	Study group II n=35	1	2.85	27	77.14	7	20

Table 4 .2 represents during pretest in study group I 0(0%) had mild menopausal symptoms , 25(71.42%) had moderate menopausal symptoms and 10 (28.57%) had severe menopausal symptoms and in study group II 1(2.85%) had mild menopausal symptoms , 27 (77.14 %) had moderate menopausal symptoms and 7 (20%) had severe menopausal symptoms .

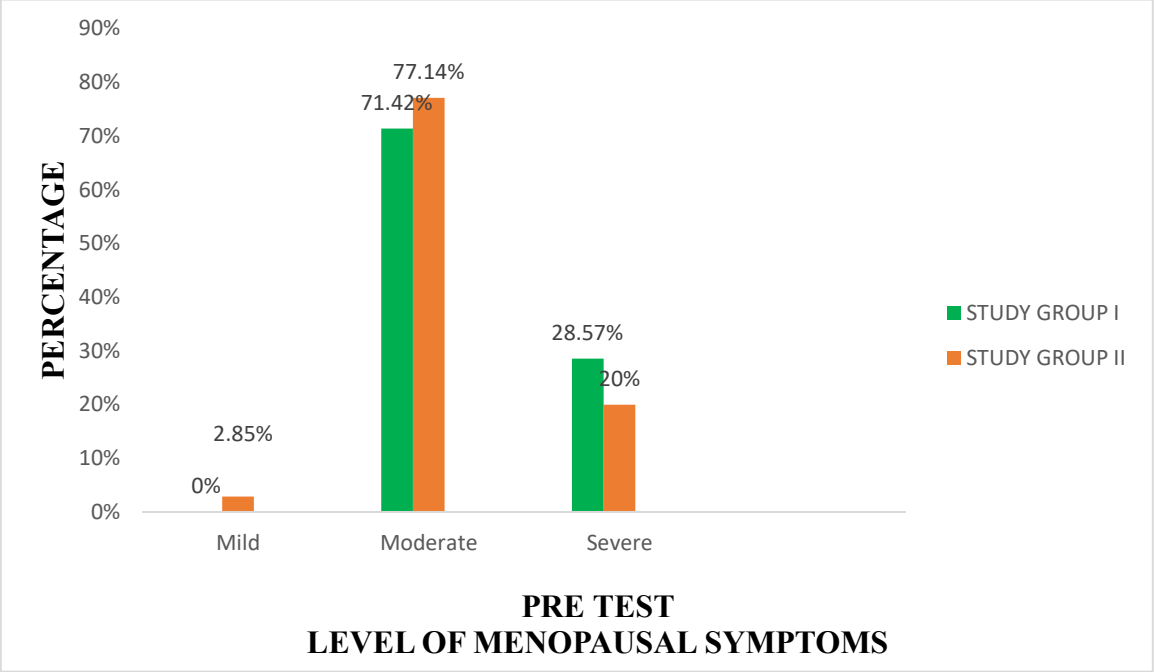


Fig 31 pretest frequency and percentage distribution of level of menopausal symptoms among postmenopausal women

Table 4.3 posttest frequency and percentage distribution on level of menopausal symptoms among menopausal women in study group I and study group II

N=70

S.No	Post test	Mild		Moderate		Severe	
	Level of menopausal symptoms	**f**	**%**	**f**	**%**	**f**	**%**
1	**Study group I n=35**	0	0	34	97.14	1	2.85
2	**Study group II n=35**	2	5.71	33	94.28	0	0

Table 4.3 represents during post test in study group I 0(0%) had mild menopausal symptoms 34 (97.14) had moderate menopausal symptoms 1 (2.85%) had severe menopausal symptoms. During post test study group II 2 (5.71%) had mild menopausal symptoms 33(94.28 %) had moderate menopausal symptoms 0 (0%) had severe menopausal symptoms.

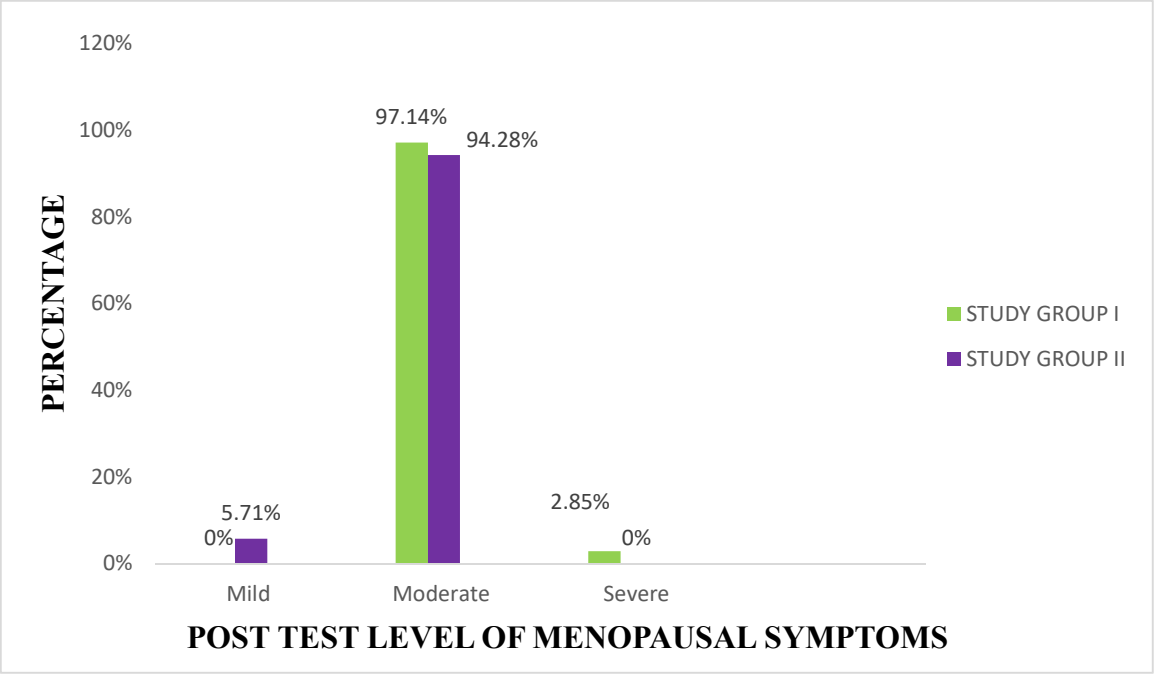


Fig 3.2 posttest frequency and percentage distribution on level of menopausal symptoms among menopausal women in study group I and study group II

SECTION – C

Comparison of pretest and posttest level of menopausal symptoms among postmenopausal women in study group I and study group II

Table 4.4 comparison of mean SD and paired t value on pretest and posttest level of menopausal symptoms among postmenopausal women in study group I and study group II.

N=70

S.No	Group	Mean	SD	df	Paired 't' test
1	Study group I n=35 pretest	39.25	5.57	34	1.69*
	post test	36.34	4.45		
2	Study group II n=35 pre test	36.71	9.64	34	1.69*
	post test	29.62	4.47		

*Significance at < 0.05

Table 4.4 shows that in study group I, during pretest the mean value was 39.25 and standard deviation was 5.57 , posttest mean value was 36.34 and standard deviation was 4.45 .In study group II pretest mean value was 36.71 and standard deviation was 9.64 , in posttest mean value was 29.62 and standard deviation was 4.47. In study group I ' t' value between pre and post test score of menopausal symptoms was 1.69and in study group II 't' value between pre and post test score was 1.69.In both groups the calculated 't' value was greater than the table values . So there was significant difference between the pre and post test scores of soya beans versus diaphragmatic breathing exercise among postmenopausal women with menopausal symptoms.

