"A STUDY TO ASSESS THE EFFECTIVENESS OF ACUPRESSURE ON DYSMENORRHEA AMONG ADOLESCENT GIRLS (12-16 YEARS) STUDYING IN SAKTHI HIGHER SECONDARY SCHOOL, NACHIMUTHUPURAM, ERODE (DT),"

By

PREMALATHA. A

Dissertation Submitted to

THE TAMILNADU DR MGR MEDICAL UNIVERSITY,

Chennai, Tamilnadu

In partial fulfillment

Of the requirements for the degree of

Master of Science

In

Obstetrics and Gynecological Nursing

Dharamarathnakara Dr.Mahalingam Institute of Paramedical Sciences and Research

Sakthi Nagar, Bhavani, Erode

March 2010

A STUDY TO ASSESS THE EFFECTIVENESS OF ACUPRESSURE ON DYSMENORRHEA AMONG ADOLESCENT GIRLS (12-16 YEARS) STUDYING IN SAKTHI HIGHER SECONDARY SCHOOL, NACHIMUTHUPURAM, ERODE DT.,

Approved by DMIPSR College Research Committee

Principal : ----------

Prof. R. Vasanthi, M. sc (Nursing)

Professor in Pediatric Nursing,
Principal, DMIPSR College of Nursing,
Sakthi Nagar, Bhavani, Erode- 638315.

Research Guide : ----------

Mrs. Piramila, M,Sc., (Nursing)
Professor in Obstetrics & Gynecology
DMIPSR, College of Nursing,
Sakthi Nagar, Bhavani, Erode- 638315.

Medical Guide : ----------

Dr.Ambika Rajamanickam MBBS, MD, DGO

Reg.No:

PGR Hospital, Bhavani, Erode District.

A Dissertation submitted to

The Tamilnadu Dr. M.G.R. Medical University, Chennai

In partial fulfillment of the requirement for

Degree of Master of Science in Nursing

VIVA VOCE :

1. **INTERNAL EXAMINER:** ----------

2. **EXTERNAL EXAMINER:** ----------

March 2010

ENDORSEMENT BY THE PRINCIPAL OF THE INSTITUTION

This is to certify that the dissertation entitled "**A STUDY TO ASSESS THE EFFECTIVENESS OF ACUPRESSURE ON DYSMENORRHEA AMONG ADOLESCENT GIRLS (12-16 YEARS) STUDYING IN SAKTHI HIGHER SECONDARY SCHOOL, NACHIMUTHUPURAM"** is a bonafide research work done by **A. Premalatha** in partial fulfillment of the requirement for the degree of **Master of Science in Nursing** Obstetrics & Gynecology

Seal & Signature of the principal
Prof (Mrs.) R. Vasanthi M. Sc. (N)
Date:
Place: Sakthi Nagar

ENDORSEMENT BY THE HOD OF THE DEPARTMENT

This is to certify that the dissertation entitled "**a study to assess the effectiveness of acupressure on dysmenorrhea among adolescent girls (12-16 years) studying in Sakthi higher Secondary School, Nachimuthupuram, Erode (Dt).**" is a bonafide research work done by **Premalatha.A** in partial fulfillment of the requirement for the degree of **Master of Science in Nursing** Obstetrics & Gynecology

Date:

Place: Sakthi Nagar

Signature of the Research Guide

Prof. Mrs. Piramila, M,sc (N)

Department of Obstetric and Gynecological Nursing

DMIPSR College Of Nursing, Sakthi Nagar,

Bhavani, Erode District.

ACKNOWLEDGEMENT

I express my gratitude to **almighty god** for his grace and blessings, because he has been the guidance force behind all my efforts.

I wish to express my sincere appreciation, and owe a deep sense of gratitude to all those who have contributed to the successful accomplishment of this task.

All the outset I express my utmost gratefulness to the Almighty **God** for his blessings throughout this study.

I am immensely grateful to **Sri Sri Sri Balagangadharanatha Mahaswamij,president SACS MUTT,Bangalore and Chairman Dr**. **Mahalingam ,sakthi group of companies,**giving me an opportunity to undertake the course of Dr Mahalingam Institute of paramedical Science & research Sakthi Nagar.

I am greatful to our correspondent Sir **Mr.Ramachandra,secretary and corresponden** of Dr Mahalingam Institute of paramedical Science & research, for giving me an opportunity to undertake the course at Dr Mahalingam Institute of paramedical Science & research Sakthi Nagar.

My heartfelt thanks to **Prof. Mrs R. Vasanthi, M.Sc., (N) Principal,** Dr. Mahalingam Institute of paramedical Science & research, for the encouragement, inspiration, support as well as for providing all facilities for successful completions of this study.

It gives me great pleasure to thanks with deep sense of gratitude and respect, my guide **Prof. Mrs. PIRAMILA M.SC, (N)** Department of Obstetrics &

Gynecology Nursing Dr. Mahalingam Institute of paramedical Science & research for her inspiring guidance, suggestions, timely help, constant encouragement and co-operation for the completion of this study.

I extend my sincere gratitude to **Mr. Anand**, **M.Sc. (N), Vice Principal, DMIPSR** nursing for this timely advice and guidance.

I extend my sincere gratitude to **Mrs.Janaki M.Sc (N), Lecturer,obstetrics and gynaecological department, DMIPSR** nursing for this timely advice and guidance

Grateful acknowledgement is extended to **Mr. Dhanapal,** Professor in statistics for his valuable help is statistical analysis of the study.

I also extend my thanks to **Mrs.Sumithra M.Phil** who edited the study.

A word of appreciation to the Librarian **Mr. Kumar** DMIPSR for their sincere help and whole hearted cooperation.

I also accord my respect and gratitude to the **faculty of Dr Mahalingam Institute of paramedical Science & research** for their timely assistance, cooperation and support throughout the period.

My sincere thanks to all the **experts** who have contributed with their valuable suggestions in validating the tool.

I am truly grateful to all the **participants** who formed the core and basis of this study for their wholehearted co-operation.

I am proud to acknowledge the love, support and prayers of my **parents Mr.M.Angamuthu and Mrs.A. Ponnachi** in every phase of the study.

My sincere thanks to all my **classmates** and **friends** & **Madesh, Sri Vijayalakshmi Computers** for making me successful in all the encounters and difficulties faced during the study.

I owe my heartful gratitude to my husband **mr.saravanan** and my father in law, and mother in law,for their moral support through out the study.

Last but not least i would like to extent my sincere thanks to all the members and colleagues who have directely and indirectley helped me in the succesful completion of the study.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ANNEXURE

ABBREVIATIONS USED

et al.	=	And others
DMIPSR	=	Dharamarathnakara Dr.Mahalingam Institute of Paramedical Sciences & Research
Fig	=	Figure
H_1	=	Research hypothesis
H_2	=	Research hypothesis
HOD	=	Head of the Department
n	=	Number of samples
N	=	Total number of samples
No.	=	Number
Dt	=	District
CAM	=	Complementary and Alternative Medicine
LIV	=	Liver
SP	=	Spleen Point
ST	=	Stomach Point
S.D	=	Standard deviation
VAS	=	Visual analogue scale
TCM	=	Traditional Chinese Medicine
TENS	=	Transcutaneous Electrical Nerve stimulation
±	=	More than or less than
=	=	Equal to
/	=	or
%	=	Percentage
$\chi 2$	=	Chi square
CV	=	Conception Vessel

ABSTRACT

STATEMENT OF THE PROBLEM:

"**A STUDY TO ASSESS THE EFFECTIVENESS OF ACUPRESSURE ON DYSMENORRHEA AMONG ADOLESCENT GIRLS (12-16 YEARS) STUDYING IN SAKTHI HIGHER SECONDARY SCHOOL, NACHIMUTHUPURAM, ERODE DT".**

OBJECTIVES OF THE STUDY

1. To assess the level of menstrual pain among experimental and control group.
2. To compare the level of pain before and after applied acupressure among experimental and control group.
3. To evaluate the acupressure for dysmenorrhea among adolescent girls.
4. To find out association of level of pain between control group and experimental group with selected demographic variables.

MAJOR FINDING OF THE STUDY:

The study reveals that the maximum demographic variables in the age group of 15-16 years 56% and most of the students attained menarche 13-14 years 48%, and the education of mother mostly from higher secondary 68%, monthly income of the parents are mostly from 3001-5000 are 56% and most of the students coming from village are 68%, most of the students are having headache during menstruation 24%.

The descriptive statistics of the maximum, mean, standard deviation and mean percentage of pain score. In control group of mean, Standard Deviation and mean percentage score regarding pain score of first day shows that the mean score (8.99 ± 0.98) 35.6 % of the total score was observed during pre test. The mean score (7.84 ± 0.98) 31.36 % of the total score was observed during post test. Further the difference in mean percentage of scores show that percentage was more or less equal and very less on both days among the control group.

In experimental group of mean, Standard Deviation and mean percentage score regarding pain score of first day shows that the mean score (8.99 ± 1.15) 35.6 % of the total score was observed during pre test. The mean score (6.44 ± 1.02) 25.76% of the total score was observed during post test. Further the difference in mean percentage of scores show that percentage was more or less equal and very less on both days among the experimental group.

In control group the pretest score was severe level of pain 14(56%), worst pain 11(44%), the post score was as the same way 15(60%) and 10(40%) and in experimental group in pretest severe 7(28%), in worst 18(72%).

It shows the effectiveness of acupressure on dysmenorrhoea.

Key words:

Dysmenorrhoea. acupressure, adolescent girls,

CHAPTER I

INTRODUCTION

“Caring is the essence of nursing”

-Jean Watson

PUBERTY:

PYOO, BORTĒ, period during which the onset of sexual maturity occurs. It usually takes place between the ages of 10 and 15 in both sexes but sometimes occurs as early as 7 or 8 years of age in females. The pituitary gland secretes hormones that stimulate enlargement and development of the sex organs, which thus become capable of reproduction. The appearance of secondary sex characteristics also occurs during puberty. In females the reproductive cycle of ovulation and menstruation begins, pubic hair appears, and development of the breasts and other body contours takes place. Puberty, a transition period coinciding with adolescence, involves both physiological and psychological adjustments. It is often marked by emotional stress arising as the adolescent relinquishes childhood behavior patterns and adopts those of an adult.

(www.google.com)

DYSMENORRHOEA:

DEFINITION:

Dysmenorrhea is the occurrence of painful cramps during menstruation.

DESCRIPTION:

More than half of all girls and women suffer from dysmenorrhea (cramps), a dull or throbbing pain that usually centers in the lower mid-abdomen, radiating toward the lower back or thighs. Menstruating women of any age can experience cramps.

While the pain may be only mild for some women, others experience severe discomfort that can significantly interfere with everyday activities for several days each month.

(Carol A. Turkington)

Menstruation although viewed as a normal physiological process, may be the most painful events occur in woman's life, during menstruation that painful event is called "Dysmenorrhea" "Unmedicated management of dysmenorrhea is the healthiest and safest way to prevent further complication in woman's life.

It has been reported that, pain management option for the woman during dysmenorrheal, has been changed dramatically over the past decade.

("American family medicine 2007")

Interest and attraction to alternative and complementary therapies is growing and it is looked at as a new approach to health care, and alternative therapies are often known as comfort measures or non pharmacologic methods for control pain. During dysmenorrhea application of heat, or cold, acupressure, acupuncture, aroma therapy, music and imagery therapy and transcutaneous electrical nerve stimulation (TENS) for chronic pain.

These comfort measures are directed at decreasing tension and pain during menstruation. In united states, nurses are asked to integrate a holistic approach to the care they provide for that people, and attend acupuncture training program. Hence we can strongly recommend nurses working in the main stream to study body work techniques such as acupressure, shiatsu and incorporate them in to practice for the purpose of pain relief augmenting the effects of pain medication and facilitating comfort.

(“alternative and complementary therapy 2006”)

“Acupressure had been recommended as a unique solution to the problem of providing accessible effective pain relieving measure for dysmenorrhea, and it is a non invasive technique that involves no other tools than a pair of hands.

Acupressure therapy was known in India as early as 5000 years ago (sushrut samhita). unfortunately it was not preserved properly then it was practiced in china, since 2000 BC Acupressure techniques are widely practiced internationally for relaxation wellness promotion and the treatment of various health conditions.”

(“alternative and complementary therapy 2005”)

In traditional Chinese medicine (TCM) term acupressure points prompt the body to work more efficiently from a medical model, they can be viewed as promoting the release of endorphins blocking the pain receptors to the brain.

Most women experience a number of minor discomforts experience before menstruation (Pre menstrual symptoms). The changes can be harmonized and balanced by stimulation of acupressure points. Acupressure is effective in treating premenstrual symptoms and discomforts during menstruation.

Acupressure therapy is one of the most Precious gifts to mankind from the creator himself.

("traditional an Chinese medicine 2004")

NEED FOR THE STUDY

Dysmenorrhea is the leading cause of recurrent short term school absence in adolescent girls and a common problem in woman of reproductive age .Around 10-45% of young woman with dysmenorrhea reports missing or having reduced time at work, school or other activities due to their symptoms.

A broad spectrum of non pharmacologic and pharmacologic approach is used to relieve pain in dysmenorrhoea.

Non pharmacologic measures to reduce dysmenorrhea have been used throughout history. Despite reports that some of these methods reduce pain increase woman's satisfaction.

Bensoussan ctal" (2009 Jan) conducted a comparative study of 60 Australian woman's and 60 Chinese woman to know effectiveness of traditional Chinese medicine and pharmacological measures in treating dysmenorrhea. The Chinese women who went traditions Chinese medicine therapy has significantly shorter duration of pain during dysmenorrhoea, the Australian women who went pharmacological measures have the side effect of the medicine for prolonged period there for TCM protocol used as effective treatment for dysmenorrhea.