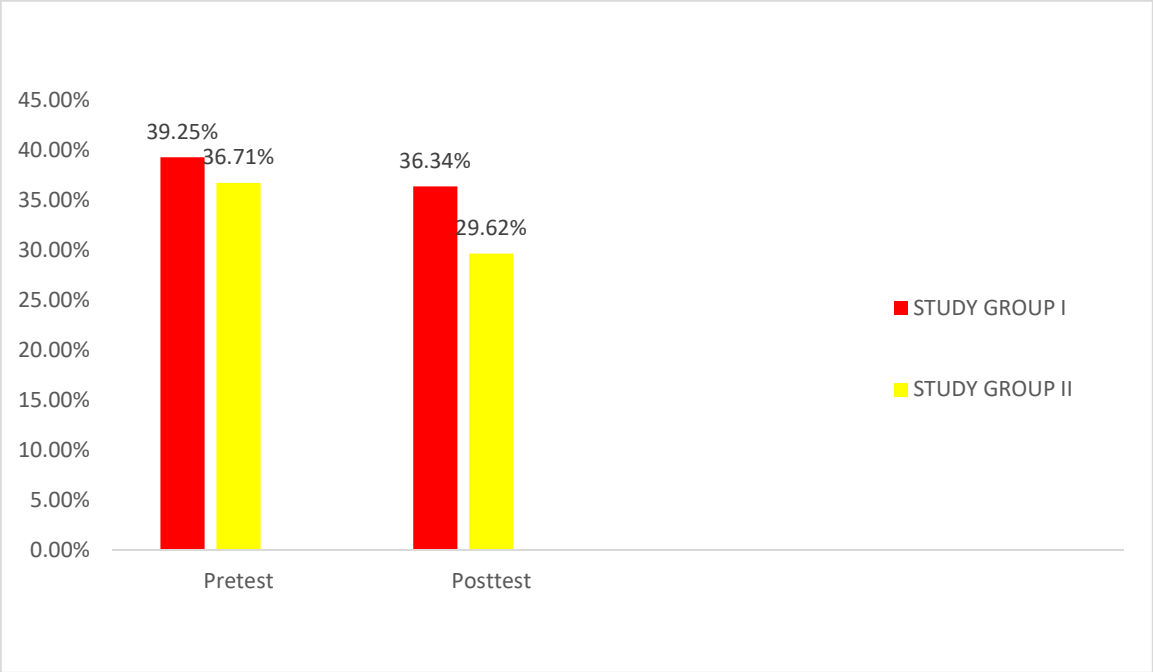


Fig:4.1: Comparison of pretest and posttest level of menopausal symptoms among postmenopausal women in study group I and study group II

Table 4.5 Mean standard deviation and value of posttest level of menopausal symptoms of soya beans versus diaphragmatic breathing exercise in study group I and study group II

N= 70

Variable	**Study group-I n=35**		**Study group II n= 35**		**t value**	**Table value**
Level of menopausal symptoms during post test	Mean	SD	Mean	SD	4.57	2.776*
	35.48	4.54	29.62	4.47		

Significance at <0.05

Table 4.5 shows that in study group I, the mean posttest value was 35.48 and the standard deviation was 4.54 and in study group II, mean posttest value was 29.62 and standard deviation was 4.47 and calculated t value was 4.57. Since the t value was greater than table value, there was significant difference between the posttest level of Soya beans and Diaphragmatic breathing exercise on menopausal symptoms among postmenopausal women in study group I and study group II.

SECTION-D

ASSOCIATION BETWEEN THE PRE TEST LEVELS OF MENOPAUSAL SYMPTOMS AMONG POSTMENOPAUSAL WOMEN IN STUDY GROUP I WITH THE SELECTED DEMOGRAPHIC AND CLINICAL VARIABLES.

Table 4.6 Association between the pretest level of menopausal symptoms among postmenopausal women in study group I with their selected demographic and clinical variables.

n=35

S.No	Demographic variables		Mild		Moderate		Severe		Chi square
			f	%	f	%	f	%	
1	Age	40- 44 years	0	0	3	8.57	0	0	χ^2=2.3* df=3 Table value =2.353
		45-49 years	0	0	1	2.85	0	0	
		50- 54 years	0	0	7	20	2	5.71	
		Above 54 years	0	0	14	40	8	22.85	
2	Education	Illiterate	0	0	9	25.71	6	17.14	χ^2 =2.07 df=3 Table value =2.353
		School education	0	0	13	37.14	3	8.57	
		Undergraduate	0	0	2	5.71	1	2.85	
		Postgraduate	0	0	1	2.85	0	0	
3	Occupation	Unemployed	0	0	16	45.71	9	25.71	χ^2 =2.55 df=2 Table value =2.920
		Self employed	0	0	6	17.14	1	2.85	
		Government employed	0	0	3	8.57	0	0	
		Private employed	0	0	0	0	0	0	

4	**Marital status**	**Married**	0	0	24	68.57	9	25.71	**χ^2 =0.43 df = 1 Table value =6.314**
		Unmarried	0	0	0	0	0	0	
		Widower	0	0	1	2.85	1	2.85	
		Separated	0	0	0	0	0	0	
5	**Dietary pattern**	**Vegetarian**	0	0	0	0	0	0	**χ^2 =0 df=2 Table value=2.920**
		Non vegetarian	0	0	25	71.42	10	28.57	
6	**Previous knowledge on Soya beans and Diaphragmatic breathing exercise**	**Media**	0	0	1	2.85	0	0	**χ^2 = 13.2* df=6 Table value =1.943**
		Elder person	0	0	15	42.85	6	17.14	
		By reading books	0	0	0	0	0	0	
		None	0	0	9	25.71	4	11.42	
CLINICAL VARIABLES									
1	**Body mass index**	**Underweight <18.5**	0	0	0	0	0	0	**χ^2 =0.67 df=6 Table value =1.943**
		Healthy weight 18.5 – 24.9	0	0	17	48.57	8	22.85	
		Over weight -25	0	0	7	20	2	5.71	
		Obese <30	0	0	1	2.85	0	0	

2	**Age at menarche**	**12-13 years**	0	0	20	57.14	6	17.14	χ^2**=1.45** **df=6** **Tablevalue=1.943**
		14 -15 years	0	0	5	14.28	4	11.42	
		16-17 years	0	0	0	0	0	0	
		Above 18 years	0	0	0	0	0	0	
3	**Age at menopause**	**40 -44 years**	0	0	2	5.71	0	0	χ^2**=34.91** **df=6** **Table value =1.943**
		45-50 years	0	0	10	28.57	3	8.57	
		51-55 years	0	0	12	34.28	8	22.85	
		Above 56 years	0	0	0	0	0	0	
4	**Number of children**	**1**	0	0	2	5.71	0	0	χ^2 **=1** **df=6** **Table value =1.943**
		2-3	0	0	12	34.28	6	17.14	
		Above 3 children	0	0	11	31.42	4	11.42	
		No children.	0	0	0	0	0	0	
5	**Type of delivery**	**Lower segment caesarian section**	0	0	10	28.57	3	8.57	χ^2**=3.96*** **df=6** **Table value =1.943**
		Normal delivery	0	0	13	37.14	7	20	
		Forceps delivery	0	0	2	5.71	0	0	
		Ventouse delivery	0	0	0	0	0	0	
6	**History of medical illness**	**Hypertension**	0	0	4	11.42	1	2.85	χ^2 **=4.47*** **df=6** **Table value=1.943**
		Diabetes mellitus	0	0	6	17.14	6	17.14	

		Arthritis	0	0	14	40	3	8.57	
		Cardiac diseases	0	0	1	2.85	0	0	
7	**Treatment of menopausal symptoms**	**Medical Treatment**	0	0	17	48.57	8	22.85	**χ^2 =0.97 df=6 Table value =1.943**
		Dietary Treatment	0	0	2	5.71	0	0	
		Natural Treatment	0	0	0	0	0	0	

Table 4.6 It shows that , In study group I, the calculated value of the selected demographic variables such as age , previous knowledge on Soya beans and Diaphragmatic breathing exercise and clinical variables type of delivery and history of medical illness except education, occupation, marital status, dietary pattern and the clinical variables such as Body Mass Index, age of attained menarche ,number of children, treatment of menopausal symptoms is greater than the table value which indicates that there is a significant association between the level of menopausal symptoms and the demographic and clinical variables .

Table 4.7 Association between the pretest level of menopausal symptoms among postmenopausal women in study group II with selected demographic and clinical variables.

n=35

S.No	Demographic variable		Mild		Moderate		Severe		Chi square
			f	%	f	%	f	%	
1	Age	40- 44 years	0	0	2	5.71	0	0	χ^2 =1.5 df=6 Table value =1.943
		45- 49 years	0	0	1	2.85	0	0	
		50- 54 years	0	0	5	14.28	2	5.71	
		above 54 years	1	2.85	17	48.57	7	20	
2	Education	Illiterate	0	0	9	25.71	2	5.71	χ^2 =3.01* df=2 Table value=2.92
		School education	0	0	14	40	5	14.28	
		Undergraduate	0	0	2	5.71	3	8.57	
		postgraduate	0	0	0	0	0	0	
3	Occupation	Unemployed	0	0	6	17.14	1	2.85	χ^2 =1.57 df=3 Table value =2.353
		Self employed	0	0	14	40	7	20	
		Government employed	0	0	4	11.42	1	2.85	
		Private employed	0	0	1	2.85	1	2.85	
4	Marital status	Married	0	0	22	62.85	9	25.71	χ^2 =0.38 df= 2

		Unmarried	0	0	0	0	0	0	**Table value=2.92**
		Widower	0	0	2	5.71	1	2.85	
		Separated	0	0	1	2.85	0	0	
5	**Dietary pattern**	**Vegetarian**	0	0	7	20	3	8.57	**$\chi^2 = 0$ df= 1 Table value=6.314**
		Non vegetarian	0	0	18	51.42	7	20	
6	**Previous knowledge on Soya beans and Diaphragmatic breathing exercise.**	**Media**	0	0	3	8.57	4	11.42	**χ^2 =5.26* df=3 Table value =2.353**
		Elder person	0	0	5	14.28	3	8.57	
		By reading books	0	0	3	8.57	0	0	
		None	0	0	14	40	3	8.57	
CLINICAL VARIABLES									
1	**Body Mass Index**	**Underweight <18.5**	0	0	0	0	0	0	**χ^2 =18.33* df=2 Table value =2.920**
		Healthy weight 18.5 – 24.9	0	0	18	51.42	6	17.14	
		Over weight -25	0	0	6	17.14	4	11.42	
		Obese >30	0	0	1	2.85	0	0	
2	**Age at menarche**	**12 -13 years**	0	0	2	5.71	1	2.85	**χ^2 =0.17 df=2 Table value =2.920**
		14 -15 years	0	0	17	48.57	6	17.14	
		16-17 years	0	0	6	17.14	3	8.57	
		Above 18years	0	0	0	0	0	0	

3	**Age at menopause**	**40-44 years**	0	0	1	2.85	0	0	**χ^2 =0.25 df=2 Table value =2.920**
		45 -50 years	0	0	15	42.85	9	25.71	
		51-55 years	0	0	6	17.14	4	11.42	
		Above 56 years	0	0	0	0	0	0	
4	**Number of children**	**1**	0	0	1	2.85	0	0	**χ^2 =0.53 df=2 table value =2.920**
		2-3	0	0	9	25.71	3	8.57	
		Above 3 children	0	0	15	42.85	7	20	
		No children.	0	0	0	0	0	0	
5	**Type of delivery**	**Lower segment caesarian section**	0	0	9	25.71	2	5.71	**χ^2 =1.63 df=2 Table value = 2.920**
		Normal delivery	0	0	14	40	6	17.14	
		Forceps delivery	0	0	2	5.71	2	5.71	
		Ventouse delivery	0	0	0	0	0	0	
6	**History of medical illness**	**Hypertension**	0	0	5	14.28	1	2.85	**χ^2 =2.34 df=2 Table value =2.920**
		Diabetes mellitus	0	0	8	22.85	6	17.14	
		Arthritis	0	0	12	34.28	3	8.57	
		Cardiac diseases	0	0	0	0	0	0	

7	**Treatment of menopausal symptoms**	**Medical Treatment**	0	0	9	25.71	4	11.42	**χ^2 =1.98 df=3 table value =2.353**
		Dietary Treatment	0	0	11	31.42	1	2.85	
		Natural Treatment	0	0	1	2.85	1	2.85	
		None	0	0	5	14.28	3	8.57	

Table 4.7 In the study group II , the calculated value of the demographic variables such as education, previous knowledge on Soya beans and Diaphragmatic breathing exercise and clinical variables such as Body Mass Index except age, occupation, marital status, dietary pattern and clinical variables such as age at menarche, age at menopause, number of children, type of delivery , history of medical illness and treatment of menopausal symptoms is greater than the table value which indicates there is a significant association between the level of menopausal symptoms and demographic and clinical variables.

CHAPTER V

DISCUSSION

This chapter deals with the discussion of the data analyzed, based on the objectives and hypotheses of the study .Quasi experimental study was used to compare the effectiveness of soya beans versus diaphragmatic breathing exercise on level of menopausal symptoms among postmenopausal women, in a selected Villages at Kanyakumari district .This discussion was based on the objectives and hypotheses mentioned in the study.

Distribution of demographic and clinical variables of postmenopausal women with menopausal symptoms in study group I and study group II

According to age in study group I 22(62.85%) belonged to age group of above 56 years, 3(8.5%) belonged to age 49 to 52 years. In study group II 25(71.42%) belonged to age above 56 years, 1(2.85%) belonged to age 49 to 52 years.

With regard to education in study group I, 16(45.71%) had completed school education and 1(2.85%) were postgraduate. In study group II 19(54.28%) had completed school education and 0(0%) of them were post graduates.

Regarding occupation in study group I, 25(71.42%) were unemployed, 0(0%) of them were private employed. In study group II 21(60%) were self-employed, 0(0%) of them were post graduate.

Considering the marital status in study group I 33(94.28%) were married, 0(0%) of them were separated. In study group II 31(88.57%) were married 0(0%) of them were unmarried.

With regard to dietary pattern in study group I 35(100%) were non vegetarian, 0(0%) of them were vegetarian. In study group II. 25(71.42%) were non vegetarian and 10(28.57%) were vegetarian

Regarding previous knowledge on Soya beans and Diaphragmatic breathing exercise in study group I 21(60%) learnt from an elderly person, 0(0%) of them were reading books. In study group II 17(48.57%) were none, 3(8.5%) from books

Considering the Body Mass Index in study group I 25(71.42%) had healthy weight, 0(0%) of them were underweight. In study group II 10(28.57%) were overweight, 0(0%) of them were underweight.

With regard to age at menarche in study group I 26(74.28%) were 12 to 13 years, 0(0%) were above 18 years. In study group II 9(25.71%) were 16 to 17 years, 0(0%) of them were above 18 years.

According to age at menopause in study group I 20(57.14%) were 51 to 55 years, 0(0%) were above 56 years. In study group II 24(68.57%) were 45-50 years, 0(0%) of them were above 56 years.

Analyzing the number of children in study group I 318 (51.42%) were having 2 children, 0(0%) of them were without children. In study group II 22(62.85%) were having 3 children, 0(0%) of them were without children.

Regarding the type of delivery in study group I 20(57.14%) had normal delivery, 0(0%) of them had Vento use delivery. Likewise in study group II 20(57.14%) had normal delivery, 0(0%) of them had Vento use delivery.

With regard to history of medical illness in study group I 17(48.57%) were suffering from arthritis, 1(2.85%) had cardiac disease. In study group II 15(42.85%) were suffering from arthritis, 0(0%) of them had cardiac disease.

Regarding Treatment of menopausal symptoms in study group I 25(71.42%) were under medical treatment and 0(0%) of them had natural treatment. In study group II 12(34.28%) had natural treatment, 4(11.42%) were undergoing medical treatment.

The first objective was to assess the pretest and posttest level of menopausal symptoms among postmenopausal women in study group I and study group II

During pretest, in study group I 0(0%) had mild menopausal symptoms, 25(71.42%) had moderate menopausal symptoms, 10(28.57%) had severe menopausal symptoms but in study group II 1(2.85%) had mild menopausal symptoms, 27(77.14%) had moderate menopausal symptoms and 7(20%) had severe menopausal symptoms.

During posttest, in study group I 0(0%) had mild menopausal symptoms, 34(97.14%) had moderate level of menopausal symptoms and 1(2.85%) had severe menopausal

symptoms .In study group II 2(5.71%) had mild menopausal symptoms, 33(94.28%) had moderate menopausal symptoms and 0(0%) had none menopausal symptoms.