Patelv etal (2006 April) conducted a Cross sectional survey in India among woman who attended Primary health center to describe the prevalence and determinants of dysmenorrhoea, the most common menstrual complaints in the community Among the subject surveyed (95%) reported moderate to server dysmenorrhea and 5% are reported with other complaints of dysmenorrhoea.

Nursing time 2004 March surveyed Dysmenorrhea pain during menstruation affects 40-90% of menstruating women and has been reported as the most common causes as the most common causes of regular absenteeism among young women, there are two types of dysmenorrhea, primary and secondary. primary dysmenorrhea is a painful menstruation with no detectable organic disease and is more common in adolescent women.Secondary dysmenorrhea is painful menstruation that is frequently associated with a pelvic pathology. The symptoms that present with dysmenorrhea, the management and treatment options that are available and the implications options that are available and the implications for nursing practices are discussed

. **Health (Jan 2003)** surveyed in many women's, the women's suffered from painful menstrual cramps (Dysmenorrhoea). Symptoms present in the lower abdomen back a or thighs ,headache, diarrhea constipation, nausea, dizziness and fainting.

During the menstrual cycle the lining of the uterus produces a hormone causes the uterus to contract often painful. woman with severe cramps may produce higher than normal amount of prostaglandins or may be more sensitive to its effects.

Aghamiriz etal states that**,** Primary dysmenorrhea is highly prevalent and causes much work loss and discomfort.100students suffered from primary dysmenorrhea were selected by targeted sampling and taken their into two groups experimental and control group. treatment was given during two consecutive menstrual cycles coincident with pain and bleeding by acupressure in case group pain rating scale was done with use of V.A.S (Visual analogue scale) in 30 min ,1 hr, 2 hr and 3 hour interval after treatment.

The result showed that mean pain scores before (8.2 : 1.6) and after (2.6, 1.3) in experimental group have significant difference between mean pain score before and after treatment

"There fore acupressure could be used as a non medicated inexpensive and safe method in decreasing pain of dysmenorrhea in girls and women.

STATEMENT OF THE PROBLEM

"**A STUDY TO ASSESS THE EFFECTIVENESS OF ACUPRESSURE ON DYSMENORRHEA AMONG ADOLESCENT GIRLS (12-16 YEARS) STUDYING IN SAKTHI HIGHER SECONDARY SCHOOL, NACHIMUTHUPURAM, ERODE (Dt)".**

OBJECTIVES OF THE STUDY:

5. To assess the level of menstrual pain among experimental and control group.
6. To compare the level of pain before and after applied acupressure among experimental and control group.
7. To evaluate the acupressure for dysmenorrhea among adolescent girls.
8. To find out association of level of pain between control group and experimental group with selected demographic variables.

HYPOTHESIS :

H_1: There is a significant difference among the pain before and after giving acupressure in experimental group

H_2: There is a significant relationship between post test level of pain in experimental and control group.

H_3: There is a association between selected demographic variables and menstrual pain with experimental and control group.

OPERATIONAL DEFINITIONS:

DYSMENORRHOEA:

Dysmenorrhoea is the medical term for menstrual cramps. pain during the menstruation due to the increased level of prostaglandins in the menstrual fluid, the signs and symptoms are lower abdominal pain backache ,nausea, vomiting etc.,

ACUPRESSURE:

Acupressure is a technique related to acupuncture where the energies of the body are regulated by manipulating points on the body and this has effects on the points on the body,this has effects on the emotions, tension, and physical conditions. The points are commonly called " **Pressure points**" **"acu points**" or **Acupressure points".**

ADOLESCENT GIRL:

The Period following the onset of puberty during which a young person develops from a child into an adult.

EXPERIMENTAL STUDY

A Scientific procedure undertaken to make a discovery test a hypothesis or demonstrate a know fact.

EFFECTIVENESS:

A change which is a result (or) consequence of an action or other causes for my study to see the effectiveness of acupressure on dysmenorrhea.

LIMITATION:

- The Study was limited only six weeks of periods
- The study was limited only to who all are studying in Sakthi higher secondary school, Nachimuthupuram, Erode District
- Limited only the students who all are having dysmenorrhoea

ASSUMPTION:

- Most of the adolescent girls will have dysmenorrhoea
- Acupressure will reduce the dysmenorrhea
- There will be difference between the pain before and after giving acupressure.

CONCEPTUAL FRAME WORK

The conceptual framework in this study was based on the sister callista ROY's adaptation model (1939) which involves five concept person goal of nursing, Nursing activates, health and environment

The adaptive system has four components like input processes effectives and output for the present study the above mentioned components have been modified as follows,

ROY's states that the recipient of nursing care may be the individual, a family, a group, a community or a society. Each one is considered as an adaptive system in this study the focus on an individual person as living system are in constant interaction of persons with their environment is characterized by both internal and external change with this changing world persons must maintain their own integrity, each person must make some kind of adaptation for better existence Hence the person is viewed as an adaptive system It has input coming from the external environment as well as internally from itself In this study assessment of pain during menstruation is input.

ROY's has utilized the term coping mechanisms to describe the control process of the person as adaptive system. Some are inherited or genetic other mechanisms are learned. In this study are learned and practiced by the school girls under supervisions help decrease the pain level during menstruations.

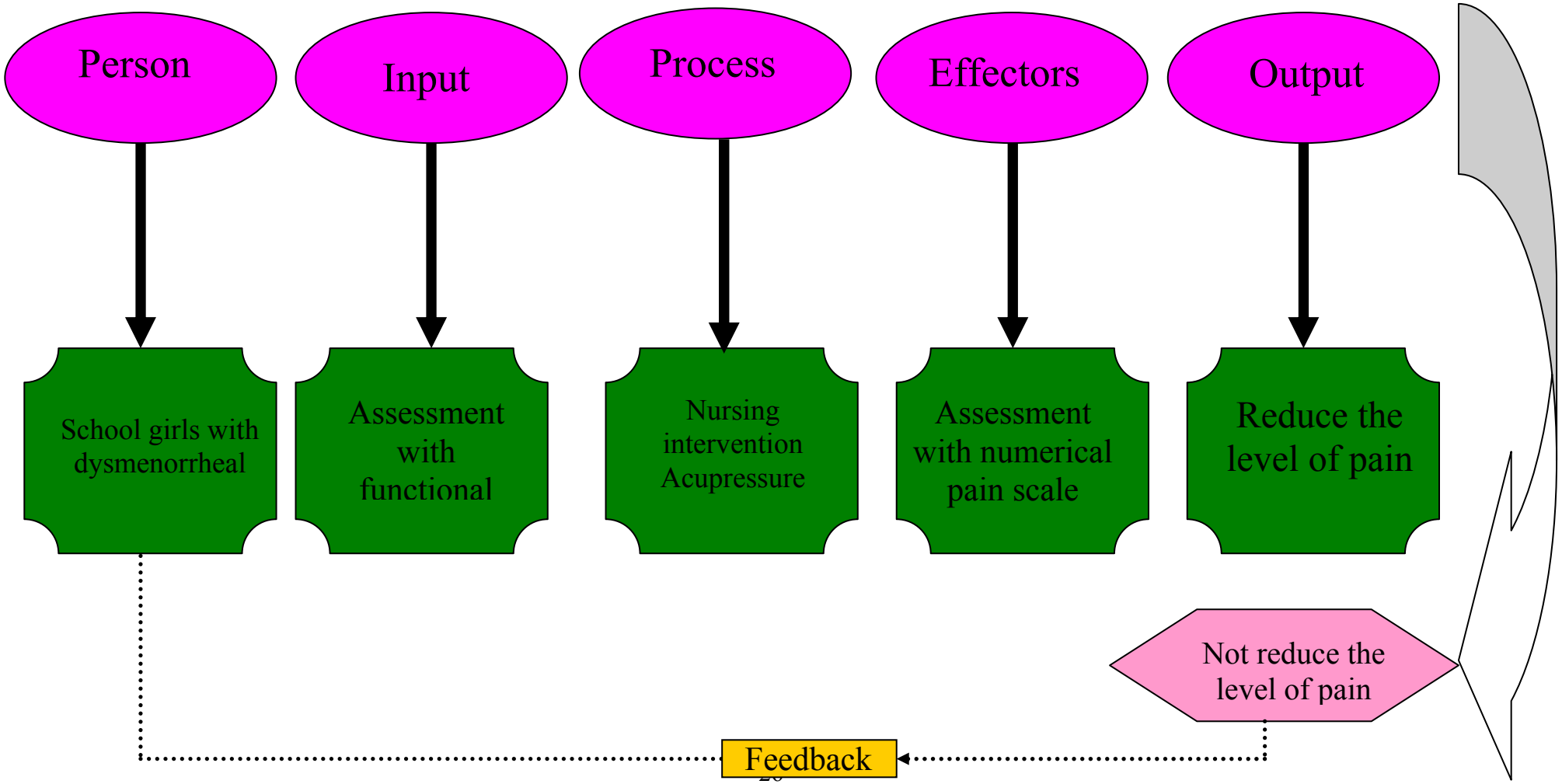
Effects refer to the regulator and cognator, There are the sub system of the person as a system. .It views as acting with four adoptive modes such an as physiological function. Self concept role function and independence in this study the effectors are the adaptive mode of the adolescent girls which are regulator by the neuro endocrine changes gained through the Acupressure.

Output person as a system is the behaviors of the person. Out put behavior can be both external and internal. This behavior may be observed measured or subjectively reported. Becomes the feed back to the system ROY's states output of the system as either adaptive response In this study the positive or the negative responses to acupressure for dysmenorrhea. It can be either positive that is reduction of pain becomes the output or negative result such as no reduction pain in this case the negative result becomes the feed back, where it must be reassessed and reinstitute the acupressure in a modified way.

Projected outcome:

The study was conducted to evaluate the effectiveness of acupressure to awaken the interest in non pharmacological treatment approaches to dysmenorrhea, since it has no pharmacological side effects. Finding of this study will help to use Acupressure in the area of dysmenorrhea.

Fig. 1: MODIFIED CONCEPTUAL FRAMEWORK SISTER CALLISTA ROY'S ADAPTATION



CHAPTER II

REVIEW OF LITERATURE

A literature review is a compilation of resources that provides the ground work for the study it includes research finding theory articles and published an unpublished reviews of literature it also suggest the limitation and bases as a result of course of knowledge development

The literature reviewed has been organized and presented under the following headings

1. **Literature related to dysmenorrhoea**
2. **Studies related to alternative and complementary therapies in dysmenorrhea**
3. **Studies related to dysmenorrhea**
4. **Studies related to acupressure and dysmenorrhea**

1. LITERATURE RELATED TO DYSMENORRHOEA:

This condition refers to the pain or discomfort associated with menstruation. Although it is not a serious medical problem, it's usually meant to describe a woman with menstrual symptoms severe enough to keep her from functioning for a day or two each month.

Many teens don't suffer from dysmenorrhea, as their uterus is still growing, and yet they may get it several years after their first period begins. Symptoms may begin one to two days before menses, peak on the first day of flow, and subside during that day or over several days. The pain is typically described as dull, aching, cramping and often radiates to the lower back. The pain from your period that is severe enough to be given this name by your health care provider is thought to be the result of uterine contractions, caused by prostaglandins (a hormone-like substance, normally found in your body). Prostaglandins are known to stimulate uterine contractions. In addition to pain other symptoms may include, headache, diarrhea, constipation, and urinary frequency and fainting.

Frequency

United States

The prevalence of dysmenorrhea is estimated at 45-90%. This wide range can be explained by an assumed underreporting of symptoms. Many women self-medicate at home and never seek medical attention for their pain. As mentioned above, dysmenorrhea is responsible for significant absenteeism from work and school; 13-51% of women have been absent at least once, and 5-14% is repeatedly absent.

International

One longitudinal study from Sweden reported dysmenorrhea in 90% of women younger than 19 years and in 67% of women aged 24 years (French, 2005).

Mortality/Morbidity

Dysmenorrhea itself is not life threatening, but it can have a profoundly negative impact on a woman's day-to-day life. In addition to missing work or school, she may be unable to participate in sports or other activities, compounding the emotional distress brought on by the pain.

Race

No significant difference is apparent in the prevalence of dysmenorrhea among different populations.

Sex

Despite prevailing trends toward equality in the sexes, men are not yet known to experience dysmenorrhea.

Age:

Women with age of less than 19years Causes

Risk factors

- Primary dysmenorrhea
    - Early age at menarche (<12 y)
    - Nulliparity
    - Heavy or prolonged menstrual flow
    - Smoking
    - Positive family history
    - Obesity
- **Secondary dysmenorrhea**

- Endometriosis
- Adenomyosis
- Leiomyomata (fibroids)
- Intrauterine device
- Pelvic inflammatory disease
- Endometrial carcinoma
- Ovarian cysts
- Congenital pelvic malformations
- Cervical stenosis

Etiology

In a systematic review, an age of less than 30 years, a low body mass index, smoking, early menarche (< 12 years), long menstrual cycles, heavy menstrual flow, nulliparity, premenstrual syndrome, sterilization, clinically suspected pelvic inflammatory disease, sexual abuse, and psychological symptoms were associated with dysmenorrhea.

Pathophysiology

Historical attitudes toward menstrual pain were often dismissive. Pain was often attributed to women's emotional or psychological states, misconceptions about sex, and unhealthy maternal relations. Research has now established concrete physiologic explanations for dysmenorrhea, which discredit these prior theories.

Primary dysmenorrhea usually begins within the first 6-12 months after menarche once a regular ovulatory cycle has been established. During menstruation, sloughing endometrial cells release prostaglandins, which cause uterine ischemia through myometrial contraction and vasoconstriction. Elevated levels of prostaglandins have been measured in the menstrual fluid of women with severe dysmenorrhea. These levels are especially high during the first 2 days of menstruation. Vasopressin may also play a similar role.

Secondary dysmenorrhea may present at any time after menarche, but most commonly arises when a woman is in her 20s or 30s, after years of normal, relatively painless cycles. Elevated prostaglandins may also play a role in secondary dysmenorrhea, but, by definition, concomitant pelvic pathology must be also present. Common causes include endometriosis, leiomyomata (fibroids), adenomyosis, endometrial polyps, chronic pelvic inflammatory disease, and IUD use.

SIGNS AND SYMPTOMS:

The main symptom of dysmenorrhea is pain concentrated in the lower abdomen, in the umbilical region or the suprapubic region of the abdomen. It is also commonly felt in the right or left abdomen. It may radiate to the thighs and lower back. Other symptoms may include nausea and vomiting, diarrhea, headache, fainting, and fatigue. Symptoms of dysmenorrhea usually begin a few hours before the start of menstruation, and may continue for a few days.

Menstrual cramps

Menstrual cramps are a very common problem for adolescent girls and women. They may be mild, moderate, or very severe. In fact, they are the single most common cause of days missed from school and work. About ten percent of girls are incapacitated for up to three days each month.

Medications for Treating Cramps

Many teens and women do not realize that there are very effective medications that can relieve not only menstrual cramps, but also the other symptoms that may accompany them. Generally these medications fall in the category of non steroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen. Some NSAIDs are available in both non-prescription strength (over-the-counter, or OTC) and in larger doses by prescription only. Other NSAIDs are only available by prescription. For some girls, cramps begin a day or so before their period starts; girls may also notice signs that their period is coming, such as abdominal bloating or constipation. In this case, it can be very helpful to begin taking the medication before the period actually begins.

For moderate to severe cramps,

Ibuprofen 200 milligrams four times daily or naproxen sodium 220 milligrams twice daily. Again, increase as needed to the maximum dosage and frequency. If cramps are moderate or severe, it is also important to continue taking the pain reliever regularly, even if there is no pain when the dosage is due. The regimen should be continued until the day when symptoms would subside, which is usually by the third day of the menstrual period. If ibuprofen or naproxen sodium at the maximum daily dose not relieve symptoms adequately, it's time to contact your health care provider.

Also, there are prescription-only medications that are especially effective against the other problems such as nausea, vomiting, and diarrhea. Don't give up hope. Under medical supervision, higher doses and other medications are safe and effective

Practical Suggestions for Medications:

Since many schools restrict to access the medications and because it is simply more often recommend that patients select medications that can be administered three times a day or less. Take the first dose in the morning, the second right after school, and the third about eight hours later recommend taking any of these medications with a meal or small snack and a glass of milk, juice, or other liquid. Rarely, a large tablet or capsule may have trouble making its way all the way down the esophagus; the liquid helps wash it down. Review the package directions and warnings carefully, and heed them. Do not take one of the listed drugs together with another one on the list, or with any other NSAID. A girl taking any medication on a daily basis should check with her doctor before starting any of these medications. Sometimes, though, more help is needed for primary dysmenorrhea than just NSAIDs. Of the prescription-only NSAIDs, I find mefenamic acid (Ponstel ®) to be especially useful. It not only works to eliminate cramps, but it can really help with diarrhea, nausea, and vomiting.

Hormonal Treatment for Period Cramps:

Assuming the pelvic examination is normal and I don't suspect endometriosis or another condition, I recommend adding hormonal treatment for girls with severe dysmenorrhea that has not responded to NSAIDs alone. The hormones prevent ovulation, and thus prevent the ovary from causing the production of the pain-causing prostaglandins. As you probably know, the oral contraceptive pill (OCP) prevents

ovulation. And this is the easiest, least expensive way to use hormones to treat severe primary dysmenorrhea. OCPs are 80 percent to 90 percent effective when used for this purpose.

Natural Remedies for Cramps

Menstrual cramps have been around for thousands of years, and so have many non-medical treatments. I recommend that non medical remedies be used in addition to the pain medications described above. Rest and stress reduction like many other conditions, cramps may be made worse by fatigue from too many late nights and by anxiety. So, getting enough rest before a period is due can actually help prevent bad cramps.

Heat:-

In the form of a warm bath or a heating pad applied to the lower abdomen, can be very helpful (and comfort).

Exercise :-

A girl who exercises regularly, and who feels up to it despite having cramps, may find that continued participation in her usual activities helps relieve the cramps. I encourage my patients to continue their daily routine during their period as much as possible.

Bed rest

Is not a documented remedy for cramps; some doctors believe instead that walking about helps expel the menstrual products, and the prostaglandins they contain, from the uterus. Additionally, anxiety generally increases as a girl worries about making up missed school assignments. On the other hand, cramps are occasionally truly incapacitating, and trying to force a "stiff upper lip" won't help.

The Menstrual Cycle

A menstrual cycle starts with the first day of vaginal bleeding. It ends with the first day of vaginal bleeding the next period. An average cycle lasts about 28 days.

During the cycle, two hormones (estrogen and progesterone) are made by the ovaries. These hormones cause growth changes in the endo etrium (the lining of the uterus) so that the uterus will be ready for a possible pregnancy. On about day 14 of the cycle, an egg is released from one of the ovaries. This is called ovulation.

The egg then moves into one of the two fallopian tubes connected to the uterus. There it can be fertilized by a sperm. If this happens, the fused egg and sperm move through the fallopian tube, attach to the uterus, and pregnancy occurs. If the egg is not fertilized, the levels of hormones decrease. That signals the uterus to shed its lining, which is when the menstrual period begins. For some women this menstrual bleeding causes mild cramps, for others it causes severe pain.

2. STUDIES RELATED TO ALTERNATIVE AND COMPLEMENTARY THERAPIES IN DYSMENORRHEA.

Complementary and alternative therapies have been accepted and used nursing cause related to pain these are simple effective low cost method that can be initiated by nurses midwives with potential benefits of reduction of pain in use of medications.

Jettestad etal (2007) conducted a study regarding review of pain from transcutaneous electrical nerve stimulation (TENS) is an established method for pain relief in dysmenorrhoea, which dose not involve the use of medication there was statistically significant difference in mean pain score from 6.73 to 5.18 points.

Eccle N.K etal (2005) conducted a randomized study to know the effectiveness of static magnet to relieve primary dysmenorrhrea. Study results shows that the reduction of pain in the magnet group were 53.0 to 23.38

Teachakannho etal (2005) conducted a study to examine the effect of abdominal median massage on menstrual cramps for dysmenorrhea. The forty two participants in the experimental group received abdominal meridian massage for 5 minutes per day during 6 days from the fifth day before menstruation to the first day of menstruation & forty three recipients did not receive the any treatment, the result of the study was in experimental group were significantly lower of pain after abdominal meridian massage than the control group.

Hansh etal (2005) conducted a study to know the effect of aromatherapy on symptoms of dysmenorrhea in college students subjects were randomized into three groups 1)an experimental group (n=25)who received aromatherapy2)a placebo group (n=20) and (3) a control group (n=22). Aromatherapy was topically applied to experimental group in the form of massage of two drops of lavender &one drop rose

oil and 5cc of almond oil, from the multiple regression aromatherapy was found to be associate changes in menstrual cramp levels.

Proctor (2004) conducted a study to assess the spinal manipulation therapy. Manipulation of these vertebra increases spindle mobility and may improve pelvic blood supply .The study suggest that spinal manipulation is effective in the treatment of primary and secondary dysmenorrhoea.

3. STUDIES RELATED TO DYSMENORRHEA :

Dysmenorrhea may begin soon after the menarche after which it often improves with age or it may originate in life after the on set of an underlying causative condition. Dysmenorrhea is common ,and up to 20% of woman it may be severe enough to interfere with daily activities.

O'Connell k. et. al., (2006) conducted a study to assess the both non — Pharmacologic and pharmacologic treatments used by adolescents with dysmenorrhea. A study shown that adolescents with moderate and severe dysmenorrhea reported high morbidity girls, used numerous non — pharmacologic remedies as well as medication for pain but infrequently accessed formal medical care.

Bieniaz .et. al ., (2006) conducted retrospective study regarding causes of menstrual disorder in adolescent girls they given concluded their study like this— menstruation cycles irregularity in the first year after menarche may be a symptom of pathology demanding diagnosis and treatment.

Houston.AM.et. al.,(2005) conducted study to assess the knowledge, attitudes, and consequence of menstrual health is urban adolescent female. A study revealed that PMS and dysmenorrheal are prevalent medical disorders among urban adolescents. Morbidities, including school absenteeism, are higher among those with negative period expectations. Since only 2% teens received information regarding menstruation from their health case provider. It is imperative the health care providers increase their anticipatory guidance regarding normal menstruation. This may aid in the prompt diagnosis and treatment of menstrual disorders, and decrease their associated morbidities.

Rothisigkeit.A. et. al., (2005) conducted a descriptive study to assess the pain among children and adolescents has been identified an important public health problem. The results of the 749 children and adolescent. 622(83%) had experienced pain during the preceding 3 months. A total of 30.08% of the children and adolescents stated. That the pain had been present for less than 6 month. Head ache *(60.5%,* limp pain (33.6%) and back pain (30.2%) and dysmenorrheal (43.3%) The study indicate that the nurse becomes give more care to the children and adolescents to relieve their pain.

Strini — C.T. et.al., **(2003)** conducted a study to examine the prevalence of dysmenorrhea in female adolescents and the influence of anthropological characteristics and life style factors all menstrual pain. They taken two hundred and ninety seven girls in that *165 (55.5%)* subjects with and one hounded and thirty three (45%) without dysmenorrhea.

Jarreft M. et. al ., conducted study to assess the Relationship between gastro intestinal and dysmenorrhea symptoms at menses. In that there were significant across- women and relationships between cramping pain and constipation, diarrhea, or stool characteristics. The result supports the presence of a similar mechanism in the generation of distressing GI symptoms and uterine cramping pain at menses.

Hirata M. et. al., (2002) conducted study regarding menstrual pain in the result show that the prevalence of menstrual pain among the college women

4. STUDIES RELATED TO ACUPRESSURE AND DYSMENORRHEA:

Wang MC (2009):conducted a study to know the effects of auricular acupressure on menstrual symptoms and nitric oxide for women with primary dysmenorrhoea. This was randomized clinical trial comparing the effects of auricular acupressure by seed-pressure method and placebo adhesive patch. This study result supports the effect of auricular acupressure has important in menstrual symptoms and offers a noninvasive complementary therapy for women with primary dysmenorrhoea.

Change etal (2007) conducted study to evaluate the efficacy of Sanyinjiao (SP6) acupressure as a non-pharmacologic interventions for dysmenorrhoea and identify the effect of temperature changes in two related acupoints as a explanatory mechanism of chi-circulation. There was a significant difference in severity of dysmenorrhoea between the two groups immediately (F=18.50, P=0.000) and for up to 2 hrs,(F=8.04, P=0.034) post treatment. Acupressure to the SP6 meridian can be an effective non-invasive nursing intervention for alleviation of primary dysmenorrhoea.

Jun EM (2004) conducted study to know the effect of SP-6 acupressure on dysmenorrhoea, skin temperature of CV2 acupoint and temperature in the college students. A total of 58 students from two universities. Both group were pre tested before the intervention for three variables, then SP-6 acupressure was provided for 20 minutes. Result of the study was there was significant difference in skin temperature of the CV2 acupoints SP-6 acupressure reduced the subjective perception of dysmenorrhoea.

Chen H Metal (2004) states that the that effects of acupressure at the Sanyinjiao point on primary dysmenorrhoea. The experimental group (n=35) received acupressure at Sanyinjiao point while the control group (n=34) rested for 20 minutes. 50 students only completed the follow-up session. The result of the study shows that acupressure at Sanyinjiao during the initial session reduced the pain and anxiety typical of dysmenorrhoea. The findings suggest that acupressure at Sanyinjiao can be an effective cost free intervention for reducing pain and anxiety during dysmenorrhoea, and we recommended its use for self care of primary dysmenorrohea.

Chang (2003) A study was conducted to identify the effects of the sp – 6 acupressure on dysmenorrhea, the SP 6 acupressure on dysmenorrhea. The sp 6 acupressure was provided for 20 minutes for students in the experimental group. There was statistically significant differences in the intensity of dysmenorrhea at the time immediately at 30 minutes and one hour & two hour after intervention.

Pouresnail (2002)conducted a study to know the effect of acupressure and ibuprofen the severity of primary dysmenorrhea. The school students were randomly selected and divided in to three group. The results indicated that the three therapeutic

techniques were significantly effective in reducing the Pan. Thus acupressure with no complications, is recommended as a alternative and also a better choice in the decrease of the severity of primary dysmenorrhea.

Taylor d etal (2002) conducted a randomized clinical trial of the effectiveness of an acupressure device for managing symptoms of dysmenorrhea. A randomized clinical trial applied a 2x3 mixed factorial design. Menstrual pain severity (worst pain and symptom intensity) pain medication use, and adverse effects were analyze. finally results shows that an acupressure device is an effective and safe non pharmacologic strategy for the treatment for primary dysmenorrhea. With who suffer from primary dysmenorrhea and do not wish to or cannot use the conventional pharmacologic agent.

Mari (1984) conducted a study to assess the use of acupuncture in the treatment of primary dysmenorrhea, different acupuncture points on several channels were stimulated depending on short types. A relief of dysmenorrheic pain was already evidenced after the first menstruation. One year after the completed therapy there was a full disappearance of dysmenorrhea pain in 93% and a partial one in 7% of cases.

CHAPTER III

RESEARCH METHODOLOGY

INTRODUCTION:

Methodological research studies are investigations of the way of obtaining and organizing data and conducting rigorous research Methodological studies address the development, validation, and evaluating of research tools or methods.