The first objective was supported by the study of **Sager A,(2013)** Conducted a cross sectional house to house survey to find out the prevalence of menopausal symptoms at Anjara kandy, Kerala. Around 106 postmenopausal women selected by random sampling method. Result showed that the mean age of attaining menopause was 48.26 years , 90.7% had emotional problem, 72.9% had headache, 65.4% had lethargy, 58.9% had dysuria, 57% had forgetfulness, 53.3% musculoskeletal problems, 31.8% sexual problems, 9.3% genital problems and changes in voice 8.4%.Only 22.4% of women know the correct cause of menopause. The study concluded that all women were suffering from one or more number of menopausal symptoms.

The second objective was to evaluate the effectiveness of soyabeans and diaphragmatic breathing exercise on level of menopausal symptoms among postmenopausal women in study group I and study group II

The mean score of level of menopausal symptoms among postmenopausal women in study group I was 39.25 in pre test and 36.34 in posttest respectively .The paired 't'value of 1.69 which is significant at $p<0.05$ .It shows that soya beans was effective in reducing the menopausal symptoms.

In study group II the mean score on level of menopausal symptoms among postmenopausal women was 36.71 in pretest and 29.62 in posttest respectively .The estimated paired't' value for reducing menopausal symptoms was 1.69which was also significant at $p<0.05$ .But comparing both the values of soyabeans and diaphragmatic breathing exercise were more significant .Hence the research hypothesis (H_1)is accepted .

The second objective was supported by the study of **Soundari,(2013).** Conducted a comparative study to assess the effectiveness of soya beans versus diaphragmatic breathing exercise among 40 menopausal women in selected villages at Salem, The design was factorial design, a standardized menopausal problems rating scale was used to assess the menopausal problems before and after the intervention namely 50 gram soya beans once daily and diaphragmatic breathing exercise twice daily for 21 days. Diaphragmatic breathing exercise was independently effective than soya beans in the

reduction of menopausal problems (p=0.001). The study concluded that diaphragmatic breathing exercise is powerful technique in reducing menopausal problems.

The third objective was to compare the effectiveness of soya beans and diaphragmatic breathing exercise on level of menopausal symptoms among postmenopausal women in study group I and study group II

In post test, mean score of level of menopausal symptoms in the study group I was 35.48 and the mean score of the experimental group II was 29.62.There was significant difference between the study group I and study group II which was computed through unpaired "t"test (4.57)which is significant at $p<0.05$ the score represents the effectiveness of diaphragmatic breathing exercise on menopausal symptoms. So the second hypothesis of the study was accepted (H_2).

The third objective was supported by the study of R.Rajasoundari**, R.thamil mani, (2015)** Conducted a study to assess the effectiveness of soya protein versus diaphragmatic breathing exercise on menopausal problems among 40 working women in selected schools at Palayamkottai, Tirunelveli district. The design was factorial design, a standardized menopausal problems rating scale was used to assess the menopausal problems before and after the intervention namely 50 gram soya protein once daily and diaphragmatic breathing exercise twice daily for 21 days. Diaphragmatic breathing exercise was independently effective than soya protein in the reduction of menopausal problems (p=0.001). The study concluded that diaphragmatic breathing exercise is powerful technique in reducing menopausal problems.

The fourth objective was to find out the association between the posttest level of menopausal symptoms with selected demographic variables and clinical variables in study group I and study group II.

In study group I, the calculated value of the selected demographic variables such as age , previous knowledge on Soya beans and Diaphragmatic breathing exercise and clinical variables type of delivery and history of medical illness except education, occupation, marital status, dietary pattern and the clinical variables such as Body Mass Index, age of attained menarche ,number of children, treatment of menopausal symptoms is greater than

the table value which indicates that there is a significant association between the level of menopausal symptoms and the demographic and clinical variables .

In the study group II , the calculated value of the demographic variables such as education, previous knowledge on Soya beans and Diaphragmatic breathing exercise and clinical variables such as Body Mass Index except age, occupation, marital status, dietary pattern and clinical variables such as age at menarche, age at menopause, number of children, type of delivery , history of medical illness and treatment of menopausal symptoms is greater than the table value which indicates there is a significant association between the level of menopausal symptoms and demographic and clinical variables. Hence the research hypothesis (H_3) accepted.

The fourth objective was supported by the study of **Anitha,(2015)** conducted a descriptive study to measure the association between selected factors and menopausal problems among 90 working women, aged between 45 to 56 in Erode district,Tamil Nadu. A self-administered questionnaire was used to collect the data and data were analyzed by using descriptive and inferential statistics .The problems assessed were vasomotor changes (mean =51.3),SD=17.68),psychological changes (mean =52.99,SD=18.25),genito urinary changes (mean =57.22,SD=17.32),structural changes (mean =50.89,SD=21.3).The major findings suggested that there was a significant relationship between the level of menopausal problems and the age of the women (x^2=8.80,p<0.01)and the duration of menopause .

This chapter deals with the discussion of the study with reference to the objectives. Researcher concluded as per the study that the menopausal symptoms reduced by soya beans and diaphragmatic breathing exercise but Diaphragmatic breathing exercise was more effective than Soya beans. The study statistically proved that there is a significant effect of soya beans versus diaphragmatic breathing exercise is reduce the level of menopausal symptoms among postmenopausal women.

CHAPTER VI

SUMMARY, CONCLUSION, LIMITATIONS, NURSING IMPLICATIONS, RECOMMENDATIONS

This chapter deals with the summary of the study and conclusion .It clarifies nursing implications for nursing practice, limitations and recommendations for further research in the field.

SUMMARY

The aim of the study is to assess the effectiveness of soyabeans and diaphragmatic breathing exercise on level of menopausal symptoms among postmenopausal women.A review of related literature enabled the researcher to develop the conceptual framework and methodology for the study .The conceptual framework adopted for this study was based on Einstein Widenbach's Prescriptive Helping Art of clinical Nursing Theory (1964).Quantitative research approach was used .Quasi Experimental design was adopted to compare the effectiveness of soyabeans and diaphragmatic breathing exercise on level of menopausal symptoms among postmenopausal women .The study was conducted in chemparuthi vilai, and R.C street under Primary Health Center. The simple random sampling technique (Lottery Method) was used to select 35 samples for study group I and 35 samples for study group II.

Data collection was done by using modified greene climacteric scale .Soyabeans was given to study group I and diaphragmatic breathing exercise given to study group II.Post test was done on twenty first day after intervention .The data gathered were analyzed by descriptive and inferential statistics and interpretation were done on the basis of the objectives of the study.The level of significance was assessed by $p<0.05$ to test the hypotheses.

MAJOR FINDINGS

The major finding of the study was summarized as follows,

Considering the Body Mass Index in study group I 25(71.42%) had healthy weight, 0(0%) of them were underweight. In study group II 10(28.57%) were overweight, 0(0%) of them were underweight.

With regard to age at menarche in study group I 26(74.28%) were 12 to 13 years, 0(0%) were above 18 years. In study group II 9(25.71%) were 16 to 17 years, 0(0%) of them were above 18 years.

According to age at menopause in study group I 20(57.14%) were 51 to 55 years, 0(0%) were above 56 years. In study group II 24(68.57%) were 45-50 years, 0(0%) of them were above 56 years.

Analyzing the number of children in study group I 318 (51.42%) were having 2 children, 0(0%) of them were without children. In study group II 22(62.85%) were having 3 children, 0(0%) of them were without children.

Regarding the type of delivery in study group I 20(57.14%) had normal delivery, 0(0%) of them had Vento use delivery. In study group II 20(57.14%) had normal delivery, 0(0%) of them had Vento use delivery.

With regard to history of medical illness in study group I 17(48.57%) were suffering from arthritis, 1(2.85%) had cardiac disease. In study group II 15(42.85%) were suffering from arthritis, 0(0%) of them had cardiac disease.

Regarding Treatment of menopausal symptoms in study group I 25(71.42%) were under medical treatment and 0(0%) of them had natural treatment. In study group II 12(34.28%) had natural treatment, 4(11.42%) were undergoing medical treatment.