(Polit & cherrytetano beck)

This chapter deals with the methodological approach to assess the effectiveness of acupressure on dysmenorrhea among adolescent girls(12-16 years) studying in Sakthi higher secondary school, Nachimuthupuram , Erode (Dt).

It includes description of research approach, research design, study setting and sampling technique, development and description of the tool, data collection technique, plan for data analysis.

RESEARCH APPROACH:

The research approach adopted for this study was Experimental approach. Experimental approach helps to explain the effect of independent variable on the dependent variable. This study includes manipulation, control and randomization to get the true result. This is considered by the investigator, the most suitable one as for as this approach is consider.

RESEARCH DESIGN:

The research design provides an over all or blueprints to cutout the study. The research design used in this study was the **true experimental design**, "**Two group**

pretest, post test design" was used for assessing the effectiveness of acupressure to reduce the dysmenorrheal among adolescent girls.

REPRESENTATION OF RESEARCH DESIGN

	PRE TEST	**MANIPULATION AFTER PRE TEST**	**POST TEST**
EXPERIMENTAL GROUP	O_1	X	O_2
CONTROL GROUP	O_1	_	O_2

KEY:

O_1: Pre test pain score

O_2: Post test pain score

X: Intervention(acupressure)

VARIABLES:

. Variables are the qualities, properties or the characteristics of the person, things or situation that change or vary.

The variables mainly include in this study are Independent and Dependent variables Dependent variables explain the effect of independent variables.

Independent variable:

Independent variables are the variable which is not dependent on any other, in this study the independent variable refers to acupressure during dysmenorrhea.

Dependent variable:

The Dependent variable is the variable that the researcher is interested in understanding explaining or predicting. In this study the dependent variable refers to effect of acupressure on dysmenorrhoea among adolescent girls.

SITES & SETTING OF THE STUDY:

Site:

Site is the exact physical location where the study was conducted. The present study was conducted in schools of Sakthinagar, Erode-(Dt).

Setting:

Setting is the physical location of the site in which data collection takes place. The study was conducted in Sakthi higher secondary school, Nachimuthupuram, Erode- (Dt).

SAMPLE AND SAMPLING TECHNIQUE:

Population: -

Population refers to the entire aggregation of cases that meets designed criteria, The population of present study was Adolescent girls who are studying Sakthi higher secondary school, Nachimuthupuram.

Samples:

12-16years age group (who fulfill the inclusive criteria) of Sakthi higher secondary school, Nachimuthupuram.

Sample Size: -

The sample used for the study was 50 students who all are having dysmenorrhea, in that *25* students were selected for experimental group and *25* students were selected for control group.

Sampling Technique:

In this study, probability, "Flip a coin method" sampling technique was used for the selection of the samples. In **"Flip coin sampling technique method",** the researcher selected the subjects who chose "head" of the coin as control group and those who chose "tail" of the coin were included in the experimental group. As per the procedure *50* samples, for example 25 students for control group and *25* students for experimental group, drawn in the 12-16 years of adolescent girls in Sakthi higher secondary school, Nachimuthupuram, Erode District.

CRITERIA FOR SAMPLE SELECTION:

The students were selected based on predetermined criteria.

Inclusive criteria:

- Adolescent girls with dysmenorrhea,

- Girls who are willing to participate.
- Girls who are available at the time of data collection

Exclusive criteria:

- Girls who are taking home remedies for dysmenorrhea.
- Girls who take oral analgesics for their dysmenorrhea.

STEPS IN THE CONSTRUCTION OF THE TOOL:

The investigator involved the following steps in preparing the tool.

- Related literature was reviewed in the preparation of the tool.
- Guidance and consultation of the experts were in nursing subjects, (maternity Nursing), medical experts were sought for the construction of tool and modification of the tool was done as per the guidance.
- Consultation with the statistician was done for the preparation of the plan for statistical data analysis.

DESCRIPTION OF THE TOOL:

- The tool was organized into two sections:

Section-I:

Socio demographic variables of the students.

Section - II:

Numerical pain scale was used (which consist of description of the functions of the student which can be utilized to assess pain in the student).

The total score is ten.

numerical pain scale.

0: No Pain

1-3: Mild pain

4-6: Moderate pain

7-9: Severe pain

10: Worst pain

ACUPRESSURE:

Acupressure was applied in four areas of body meridians, the pressure was applied for 10 minutes for each points

TESTING THE INSTRUMENT:

Validation of the Tool:

Content Validity:

The content validity of the instrument was assessed by obtaining from five experts in the field of nursing and medicine. The experts suggested specification in languages, recognization and addition to certain items. Appropriate modification was made accordingly and the tool was finalized.

PILOT STUDY:

The pilot study is a small scale version of trail run before the major study pilot study was conducted to ensure validity and reliability of the tool and acupressure.

The primary objective of the pilot study was to test as many elements of the research proposal as possible; in order to correct any part does not work well, for this study the pilot study was conducted at, Vivekananda matriculation higher secondary school, Vijay colony, Erode (Dt) on 1.11.2009 to 7.11.2009 In order to ensure the effectiveness of the acupressure. **"Flip a coin method**" was used to select 5 students for experimental group and which odd number were given and if "head" of the coin appeared they were grouped under experimental group to select *5* students for the control group, the coin was tossed, and if "tail" of the coin appeared and even numbers were allotted to select the same. acupressure was provided for the students in the experimental group during the dysmenorrhea and 5 students of control group did not receive any remedy.

DATA COLLECTION PROCESS:

Written permission was obtained from the college authority for conducting study and with the Co-Operation of the Class-Teacher of particular standard students of the Sakthi higher secondary school Nachimuthupuram, Erode. The study was

conducted on 11.11.2009 to 30.11.2009, the feasibility of conducting the study was ensured.

In data collection period the investigator established a good rapport with the students who are participatory in the study, took oral consent from each student to participate in this study and collected the demographic data and pain level with numerical pain scale, after that acupressure was given then reassessed the pain with pain scale and no intervention was given for control group.

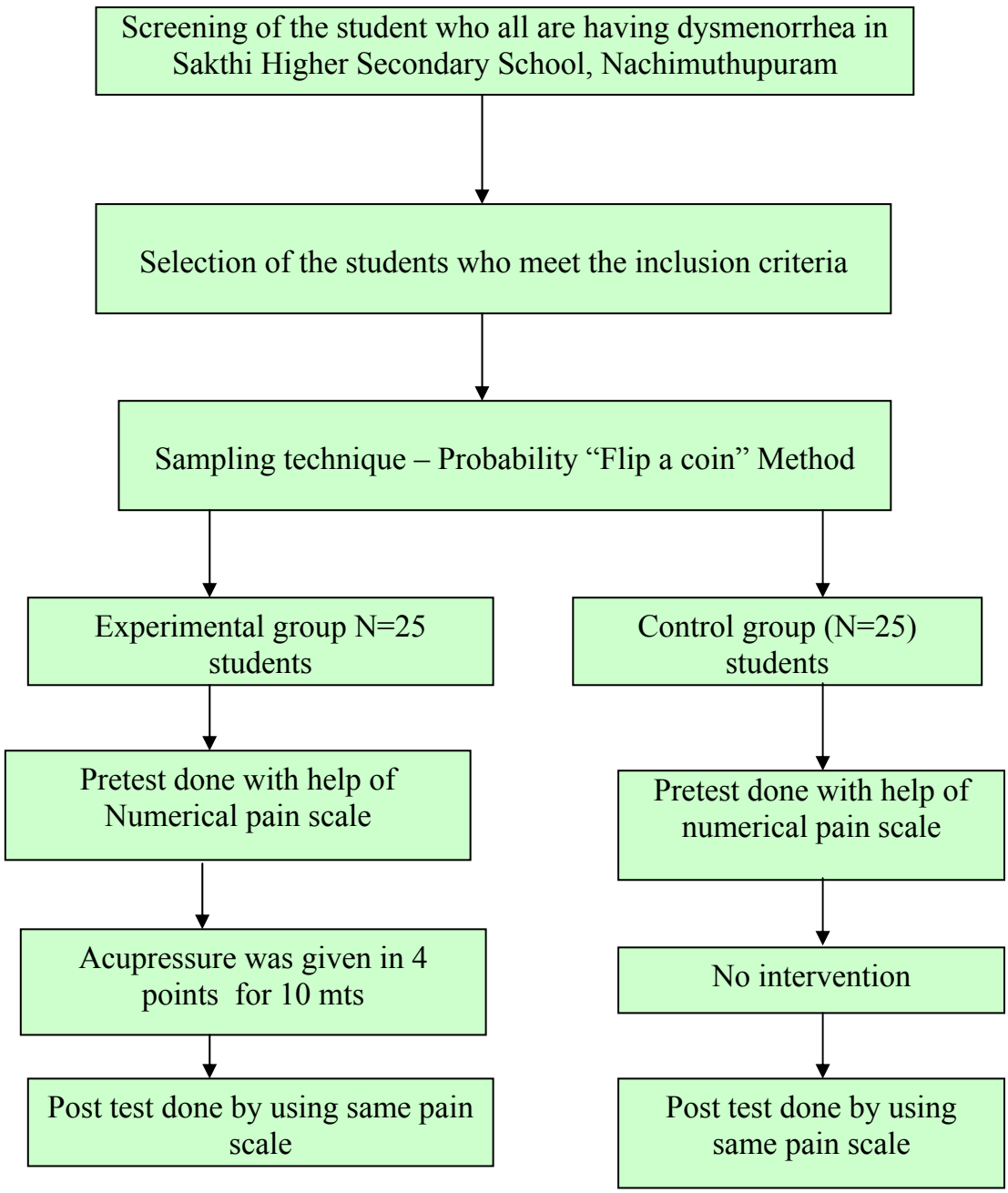
PLAN FOR DATA COLLECTION:

Data were collected and observed for 50 students, out of which 25 student were in the experimental group and 25 students were in the control group who are studying in the Sakthi higher secondary school, Nachimuthupuram,, Erode (Dt). The Collected data were statistically analyzed and tabulated by applying descriptive statistics such as mean percentage, standard derivation and inferential statistics e.g. paired test, Chi-square test and independent‘t’ test.

Ethical Consideration

- Permission was given by head master of Sakthi higher secondary school Nachimuthupuram, Erode
- Oral consent was received from the students after explaining the purpose of the study.

FIG.2: SCHEMATIC REPRESENTATION



CHAPTER IV

ANALYSIS AND INTERPRETATION

Introduction

This chapter will present the quantitative results of an experimental study to assess effectiveness of acupressure reducing dysmenorrhoea among adolescent girls studying in Sakthi Higher Secondary School, Bhavani Taluk, Erode (Dt.).

Kerlinger (1995) defines analysis as the category, ordering, manipulating and summarizing of data to obtain answers to research question.

The study was carried out by taking two groups of 25 students each among which one is called control group and the other is called experimental group for which acupressure were given. During first day the pain was observed by numerical pain scale. The qualitative information of the pain score was measured by numerical scales assigning, mild, moderate, severe and worst pain.

STATISTICAL ANALYSIS:

The results obtained were classified, tabulated and the following analyses were performed in fulfilling the objectives of the study. The data analysis consists of three major sections. The first is a percentage analysis which will be used to describe demographic variables of sampled respondents. The second section includes the descriptive analysis which will describe the average pain level with respect to

demographic variables. Finally, in the third section the chi-square analysis was used to examine the association between the levels of pain with demographic variables.

OBJECTIVES:

1. To assess the level of menstrual pain among experimental and control group
2. To compare the level of pain before and after applied acupressure among experimental and control group.
3. To evaluate the effectiveness of acupressure for dysmenorrhea among adolescent girls.
4. To find out association of level of pain between control group and experimental group with selected demographic variables

DESCRIPTION OF THE DATA ANLYSIS:

The analysis of the data is organized and presented under the following headings,

SECTION I: description of the subject by demographic variables

SECTION II: compare the level of pain before and after applied acupressure among experimental and control group.

SECTION III: evaluate the effectiveness acupressure for dysmenorrhoea among adolescent girls.

SECTION IV: association of levels of pain between experimental and control group with selected demographic variables regarding acupressure.

HYPOTHESIS :

H_1: There is a significant difference among the pain before and after giving acupressure in experimental group

H_2: There is a significant relationship between post test level of pain in experimental and control group.

H_3: There is a association between selected demographic variables and menstrual pain with experimental and control group

SECTION I

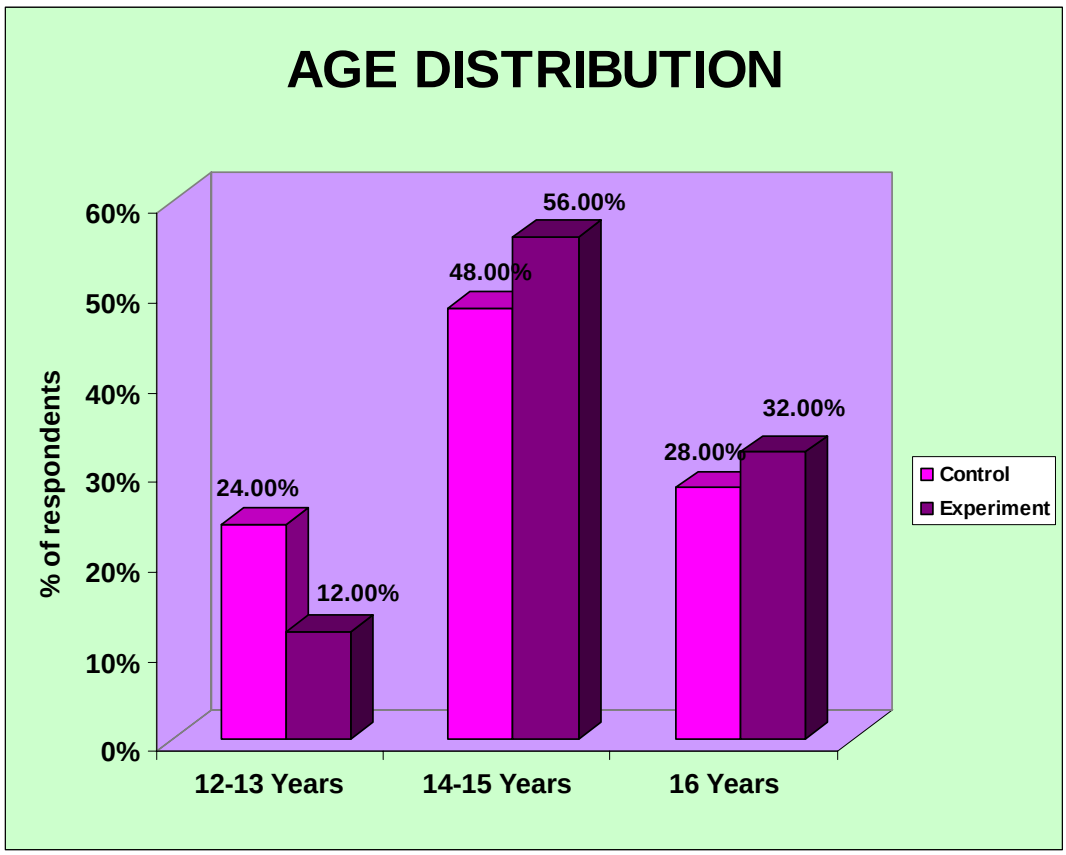
DESCRIPTION OF THE SUBJECT BY DEMOGRAPHIC VARIABLES

Table 4.1 Frequency and percentage of demographic variables

Demographic variables		Control Group		Experimental Group	
		Frequency	%	Frequency	%
Age	12-13 Years	6	24	3	12
	14-15 Years	12	48	14	56
	16 Years	7	28	8	32
Age at menarche	11 - 12 Years	7	28	4	16
	13 – 14 Years	12	48	12	48
	15 - 16 Years	6	24	9	36
Education of Mother	Illiterate	4	16	6	24
	Higher Secondary	18	72	17	68
	Under Graduate	3	12	2	8
Monthly income	< 3000	7	28	5	20
	3001-5000	15	60	14	56
	5001-7000	2	8	3	12
	7001 and above	1	4	3	12
Residence	Village	16	64	17	68
	Town	9	36	8	32
Length of cycle	< 20 Days	2	8	1	4
	28-30 Days	16	64	17	68
	35 Days	4	16	5	20
	>36 Days	3	12	2	8
Amount of flow	< 30 Ml	18	72	16	64
	30-100 Ml	7	28	9	36
Duration of bleeding	3-5 Days	9	36	14	56
	6-8 Days	15	60	9	36
	8 days and above	1	4	2	8
Family History of dysmenorrhoea	Yes	18	72	19	76
	No	7	28	6	24
Other Symptoms	Nausea and vomiting	16	64	17	68
	Headache	3	12	2	8
	Fatigue	6	24	6	24

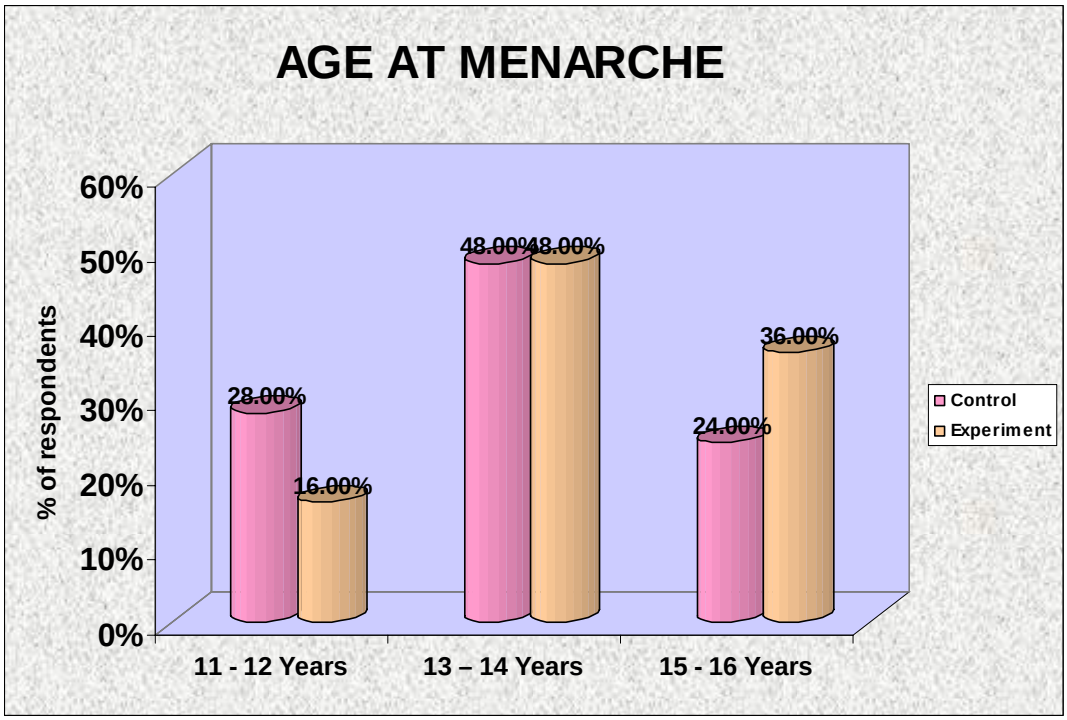
Table no 4.1 shows that the experimental and control group of adolescent school girls demographic variables, for those who have participated in the following study "**A STUDY TO ASSESS THE EFFECTIVENESS OF ACUPRESSURE ON DYSMENORRHEA AMONG ADOLESCENT GIRLS (12-16 YEARS) STUDYING IN SAKTHI HIGHER SECONDARY SCHOOL, NACHIMUTHUPURAM, ERODE DISTRICT".**

Fig. 3: Bar diagram showing the age of the student



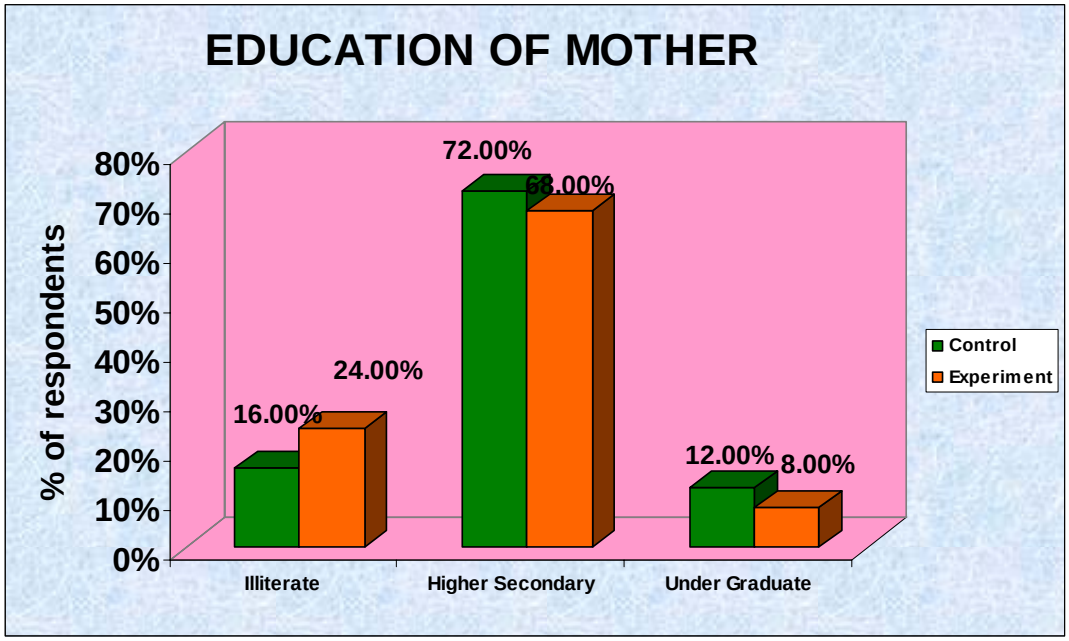
The results of control group shows that 24% of sample respondents are the age group of 12-13 years and 48% are the age group of 14-15 years and 28% shows 16 years. Similarly in experimental group 12 % of samples respondents are the age group of 12-13 years and 56% are the age group of 14-15 years and 32% shows 16 years.

Fig. 4 Cylinder diagram showing the age at menarche of the student



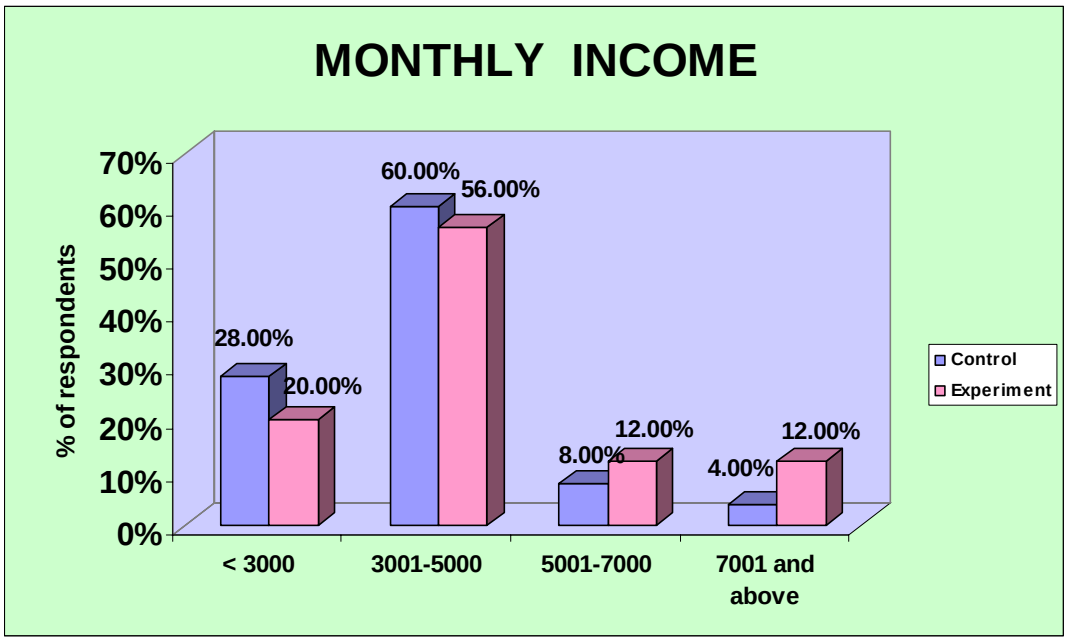
According to the age of the menarche in control group reveals that 28% of the girls attained menarche at the age of 11-12 year and 48% of students attained menarche at the age of 13-14 years and 24% students at the age 15-16 years. In experimental group reveals that 16% of the girls attained menarche at the age of 11-12 year and 48% of students attained menarche at the age of 13-14 years and 36% students at the age 15-16 years.

Fig. 5: Bar diagram showing the education of mother



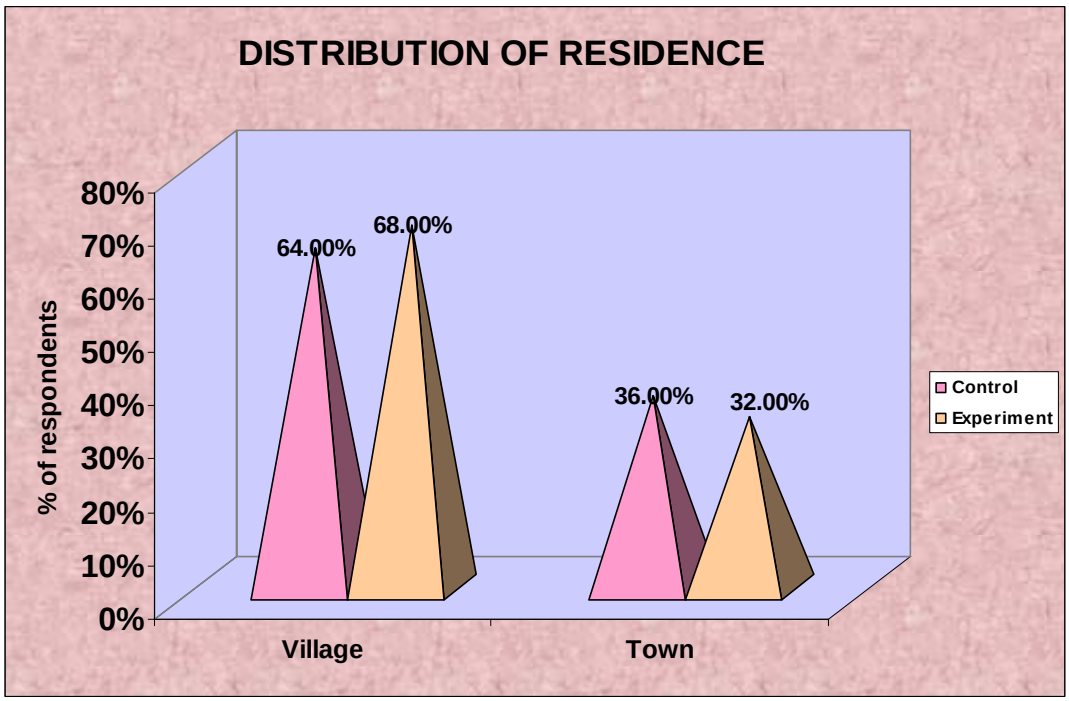
According to the education of mothers in control group reveals that 16% are the illiterate and 72% are higher secondary and 12% are undergraduate. In experimental group reveals that 24% are the illiterate and 68% are higher secondary and 8% are undergraduate.