The mean score of level of menopausal symptoms among postmenopausal women in study group I was 39.25 in pretest and 36.34 in posttest respectively .The paired ‘t’value of 1.69 which is significant at $p<0.05$ .It shows that soya beans was reducing the menopausal symptoms. In study group II the mean score on level of menopausal symptoms among postmenopausal women was 36.71 in pretest and 29.62 in posttest respectively .The

estimated paired 't' value was 1.69which was also significant at $p<0.05$. Hence the research hypothesis (H_1) is accepted

In posttest , mean score of level of menopausal symptoms in the study group I was 35.48 and the mean score of the experimental group II was 29.62.there was significant difference between the study group I and study group II which was computed through unpaired 't'test (4.57)which is significant at $p<0.05$ the score represents the effectiveness of diaphragmatic breathing exercise on menopausal symptoms. So the second hypothesis of the study was accepted (H_2).

In study group I, the calculated value of the selected demographic variables such as age , previous knowledge on Soya beans and Diaphragmatic breathing exercise and clinical variables type of delivery and history of medical illness except education, occupation, marital status, dietary pattern and the clinical variables such as Body Mass Index, age of attained menarche ,number of children, treatment of menopausal symptoms is greater than the table value which indicates that there is a significant association between the level of menopausal symptoms and the demographic and clinical variables .

In the study group II , the calculated value of the demographic variables such as education, previous knowledge on Soya beans and Diaphragmatic breathing exercise and clinical variables such as Body Mass Index except age, occupation, marital status, dietary pattern and clinical variables such as age at menarche, age at menopause, number of children, type of delivery , history of medical illness and treatment of menopausal symptoms is greater than the table value which indicates there is a significant association between the level of menopausal symptoms and demographic and clinical variables. Hence the research hypothesis (H_3) accepted.

CONCLUSION

The study is to compare the effectiveness of Soyabeans and Diaphragmatic breathing exercise on level of menopausal symptoms among postmenopausal women. A review of related literature enabled the researcher to develop the conceptual framework and methodology for the study .The conceptual framework adopted for this study was based on Einstein Widenbach's Prescriptive Helping Art of Clinical Nursing Theory

(1964).Quantitative research approach was used .Quasi Experimental design was adopted to evaluate the effectiveness of soyabeans and diaphragmatic breathing exercise on level of menopausal symptoms among postmenopausal women .The study was conducted in under Primary Health Center chemparuthivilai, Gnaravilai and R.C street. The simple random sampling technique was used to select 35 samples for study group I and 35 samples for study group II.

Based on the data collected, the mean score on level of menopausal symptoms posttest value was 35.48 in study group I and mean score in 29.42 posttest in study group II .The unpaired 't' value is 2.77.It shows that Diaphragmatic breathing exercise is more effective in reducing the menopausal symptoms than soya beans among postmenopausal women. Therefore the researcher felt that more importance should be given to diaphragmatic breathing exercise.

NURSING IMPLICATIONS

The findings of the study enables us to conclude that the soyabeans and diaphragmatic breathing exercise were effective in reducing menopausal symptoms .But diaphragmatic breathing exercise is more effective in reducing menopausal symptoms .

NURSING EDUCATION

- Nursing students shall receive adequate training, regarding diaphragmatic breathing exercise
- Workshops or conference for students shall be conducted regarding the use of soya beans and diaphragmatic breathing exercise on menopausal symptoms.
- Nurse educators should ensure that complementary therapies are included in the curriculum from the basic level of nursing education.
- Nurse educator shall make sure that adequate literatures are available regarding Soya beans and Diaphragmatic breathing exercise.

NURSING ADMINISTRATION

- Nurse administrator shall assist in implementing soyabeans and diaphragmatic breathing exercise on public health awareness in the hospital and community sector.
- Administrative staff shall understand the needs of postmenopausal women
- Nursing administrators can organize the conferences, seminars and workshops for nurses working in community to encourage a positive attitude on soyabeans and diaphragmatic breathing exercise to reduce menopausal symptoms.
- Request shall be designed by nurses to the institutions to implement diaphragmatic breathing exercise for menopausal symptoms.

NURSING PRACTICE

- Nurses shall develop their knowledge regarding the benefits of Diaphragmatic breathing exercise and Soya beans on reducing menopausal symptoms among postmenopausal women.
- Nurses shall develop skills in demonstrating Diaphragmatic breathing exercise
- Midwife should create awareness on benefits of Diaphragmatic breathing exercise and Soya beans reducing menopausal symptoms among postmenopausal women.

NURSING RESEARCH

- Nursing research is to be done to find out the various methods to reduce the menopausl symptoms.
- Nurses shall conduct research for further clarifications of the benefits of diaphragmatic breathing exercise on menopausal symptoms
- Large scale study shall be conducted on benefits of diaphragmatic breathing exercise on menopausal symptoms and disseminate the findings of research through conferences, seminars and publishing in nursing journals.
- A qualitative study can be adopted to find out the practice and factors influencing diaphragmatic breathing exercise

RECOMMENDATIONS

- A study can be conducted to determine the occurrence of menopausal symptoms in surgical menopause
- A study can be conducted in menopausal women
- A study can be conducted with large sample size to generalize the results of the study

LIMITATIONS

- The study was conducted in two villages, so the investigators had faced lot of difficulties while taking the survey.
- A similar study can be conducted among menopausal women residing at urban area.
- A comparative study can be done for the menopausal women residing at rural and urban areas.
- A similar study can be conducted among menopausal women in large scale of samples.

REFERENCES

TEXT BOOKS

1. Chandraiah.P.(2012).Nursing research (1st edition), Hyderabad, Florence publishers.
2. D.C Dutta's (2013).Textbook of Gynecology (6th Edition) New Delhi. Jaypee Brothers Medical Publishers.
3. Howkins .J. Hudson .C.N.(1994).Shaw's Textbook of Operative Gynaecology(5th edition) New Delhi.Chruchil Livingstone .
4. Howkins .J, Bourne .G.(1986). Shaw's Textbook of Gynaecology (9th edition).Newdelhi. B.I publications Pvt.Ltd.
5. Hart .D.M,Norman.J(2001).Gynaecology illustrated .(5th edition).China .Chruchil Livingstone.
6. Haber.J.(2006).Nursing research (7th Edition). China, Mosby Elsevier.
7. Jacob.A.(2012).A Comprehensive Textbook of midwifery and Gynecological Nursing(3rd edition).New Delhi. Jaypee Brothers Medical Publishers.
8. Lowdermilk , Perry,Cashion,Alden.(2016).Maternity and Womens Health Care .11th edition U.S.A. Elseveir.
9. Lowdermilk ,Perry ,Cashion,Alden (2012) Maternity and Women's Health Care .10th edition .United States of America .Elsevier Mosby.
10. Lowdermilk ,Perry (2007) Maternity and women's Health care (9th edition)China .Mosby Elsevier.
11. Perry ,Hockenberry , Lowdermilk ,Wilson.(2010) Maternal Child Nursing Care , 4th edition ,Canada .Mosby Elsevier.
12. Padubidri V.G, Anand .E(2005).Gynaecology (2nd edition) , New Delhi. Elsevier.
13. Polit .D, Beck.C(2009).Essentials of Nursing Research 7th edition , India, wolters Kluwer Lippincott Williams and Wilkins.
14. Potter .A. Patrica and perry G Anne (1991).Basic nursing theory and practice (2nd edition).New Delhi: Mosby publications (p).Ltd.
15. Swaminathan ,M.(2004). Hand book of food and nutrition. (1st edition).The Bangalore printing and publishing (p) Ltd India.

16. Schuiling K.D.Likis.F (2006).Women's Gynecologic Health .Canada . Jones and Bartlett.
17. Stoppard.M.(1994).Menopause .(1st Edition) Singapore. Carroll and brown Limited .Sharma.s, Pareek.B.(2016).A Textbook of Nursing Research and Statistics .India. Vikas and Company (Medical Publishers).
18. Vanguri.I(2010).Nursing research and statistics 1st edition, Hyderabad , Frontline publications.
19. Yadav.M.(2009).Textbook of Biostatistics 1st edition Jalandhar .Lotus Publishers.