Fig. 6: Bar diagram showing the distribution of monthly income



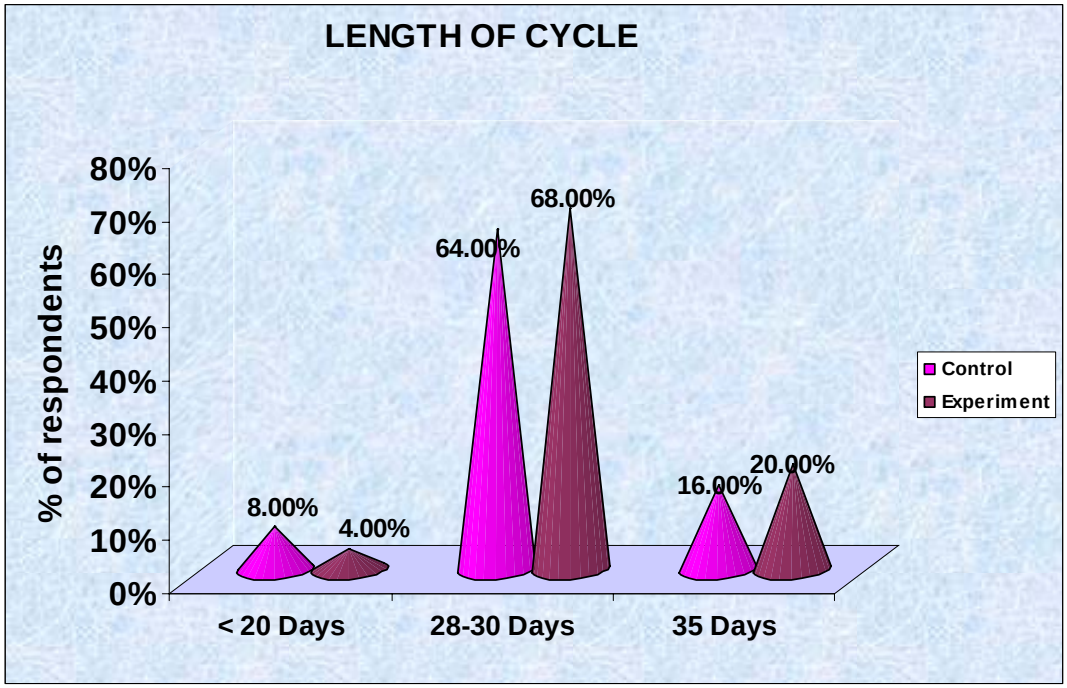
According to their family monthly income in control group reveals that 28% of the students from below Rs.3000 and 60% from Rs.3001-5000 and 8% from Rs.5001-7000 and 4% from above Rs.7001 of monthly salary. In experimental group reveals that 20%of the students from below Rs.3000 and 56% from Rs.3001-5000 and 12% from Rs.5001-7000 and 12% from above Rs.7001 of monthly salary.

Fig. 7: Pyramid diagram showing the distribution of residence



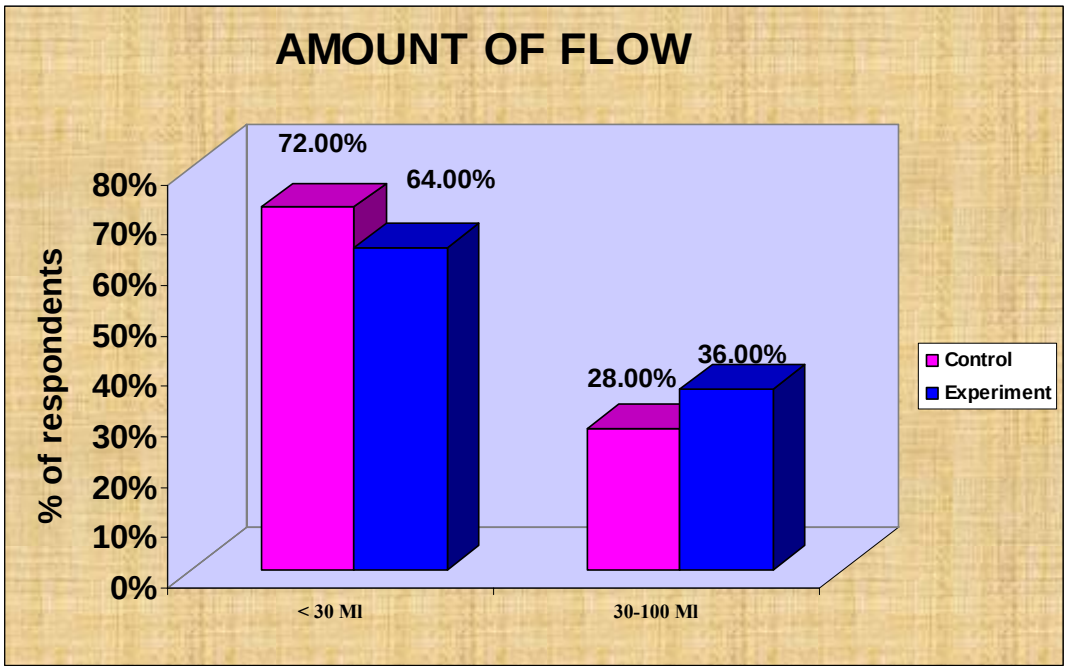
This above diagram shows that the area of residence of school girls in control group 64.0% from village and36.0% from town, in experimental group 68.0%of students from village and 32.0%of students from town.

Fig. 8: cone diagram showing the distribution length of cycle



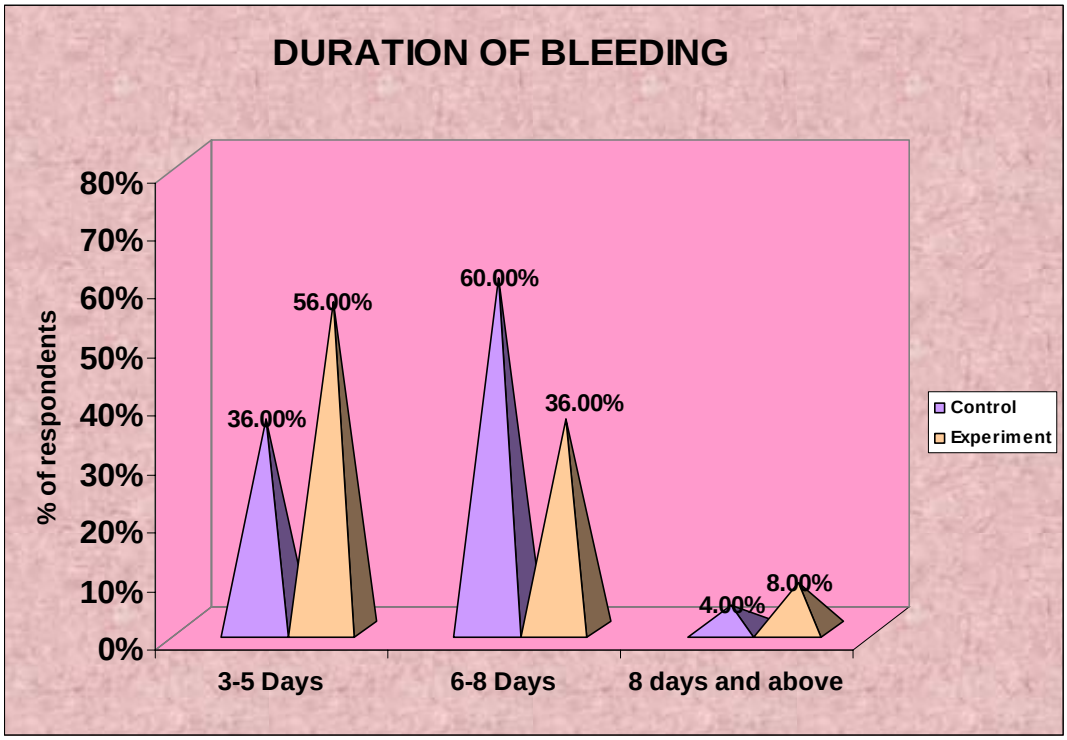
According to the students length of menstrual cycle is in control group 8% are <20 days and 64% are 28-30 days and 16% are students are 35 days and 12% are more than 36 days cycle. In experimental group 4% are <20 days and 68% are 28-30 days and 20% are students are 35 days and 8% are more than 36 days cycle.

Fig. 9: Bar diagram showing the distribution of amount of flow



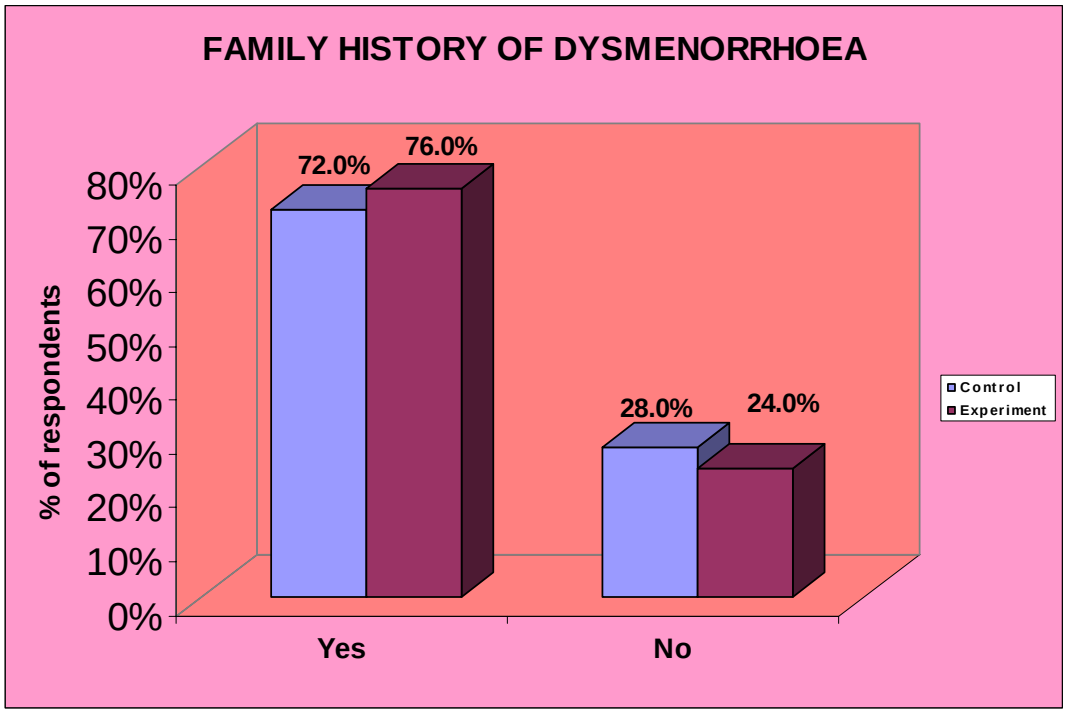
According to the amount of flow of the menstrual cycle in control group 72% of the students are having <30 Ml of blood flow and 28% of the students are having 30-100 ml of blood flow. In experimental group 64% of the students are having <30 Ml of blood flow and 36% of the students are having 30-100 ml of blood flow.

Fig. 10: Bar diagram showing the distribution of duration of bleeding



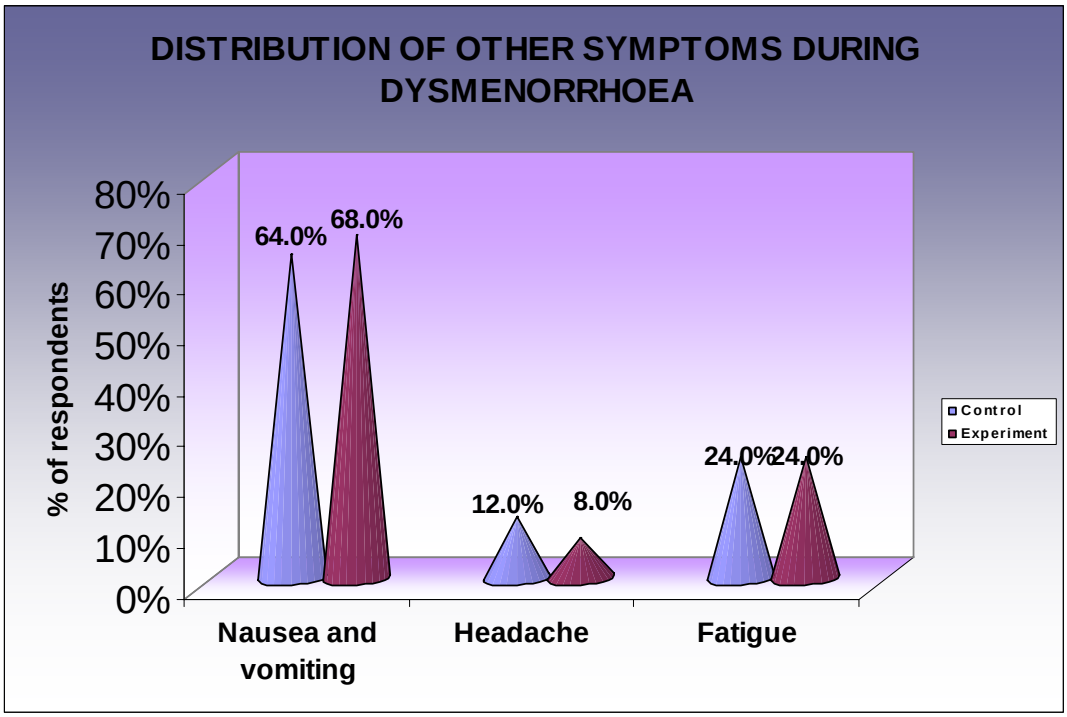
According to the duration of bleeding during menstruation in control group 36% of are having 3 – 5 days cycle and 60% are having 6-8 days cycle and 4% are having above 8 days cycle. In experimental group 56% of are having 3 – 5 days cycle and 36% are having 6-8 days cycle and 8% are having above 8 days cycle.

Fig. 11: Bar diagram showing the distribution of family history of dysmenorrhoea



According to the family history of dysmenorrhoea 72% students are having family history of dysmenorrhoea in control and 76% in experimental group. There is no history of dysmenorrhoea 28% in control group and 24% in experimental group.

Fig. 12: cone diagram showing the distribution of other symptoms during dysmenorrhoea



According to other symptoms present during menstruation for adolescent girls in control group 64% are having nausea and vomiting and 12% are having headache and 24% are having fatigue. In experimental group 68% are having nausea and vomiting, 8% are having headache 24% are fatigue during menstruation.

SECTION II: **TO COMPARE THE LEVEL OF PAIN BEFORE AND AFTER APPLIED ACUPRESSURE AMONG EXPERIMENTAL AND CONTROL GROUP.**

An attempt has been made to study the effectiveness of acupressure during dysmenorrhoea among adolescent girls by comparing control and experimental group. After converting the qualitative information of the pain score into a quantitative one using numerical scale, the average score were obtained from the respondents on first day and after acupressure and the effectiveness is obtained.

Comparison of level of menstrual pain scores of control group and experimental group with respect to Pre Test & Post Test.

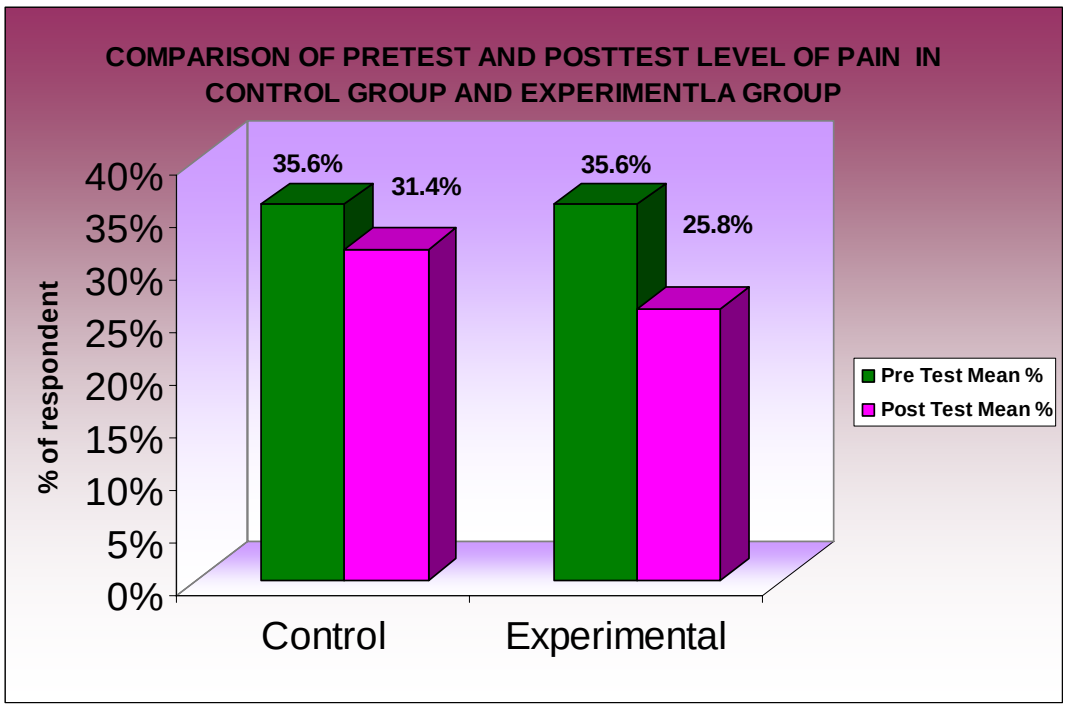
The paired t test procedure is used to compare the mean pain scores of the control group and experimental group observed during Pre and Post test on first day was observed. On first day the significance of the pain score during pre and post test was tested and the results were given in Table 4.2.

Null Hypothesis: H_0 : There is no significant difference between the mean pain scores of the student before and after acupressure.

Table 4.2 Paired t Test – Pre and Post Test

Group	Day	Pre Test			Post Test			Paired t
		Mean	SD	Mean %	Mean	SD	Mean %	
Control	1	8.9	0.98	35.6	7.84	0.98	31.36	10.2
Experi Mental	1	8.9	1.15	35.6	6.44	1.02	25.76	14.14

Fig. 13: Bar diagram showing comparison of pre and posttest level of pain in the experimental and control group



The tables' displays the descriptive statistics of the maximum, mean, standard deviation and mean percentage of pain score. In control group of mean, Standard Deviation and mean percentage score regarding pain score of first day shows that the mean score (8.99± 0.98) 35.6 % of the total score was observed during pre test. The mean score (7.84± 0.98) 31.36 % of the total score was observed during post test. Further the difference in mean percentage of scores show that percentage was more or less equal and very less on first day among the control group.

In experimental group of mean, Standard Deviation and mean percentage score regarding pain score of first day shows that the mean score (8.99± 1.15) 35.6 % of the total score was observed during pre test. The mean score (6.44± 1.02) 25.76% of the total score was observed during post test. Further the difference in mean

percentage of scores show that percentage was more or less equal and very less on first day among the experimental group.

Hence there is significant difference in the mean scores of the two groups of pre test and post test among control group as well as experimental group. It is observed from the table that in experimental group there is huge reduction in mean pain score. It shows the effectiveness of acupressure.

Comparison of menstrual pain scores of Control Group & Experiment group with respect to Pre test and Post test

The Independent sample t test procedure is used to compare the mean pain scores of the control and experimental group observed during Pre and Post test on first day. On first day the significance of the pain score during pre and post test was tested and the results were given in Table 4.5.

Null Hypothesis: $H_{0:}$ There is no significant difference between the mean pain scores of the student before and after acupressure

Table 4.5 Independent t -Test – Control Group and Experimental Group

Test	Day	Control			Experimental			Indept T
		Mean	SD	Mean %	Mean	SD	Mean %	
Pre Test	1	8.9	0.98	35.6	8.9	1.15	35.6	1.10
Post Test	1	7.84	0.98	31.36	6.44	1.02	25.76	4.80

The tables' displays the descriptive statistics of the maximum, mean, standard deviation and mean percentage of pain score. In pre test the group-wise comparison of mean, Standard Deviation and mean percentage score regarding pain score of first day

shows that the mean score (8.9 ± 0.98) 35.6 % of the total score was observed during control group during the post test. The mean score (7.84) 31.36 % of the total score was observed during control group.

In experimental group the comparison of mean, Standard Deviation and mean percentage score regarding pain score of post test shows that the mean score (8.9 ± 1.15) 35.6 % of the total score was observed during post test in control group and the mean score (6.44 ± 1.02)25.76% of the total score was observed during post test in experimental group. It is observed from the table that in experimental group there is huge reduction in mean pain score. It shows the effectiveness of acupressure.

SECTION III: EVALUATE THE EFFECTIVENESS ACUPRESSURE FOR DYSMENORRHOEA AMONG ADOLESCENT GIRLS

Table 4.6 evaluates the effectiveness of acupressure and the levels of Pain among adolescent girls in- control Group.

Control Group							
Test	**Level of pain**				**Chi**	**df**	**Table Value**
	Severe		**Worst**				
	Frequency	**%**	**Frequency**	**%**			
Pre Test	14	56	11	44	0.0821	1	3.841
Post Test	15	60	10	40			
Total	29	116	21	84			

*** Non significant (Significant at 5 %)**

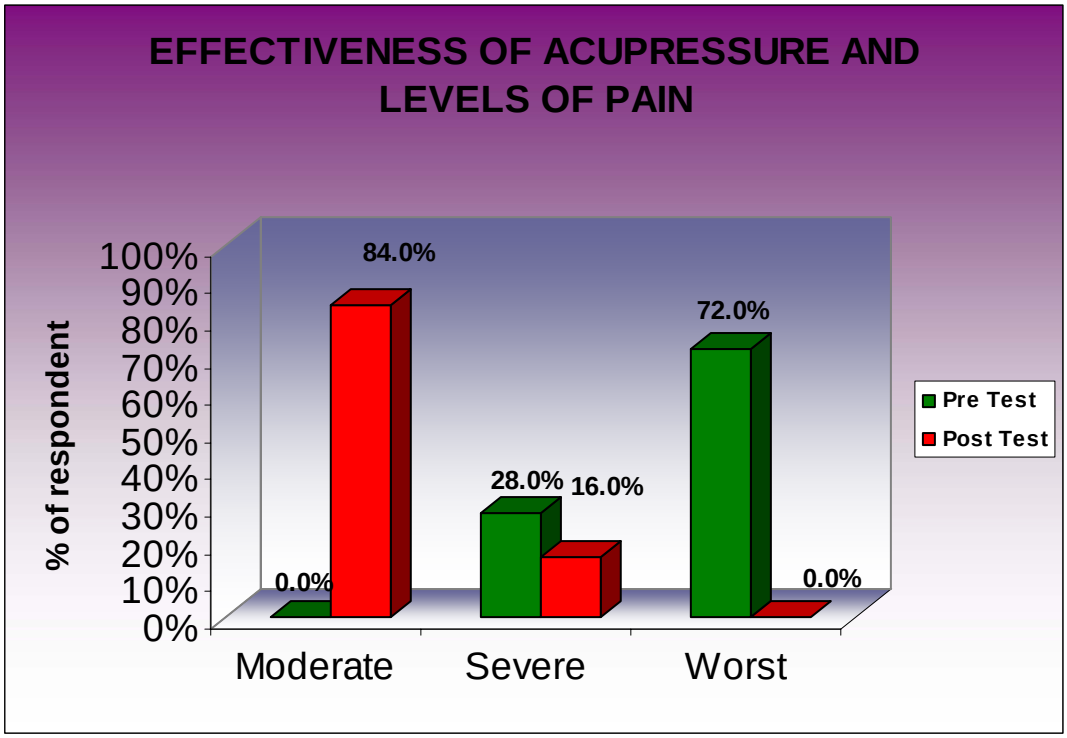
Table 4.6 evaluate the effectiveness of acupressure and the levels of Pain among adolescent girls in – Experimental Group.

Experimental Group									
Test	**Level of pain**						**Chi**	**df**	**Table value**
	Moderate		**Severe**		**Worst**				
	Frequency	**%**	**Frequency**	**%**	**Frequency**	**%**			
Pre Test	0	0	7	28	18	72	39.81	2	5.999
Post Test	21	84	4	16	0	0			
Total	21	84	11	44	18	72			

**** Highly Significant (Significant at 1 % as well as 5 %)**. From the analysis it is concluded that there is close relationship between the level of Pain and type of test in experimental group. As the highly significant results show that the reason for significant difference is the acupressure.

EFFECTIVENESS OF ACUPRESSURE AND THE LEVELS OF PAIN IN CONTROL GROUP AND EXPERIMENTAL GROUP

Fig. 14: Bar diagram showing effectiveness of acupressure and levels of pain



From the analysis it is concluded that there is close relationship between the level of Pain and type of test in control group. It shows that the relationship is not significant. But the 'p; value is less than 0.01 and hence the results is highly significant. . From the analysis it is concluded that there is close relationship between the level of Pain and type of test in experimental group. As the highly significant results show that the reason for significant difference is the acupressure.

SECTION IV: ASSOCIATION OF LEVELS OF PAIN BETWEEN EXPERIMENTAL AND CONTROL GROUP WITH SELECTED DEMOGRAPHIC VARIABLES REGARDING ACUPRESSURE.

This section dealt with association between the levels of Pain and demographic variables regarding acupressure reducing dysmenorrheal among adolescent girls. The cross tabulation analysis was employed effectively and separately for control group and experimental group with pre test and post teat.

Association between the levels of Pain and demographic variables – Control Group

This section dealt with association between the levels of pain regarding the dysmenorrheal among adolescent girls with their demographic variables. The cross tabulation analysis was employed effectively for pre test and post test of control group and the results of chi square analysis were observed and shown in Table 4.7 and Table 4.8.

It is noted from the table 4.7 that the p value shows greater than 0.05 level of significance for all the demographic variables and hence the results are not significant at 5% level. From the analysis it is concluded that there is no close relationship between the demographic variables of the respondents and level of Pain except age of respondent.