JOURNAL

20. Karmakar,N(2017) Quality of life among menopausal women : A community based study in a rural area of West Bengal, Journal of Mid-life Health volume 1, page no 21-27.
21. Levis,S(2010) The role of Soy Foods in the treatment of menopausal symptoms , The journal of nutrition, volume 140 ,pages 2318S-2321S.
22. Mesina,M(2014) Soy bean isoflavones warrant greater consideration as a treatment for the alleviation of menopausal hot flashes women's health volume 6 page no 549 -553.
23. Michelle,R.(2013) The implications of menopause research for studies of midlife health. Health sociology review volume 22, page no 365-376.
24. Natarajan,J.(2013) Distress during the menopausal transition and their impact on the quality of life of women.Journal of nursing and health science volume 2, page 1-10 www.iosrjournals.org.
25. Potar.N.(2014) Psychological problems and coping strategies adopted by post menopausal women , International journal of science and research volume 3 , page no 293-296, www.ijsr.net.
26. Srivastava,S .(2014) stress and well being in menopausal and postmenopausal working and non working women, Indian journal of applied research ,volume 4 ,page no 559-561.

27. Sciff,I (2019) Menopause, the journal of the north American menopause society volume 26, page no 691-693.
28. Santoro, N.(2016) Menopausal symptoms and their management, HHS Public Access volume 3 page no 497 -515.
29. Sreenjini.B(2018) Effectiveness of deep breathing and walking exercise in reducing menopausal symptoms among women at karadivavi, India., International Journal of Research in medical sciences, volume 4, page no 1203-1206.

ELECTRONIC VERSION

30. Abarnathy.K(2007).Options for the treatment of menopausal symptoms Retrieved 28 December , 2011 from http://Menopause research.com.
31. Bhattacharjee.M (2017) Menopause Retrieved on Jan 2017 https://www.slideshare net /mobile /monolith Bhatt charge/Menopause-71378040.
32. Diana Lou (2018) Menopause Retrieved on Feb 21, 2018 from http://www.google.com/android UTF-8.
33. Kupfover .(2009). Herbal Remedies for menopausal symptoms .Retrieved 3 July from http://www.Herbal remedies.com.
34. Patanwal.S.(2014). Menopause Retrieved on May 13 2014 https://www.slideshare.net/mobile /swatipatanwal/menopause -ppt 34603737.
35. Patanwal.M.(2015) Seminar on menopause Retrieved on December 29, 2015 from http://www.slideshare.net/mobile vruticpatel/Menopause -56517658
36. Sarath.(2006). Research on hormone replacement therapy in the million women study .Retrieved 17 Jan , 2011 from http://HRT.com.

ANNEXURE- I

LETTER SEEKING PERMISSION TO CONDUCT STUDY

St. XAVIER'S CATHOLIC COLLEGE OF NURSING

Chunkankadai, Nagercoil, Kanyakumari, Tamil Nadu - 629 003.
Tel : College : 04651-231740, Cell : 9840307884, 8012524043; Fax : 04651 - 230914
E-mail : xaviers_nursing@yahoo.com; Website : www.xaviersnsg.edu.in

Dr. A. REENA EVENCY, M.Sc (N)., Ph.D.
Principal

To

The Block Medical Officer,
Primary health center,
Kodhanalloor,
Kanyakumari District.

Respected Sir,

Mrs. Asha S is a student of M.Sc Nursing program in our college, from Obstetric Gynaecological Nursing department. She is conducting a study on A study to compare the effectiveness of soyabeans versus diaphragmatic breathing exercise on level of menopausal symptoms among post menopausal women in a selected village at Kanyakumari District.

This is for the dissertation to be submitted to the Tamilnadu, Dr. M.G.R. Medical University, Chennai, in partial fulfillment of university requirement for the award of M.sc Nursing degree will be beneficial in understanding and improving the health of the postmenopausal women.

As a part of her study she needs to find out the postmenopausal women and select the samples for her study in selected village of primary health center, Kodhanalloor. So permission may kindly be granted for her to conduct the study in selected villages under Primary Health Center, Kodhanalloor, She will abide the rules and regulations.

Thanking you

Chunkankadai

11-12-2018

Yours faithfully

11/12/18

PRINCIPAL
St. XAVIER'S CATHOLIC COLLEGE OF NURSING
CHUNKANKADAI
NAGERCOIL - 629 003
K. K. DIST.

ANNXURE II

LETTER GRANTING PERMISSION TO CONDUCT THE SDTUY

From

The Block Medical Officer,
Block Primary Health Center ,
Kodhanalloor

TO

The principal ,
St.Xaviers Catholic College of Nursing ,
Chunkankadi,
Nagercoil-629 003,
Kanyakumari district.

Respected Madam,

Sub: Granting permission – Mrs.Asha.S
M.Sc Nursing Student regarding.

We are glad to inform you that we have approved permission to your college student Mrs.Asha to under to go to a project on '' Quasi experimental study to compare the effectiveness of soyabeans versus diaphragmatic breathing exercise on level of menopausal symptoms among post menopausal women in a selected village at Kanyakumari district in the villages coming under our block Primary Health Center from 22-12-2018 to 26-01-2019.We trust that your student will abide our rules and regulations.

Thanking you

Block Medical Officer

Medical Officer
Govt. P.H.C., Kodhanallur

ANNEXURES III

LETTER SEEKING EXPERTS OPINION FOR THE VALIDITY OF THE TOOL

From,

S. Asha ,

M.SC . Nursing II year,

St. xaviers catholic college of nursing,

Chunkankadai .

To

Respected madam

Sub; requisition to expert opinion and suggestion for the content validity

I s. Asha,M.SC. Nursing II year students of St.Xavier's Catholic College of Nursing,Chunkankadai, have selected the following topic ", **A Study to compare the effectiveness of soya beans versus diaphragmatic breathing exercise on level of menopausal symptoms among post-menopausal women in a selected villages at Kanyakumari district** '' for my dissertation to be submitted to Tamilnadu Dr. M.G.R Medical University in the partial fulfillment of the requirement for award of master of science in nursing.

I request you to go through the items and give your valuable suggestions and opinions to develop the content validity of the tool. Kindly suggest modifications,addition and deletions if any in the remarks colum.

Thanking you

Place; Chunkankadai

Date;yours faith fully

S.Asha

ENCLOSURE

1. Problem statement , objectives, and hypothesis of study
2. Demographic profile
3. Assessment of Greene Climacteric Scale

4. Evaluation performa for validation of tool.

ANNEXURE - IV

EVALUATION CRITERIA CHECKLIST FOR VALIDATION

INSTRUCTION:

The expert is requested to go through the following criteria for evaluation. Three columns are given for responses and a column for remarks. Kindly put a tick mark (✓) in the appropriate columns and give remarks. Interpretation column:

Column I - does not meet the criteria.

Column II - Partially meets the criteria.

Column III - meets the criteria.

S.NO	CRITERIA	1	2	3	REMARKS
1.	Scoring - adequacy - clarity - simplicity				
2.	Content - logical sequence - adequacy - relevance				
3.	Language - appropriate - clarity - simplicity				
4.	Practicability - easy to score - precise - utility				

Any other suggestion:

Signature:

Name:

Designation:

CRITERIA CHECKLIST FOR VALIDATION OF THE TOOL

Instructions, kindly review the demographic data for menopausal symptoms among post-menopausal women.Kindly give your suggestion regarding the accuracy, relevance and appropriateness of the content. Kindlyplaces tick mark (✓) against specific columns.

PART I AND PART II

VALIDATION OF DEMOGRAPHIC VARIABLE

Item	Very relevant	Relevant	Need for modification	Not relevant	Remarks
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					

PART-III
VALIDATION OF MODIFIED GREENE CLIMACTERIC SCALE

Item	Very relevant	Relevant	Need for modification	Not relevant	Remarks
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

ANNEXURES V

LIST OF EXPERTS VALIDATED THE TOOL

1. Dr.Caroline Felcia Mary MD.,DGO,
   Obstetrician and Gynaecologist,
   Caroline John Hospital,
   Asaripallam ,
   Nagercoil-629 001,
   Kanyakumari District.
2. Dr.Shanthi MD.,DGO.,ART.,MRM,
   Obstetrician andGynaecologist,Infertility Specialist,
   Rathna Memorial Hospital,
   Swamiyarmadam,
   Kanyakumari District.
3. Dr.Reeta Jeba Kumari.S.M.Sc.,(N),PhD.,(N),
   Thasiah College of Nursing,
   Marthandam,
   Kanyakumari District.
4. Mrs.Joylet Paulian M.Sc(N),
   Associate professor,
   C.S.I Mission College of Nursing,
   Marthandam.
   Kanyakumari District.
5. Mrs.R.BeutlinM.Sc(N),
   Associate professor,
   Catherin Booth College of Nursing.
   Nagercoil,
   Kanyakumari District.

ANNEXURES –VI

CERTIFICATE OF DIAPHRAGMATIC BREATHING EXERCISE

Vazhga Vaiyagam

Vazhga Valamudan

THE WORLD COMMUNITY SERVICE CENTRE

26, Second Seaward Street, Valmiki Nagar, Thiruvanmiyur,
Chennai - 600 041.
Regd. No. 84/1958 & 22/1993 under T.N.S.R. Act 27/75
Ph : 044 - 24571153 E-Mail : chennai.wcsc@vethathiri.edu.in

Affiliated Trust Address :

TEMPLE OF CONSCIOUSNESS
வாழ்கலைவையகம் வாழ்கவளமுடன்
விள்ளுக்குறி மனவளக்கலை
தவமையம்
குண்டலினியோக தியானப்பயிற்சி
விள்ளுக்குறி. Pin : 629 180.

KAYAKALPA COURSE CERTIFICATE

This is to certify that

~~Thiru~~ / Tmt / ~~Selvan / Selvi.~~ S. ASHA

has successfully participated in the

KAYAKALPA COURSE

held at VILLUPURAM

on 09-05-2018

வாழ்கவையகம் வாழ்கவளமுடன் Be Blessed by the Divine Power
விள்ளுக்குறி மனவளக்கலை
தவமையம்
குண்டலினியோக தியானப்பயிற்சி
விள்ளுக்குறி. Pin : 629 180.

For President
The World Community Service Centre

ANNEXURE VII

STRUCTURED INTERVIEW SCHEDULE TO COLLECT THE DEMOGRAPHIC AND CLINICAL VARIABLES

PART -1

DEMOGRAPHIC VARIABLES

Introduction to participants;

Dear participants,

This section consists of the personal information and you are requested to answer the question correctly. The information collected from you will be kept confidential.

1. Age

a) 40- 44 years ( )
b) 45- 49 years ( )
c) 50- 54 years ( )
d) Above 54 years ( )

2. Education

a) Illiterate ( )

b) School education ( )

c) Undergraduate ( )

d) Postgraduate ( )

3. Occupation

a) Unemployed ( )

b) Selfemployed ( )

c) Government employed ( )

d) Private employed ( )

4. Marital status

a) Married ( )
b) Unmarried ( )
c) Widower ( )
d) Separated ( )

5. Dietary pattern

a) Vegetarian ( )

b) Non vegetarian ( )

6. Previous knowledge on Soya beans and

Diaphragmatic breathing exercise

a) Media ( )

b) Elder person ( )

c) By reading books ( )

d) None ( )

Clinical variable

Part II

1. Body mass index

a) Underweight< 18.5( )

b) Healthy weight 18.5 – 24.9( )

c) Over weight 25.0 – 29.9 ( )

d) Obese 30.0 – 39.9. ( )

2. Age at menarche

a) 12 – 13 years ( )

b) 14 – 15 years ( )

c) 16 - 17 years ( )

d) above 18 years ( )

3. Age at menopause

a) 40 -44 years ( )

b) 45-50 years ( )

c) 51-55 years ( )

d) above 56 years. ( )

4. Number of children

a) 1 ( )

b) 2-3 ( )

c) Above 3 children ( )

e) No children. ( )

5. Type of delivery

a) Lower segment caesarian section ( )

b)Normal delivery ( )

c) Forceps delivery( )

d) Vento use delivery ( )

6. History of medical illness

a) Hypertension ( )

b) Diabetes mellitus( )

c) Arthritis ( )

d) Cardiac diseases( )

7. Treatment of menopausal symptoms

a) Medical Treatment ( )

b) Dietary Treatment( )

c) Natural Treatment ( )

d) None ( )

PART – III

Description of tool

MODIFIED GREENE CLIMACTERIC SCALE TO ASSES THE LEVEL OF MENOPAUSAL SYMPTOMS

S. NO	SYMPTOMS	NOT AT ALL (0)	RARELY (1)	FREQUENTLY (2)	ALWAYS (3)	SCORE
I	How often do you experience PHYSIOLOGICAL SYMPTOMS					
1	Palpitation					
2	Sleep disturbance					
3	Tiredness					
4	Tightness in head or body					
5	Tingling sensation					
6	Joint and muscle pain					
7	Loss of scalp hair					
8	Breathing difficulty					
9	Hot flush					
10	Excessive sweating during night time					
11	Vaginal dryness					
12	Fatigue					
13	Weight gain					
14	Dry skin					
II	**PSYCHOLOGICAL SYMPTOMS**					
15	Tensed up for little thing					
16	Sudden excitability					
17	Difficulty in concentration					
18	Lose interest in doing things					

19	Lack of confidence					
20	Depression					
21	Anxiety					
22	Confusion					

Scoring procedure,

Score	Postmenopausal symptoms
0- 22	Mild
23- 44	Moderate
45- 66	Severe

ANNXURE VIII

DATA COLLECTION SCHEDULES

S.NO	DATE	NUMBER OF SAMPLES		METHOD OF SAMPLE SELECTION
		Study group I	Study group II	
1	23-12-2018	survey		Simple Random Sampling Method (Lottery Method)
2	24-12-2018			
3	25-12-2018			
4	26-12-2018			
5	27-12-2018			
6	28-12-2018			
7	29-12-2018			
8	30-12-2018			
9	31-12-2018			
10	1-01-2018			
11	2-01-2018			
12	3-01-2018			
13	4-01-2018			
14	5-01-2018			
15	6-01-2018			
16	7-01-2018	35	35	
17	8-01-2018			
18	9-01-2018			
19	10-01-2018			
20	11-01-2018			
21	12-01-2018			
22	13-01-2018			
23	14-01-2018			
24	15-01-2018			
25	16-01-2018			
26	17-01-2018			

ANNEXURE IX

CERTIFICATE OF STATISTICAL ANALYSIS

CERTIFICATE OF STATISTICAL ANALYSIS

TO WHOM SO EVER IT MAY CONCERN

Certified the dissertation paper titled **" A Quasi Experimental study to Effectiveness of Soya beans versus Diaphragmatic breathing exercise on level of menopausal symptoms among postmenopausal women in selected Villages at Kanyakumari District"** done by **Mrs.S.Asha,** has been checked for the accuracy in statistical analysis and interpretation and was appropriate for the purpose.

P. ANTO PAULIN BRINTO
Asst. Professor & Bio-Statistician
Scott Christian College (Autonomous)
Nagercoil

Signature

ANNEXURE X

CERTIFICATE OF EDITING

CERTIFICATE OF EDITING

TO WHOMSOEVER IT MAY CONCERN

This is to Certify that the dissertation paper titled **"A Quasi Experimental study to Effectiveness of Soya beans versus Diaphragmatic breathing exercise on level of menopausal symptoms among postmenopausal women in a selected Villages , at Kanyakumari District"** by **Mrs.S.Asha,** has been checked for the accuracy and correctness of English language usage and that the language used in the tool is lucid, unambiguous, free of grammatical and spelling errors and appropriate for the purpose.

Signature

Jemimah Baus, G. PhD
Asso. Prof. in English
N. M. Christian College
Marthandam-629165

ANNEXURE XI

CERTIFICATE OF CALIBRATION

EQUIPCARE ENGINEERING
2ND FLOOR, REHOBOTH COMPLEX,
MS ROAD, VETTURNIMADAM,
NAGERCOIL 629003.

24/11/2018

CERTIFICATE OF TOOL VALIDATION

TO WHOMSOEVER IT MAY CONCERN

This is to certify that the Weighing Scale **(COMPANY: UNITECH SYSTEM, MODEL: 552, SERIAL NO: 3076)** which is owned by **S. Asha, Second Year M.Sc Nursing, St. Xavier's Catholic College of Nursing, Chunkankadai** was tested and calibrated with the clinical standards and its ready for use.

Performance Analysis:

Sl No	Std Weight(kg)	DUT Under Comparison(kg)	% Deviation
1	10	10.0	0
2	15	15.0	0
3	20	20.0	0
4	55	54.9	0.1

EQUIPCARE ENGINEERING Nagercoil 629 003

Bravin Rajagopal
Senior Biomedical Engineer

E-mail: equipcareengineering@gmail.com Phone: +91 9790567867, +91 9159993243

ANNEXURE-XII

CERTIFICATE OF PLAGIARISM

This is to certify that is dissertation work titled **"Effectiveness of soya beans versus diaphragmatic breathing exercise among postmenopausal women** "of the candidate **Mrs.S. Asha** with registration number **301721901** for the award of **Master of Science in Nursing** in the branch of **Obstetrics and Gynaecological Nursing**. I personally verified the urkund.com website for the purpose of plagiarism check. I found that the uploaded thesis file contains from introduction to conclusion pages and result shows **17** percentage of plagiarism in the dissertation.

Name and Signature of the Principal: _____

Dr. (Mrs)A.Reena Evency, M.Sc.,(N),Ph.D., (N),
Principal,
St.Xaviers Catholic College of Nursing,
Chunkankadai,Nagercoil,
Kanyakumari District, Pin code- 629 003.

Name and Signature of the Guide: _____

Mrs.D .Shiny Mary, M.Sc., (N),
Associate professor,
Obstetrics and Gynaecological nursing,
St.Xavier's Catholic College of Nursing,
Chunkankadai , Nagercoil,
Kanyakumari District, Pin code- 629 003.

URKUND

Urkund Analysis Result

Analysed Document:	ASHA.docx (D54733692)
Submitted:	8/7/2019 4:09:00 PM
Submitted By:	vsmith0268@gmail.com
Significance:	17 %

Sources included in the report:

Raji PhD Thesis 01 07 2019.docx (D54252971)
final.docx (D54336710)
5 Ph D.doc (D29539996)
Chapters.docx (D54330379)
0870040016-S.docx (D28687539)
chapter 1-6.docx (D26853708)
https://pdfs.semanticscholar.org/312b/bffc80fcd6e568303325cfbec5c4cac00e4d.pdf
http://repository-tnmgrmu.ac.in/3999/1/3003188shenbagamc.pdf
http://repository-tnmgrmu.ac.in/3988/1/3003128lourdsbemig.pdf
http://repository-tnmgrmu.ac.in/830/1/3004163sangeethav.pdf
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3973860/
http://www.ijournalhs.org/article.asp?issn=2542-6214;year=2018;volume=11;issue=1;spage=77;epage=80;aulast=Pathak
http://ajner.com/AbstractView.aspx?PID=2019-9-2-3
http://repository-tnmgrmu.ac.in/1661/1/3003275chitradevia.pdf
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4071650/
http://www.gijhsr.com/GIJHSR_Vol.4_Issue.3_July2019/11.pdf
http://docplayer.net/85864791-M-sc-nursing-degree-examination-branch-iv-community-health-nursing-college-of-nursing-madras-medical-college-chennai.html
https://www.ncbi.nlm.nih.gov/pubmed/29105043/
http://repository-tnmgrmu.ac.in/10203/1/300423914bino_shiny.pdf
http://52.172.27.147:8080/jspui/bitstream/123456789/9060/1/Shilpa%20D%20V%20-%20obg.pdf
https://www.ijsrm.in/index.php/ijsrm/article/view/1944
http://www.rguhs.ac.in/cdc/onlinecdc/uploads/05_N199_32428.doc
https://tria999enniaria.com/ru-product-details-323.html
http://ijcrme.rdmodernresearch.com/wp-content/uploads/2015/06/95.pdf
9aeb6206-6c37-4d9e-96d6-2b1e4851128f

Instances where selected sources appear:

88

ANNEXURE XIII

INTERVENTION

DEFINITION

Soya bean is one of the nutritious pulses availablie under cultivation. it contains all micro nutrients for good nutrition , protein , fat , carbohydrates , calcium,iron,vitamin $B_1$and phytoestrogens which are used to alleviate the menopausal problems.

PURPOSES OF SOYA BEAN,

- Soya bean has the natural hormone of phytoestrogen which reduce the level of menopausal symptoms
- Consuming soy isoflavin may reduce the frequency and intensity of hot flushes in menopausal women.

MECHANISM OF ACTION

Soy products contain isoflavones known as phytoestrogens such as genistein and daidzein .When these isoflavones bind to some receptors, they mimic the effects of oestrogens and reduce hot flashes and other symptoms of menopause.

PREPARATION OF BOILED SOYA BEANS

INGREDIENTS

- Soya bean-50gm
- Water
- Salt for taste

PROCEDURE FOR PREPARATION

1. Wash hands
2. Take 50 grams of soya bean
3. Soak it in water for 8- 10 hours
4. Boil the soya bean
5. 50 gram of soya bean is given to each menopausal women before breakfast once a day for 21 days .

DIAPHRAGMATIC BREATHING EXERCISE

DEFINITION

Diaphragmatic breathing or deep breathing, is breathing that is done by contracting the diaphragm, a muscle located horizontally between the thoraxic cavity and abdominal cavity air enters the lungs and the chest rises and belly expands.

PURPOSES

- Reduction of hot flushes in menopausal women
- Relaxation of facial muscles
- Reduction of pain and stress signals
- Improve effectiveness of aerobic exercises and workouts
- Lower blood pressure
- Reduction of chances to have a second heart attack
- Promote relaxation
- Reduce anxiety

INDICATIONS

- Hot flush
- Fatigue
- Headache and Insomnia
- Stress
- Obesity

CONTRAINDICATIONS

- Severe orthopedic abnormalities eg.scoliosis
- Deficit in CNS that lead to muscle weakness
- Surgery like CABG or trauma
- Acute or chronic lung diseases eg.COPD tuberculosis
- Renal diseases ,Gout

BENEFITS

PSYCHOLOGICAL BENEFITS

- Increase your self-confidence and self-image
- Makes you feel good
- Improves concentration and memory

- Helps you relax and sleep better
- Helps control anxiety
- Helps reduce food cravings

PHYSICAL BENEFITS

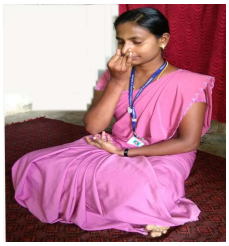
- Helps your respiratory muscles work better
- Helps you control your breathing better
- Improves the function of your heart and lungs
- Improves the flexibility of your muscles and joint range of motion
- Maintains the health of your bones
- Enhance your co-ordination and balance
- Optimizes weight control and increases lean muscle mass
- Helps in digestion**.**

MECHANISM OF ACTION

When a women takes deep breath, human lung which produce insulin growth factor which is bind in the muscles and enhance the stimulating effects of estradiol.

PREPARATION

- Choose the calm and quiet place without any disturbance
- Spread the mat and squat on the mat
- Keeping your back straight
- Keep your mind relax
- Close your eyes



STEPS OF PROCEDURE

STEP -1

With your right thumb close your right nostril and inhale air through your left nostril for 5 seconds depending on persons ability the timing of inhalation may vary.

STEP-2

With your right ring finger close your left nostril exhale air through the right nostril.You can take more time eg.10 seconds for exhalation, repeat the procedure with inhaling air through your right nostril and exhaling through left nostril this makes one cycle of the exercise.You can do the this exercise 21 times, it must be done twice a day,once in the morning and once in the evening .

ANNEXURE XIV

FORMULAS USED FOR DATA COLLECTION

Slovin's Formula

$$n = \frac{N}{1 + Ne^2}$$

Coefficient and correlation

$$r = \frac{(x - \bar{x})(y - \bar{y})}{\sqrt{\sum(x - \bar{x})^2 \Sigma(y - \bar{y})^2}}$$

Mean

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

Standard deviation

$$SD = \sqrt{\frac{\sum(x - \bar{x})^2}{n - 1}}$$

Paired 't ' test

$$t = \frac{\bar{d}}{s}\sqrt{n_{-1}}$$

$$s = \sqrt{\frac{\sum\left(d - \bar{d}\right)^2}{n - 1}}$$

Unpaired 't' test

$$t = \frac{\bar{x} - \bar{y}}{s\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

$$s = \sqrt{\frac{\sum(x - \bar{x})^2 + \sum(y - \bar{y})}{n_1 + n_2 - 2}}$$

Chi-square test

$$X^2 = \frac{\Sigma(0 - E)^2}{E}$$

ANNEXURE XV

PHOTOGRAPHS