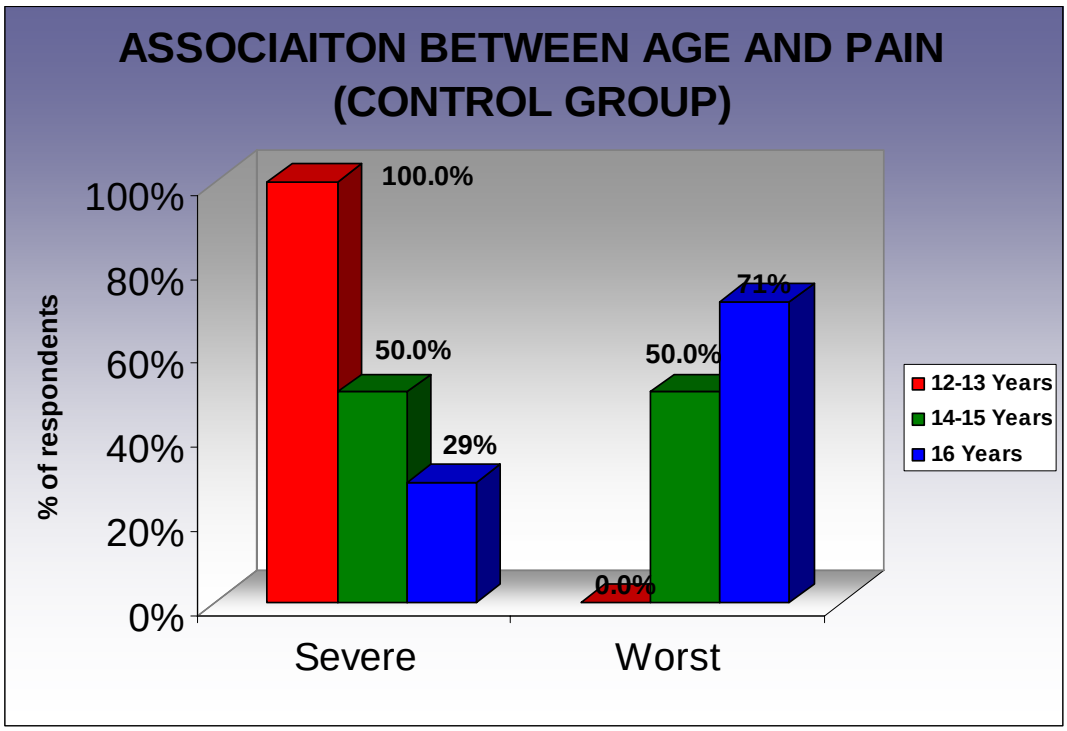
It is noted from the table 4.8 that the p value shows greater than 0.05 level of significance for all the demographic variables and hence the results are not significant at 5% level. From the analysis it is concluded that there is no close relationship

between the demographic variables of the respondents and level of Pain in post test of control group except age of respondent.

Table 4.7 Association - Control Group - Pre Test

Demographic variables		Control Group Pretest				Chi Square	Df
		Severe		Worst			
		F	%	F	%		
Age	12-13 Years	6	100%	0	0%	**X^2=7.027 P=0.029 Significant**	2
	14-15 Years	6	50%	6	50%		
	16 Years	2	29%	5	71%		
Age at menarche	11 - 12 Years	4	57%	3	43%	X^2=0.4561 P=0.7961 Not Significant	2
	13 – 14 Years	6	50%	6	50%		
	15 - 16 Years	4	67%	2	33%		
Education of mother	Illiterate	2	50%	2	50%	X^2=0.1984 P=0.9056 Not Significant	2
	Higher Secondary	10	56%	8	44%		
	Under Graduate	2	67%	1	33%		
Monthly income	< 3000	4	57%	3	43%	X^2=3.432 P=0.3297 Not Significant	2
	3001-5000	9	60%	6	40%		
	5001-7000	0	0%	2	100%		
	7001 and above	1	100%	0	0%		
Residence	Village	10	63%	6	38%	X^2=0.7621 P=0.3821 Not Significant	1
	Town	4	44%	5	56%		
Length of cycle	< 20 Days	1	50%	1	50%	X^2=0.9876 P=0.8043 Not Significant	3
	28-30 Days	8	50%	8	50%		
	35 Days	3	75%	1	25%		
	>36 Days	2	67%	1	33%		
Amount of flow	< 30 Ml	10	56%	8	44%	X^2=0.00515 P=0.9428 Not Significant	2
	30-100 Ml	4	57%	3	43%		
Duration of bleeding	3-5 Days	5	56%	4	44%	X^2=0.8297 P=0.6604 Not Significant	2
	6-8 Days	8	53%	7	47%		
	8 days and above	1	100%	0	0%		
Family History of dysmenorrhoea	Yes	10	56%	8	44%	X^2=0.00515 P=0.9428 Not Significant	1
	No	4	57%	3	43%		
other Symptoms	Nausea and vomiting	9	56%	7	44%	X^2=0.2266 P=0.8929 Not Significant	2
	Headache	2	67%	1	33%		
	Fatigue	3	50%	3	50%		

Fig. 15: Bar diagram showing diagram association between age and pain (control group pre test)



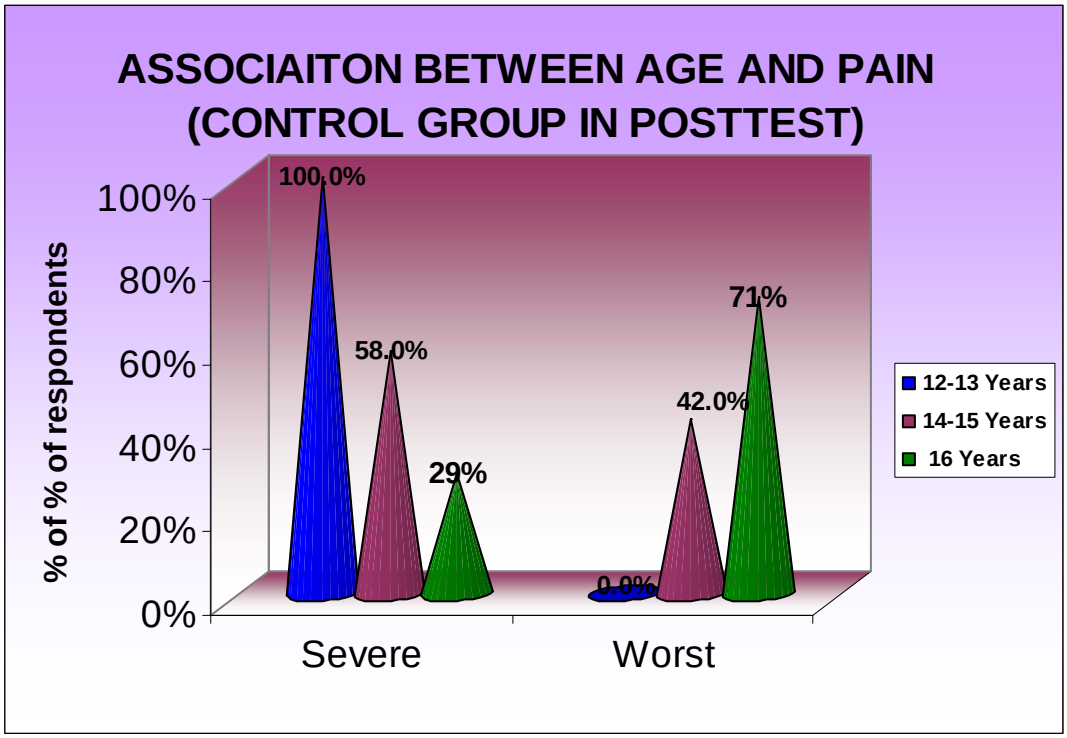
Bar diagram showing the association between the age and pain in control group shows that age group of 12-13 years are showing the severe pain of 100.00% and 14-15 years are showing the 50.00%and 16 years are showing the 29% of mean score

In control group worst pain shows that 12-13years of age group showing 0% and 14-15years are showing the 50.0% and 16 years are showing the 71% of pain score.

Table 4.8 Association - Control Group - Post Test

Demographic variables		Control Group Posttest				Chi Square	Df
		Severe		Worst			
		F	%	F	%		
Age	12-13 Years	6	100%	0	0%	**X^2=6.895 P=0.0318 Significant**	2
	14-15 Years	7	58%	5	42%		
	16 Years	2	29%	5	71%		
Age at menarche	11 - 12 Years	4	57%	3	43%	X^2=0.1488 P=0.9283 Not Significant	2
	13 – 14 Years	7	58%	5	42%		
	15 - 16 Years	4	67%	2	33%		
Education of mother	Illiterate	2	50%	2	50%	X^2=2.315 P=0.3147 Not Significant	2
	Higher Secondary	10	56%	8	44%		
	Under Graduate	3	100%	0	0%		
Monthly income	< 3000	4	57%	3	43%	X^2=0.7738 P=0.8557 Not Significant	3
	3001-5000	9	60%	6	40%		
	5001-7000	1	50%	1	50%		
	7001 and above	1	100%	0	0%		
Residence	Village	10	63%	6	38%	X^2=0.1157 P=0.7337 Not Significant	1
	Town	5	56%	4	44%		
Length of cycle	< 20 Days	1	50%	1	50%	X^2=1.389 P=0.7081 Not Significant	3
	28-30 Days	10	63%	6	38%		
	35 Days	3	75%	1	25%		
	>36 Days	1	33%	2	67%		
Amount of flow	< 30 Ml	10	56%	8	44%	X^2=0.5291 P=0.4670 Not Significant	1
	30-100 Ml	5	71%	2	29%		
Duration of bleeding	3-5 Days	5	56%	4	44%	X^2=0.7407 P=0.6905 Not Significant	2
	6-8 Days	9	60%	6	40%		
	8 days and above	1	100%	0	0%		
Family History of dysmenorrhoea	Yes	10	56%	8	44%	X^2=0.5291 P=0.4670 Not Significant	1
	No	5	71%	2	29%		
other Symptoms	Nausea and vomiting	9	56%	7	44%	X^2=2.344 P=0.3098 Not Significant	2
	Headache	3	100%	0	0%		
	Fatigue	3	50%	3	50%		

Fig. 16: cone diagram showing diagram association between age and pain (control group in posttest)



Cone diagram showing the association between the age and pain in control group shows that age group of 12-13 years showing the severe pain of 100.0% and 14-15 years showing the 58.0% and 16 years showing the 29% of mean score in control group.

In control group worst pain shows that 12-13 years of age group showing 0% and 14-15 years show the 42.0% and 16 years showing the 71% of pain score.

Association between the levels of Pain and demographic variables in - Experimental Group:

This section dealt with association between the levels of pain regarding the dysmenorrhea among adolescent girls with their demographic variables. The cross tabulation analysis was employed effectively for pre test and post test of experimental group and the results of chi square analysis were observed and shown in Table 4.9 and Table 4.10.

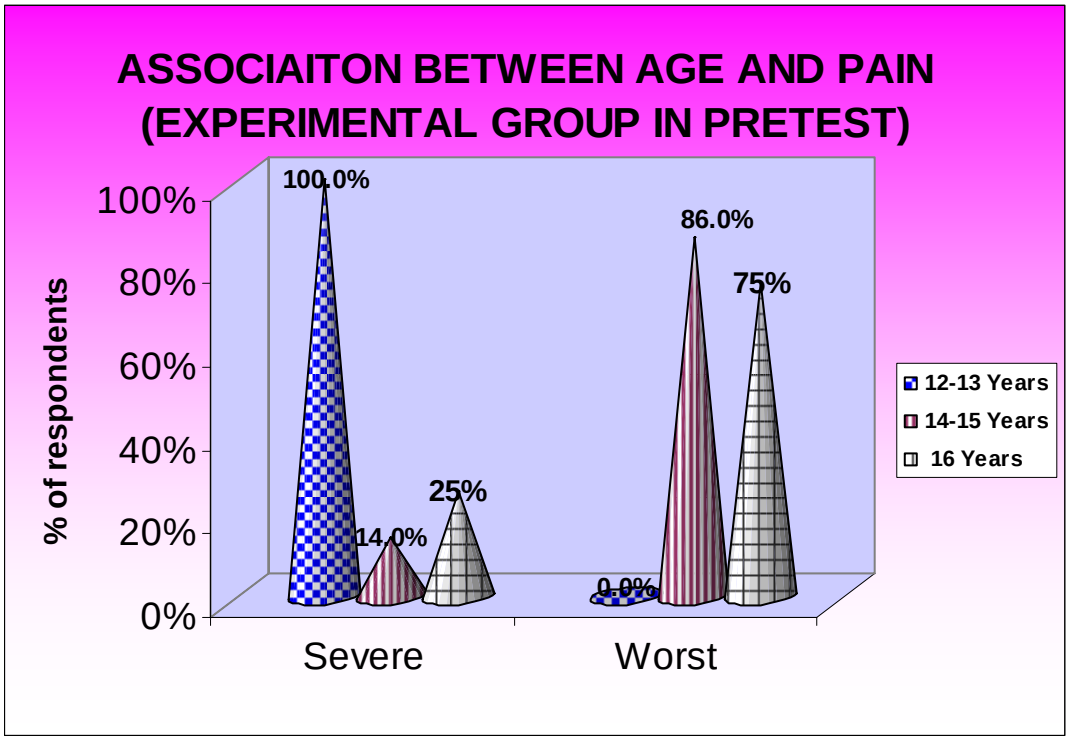
It is noted from the table 4.9 that the p value shows greater than 0.05 level of significance for all the demographic variables and hence the results are not significant at 5% level. From the analysis it is concluded that there is no close relationship between the demographic variables of the respondents and level of Pain in pre test of experimental group except age of the respondent.

It is noted from the table 4.10 that the p value shows greater than 0.05 level of significance for all the demographic variables except age of the respondent and hence the results are not significant at 5% level. From the analysis it is concluded that there is no close relationship between the demographic variables except age of the respondents and level of Pain in post test of experimental group.

Table 4.9 Association - Experimental Group - Pre Test

Demographic variables		Experimental Group Pretest				Chi Square	Df
		Severe		Worst			
		F	%	F	%		
Age	12-13 Years	3	100%	0	0%	**X^2=9.052 P=0.0108 Significant**	2
	14-15 Years	2	14%	12	86%		
	16 Years	2	25%	6	75%		
Age at menarche	11 - 12 Years	3	75%	1	25%	X^2=5.297 P=0.0708 Not Significant	2
	13 – 14 Years	2	17%	10	83%		
	15 - 16 Years	2	22%	7	78%		
Education of mother	Illiterate	3	50%	3	50%	X^2=2.387 P=0.3032 Not Significant	2
	Higher Secondary	4	24%	13	76%		
	Under Graduate	0	0%	2	100%		
Monthly income	< 3000	2	40%	3	60%	X^2=4.049 P=0.2563 Not Significant	3
	3001-5000	3	21%	11	79%		
	5001-7000	2	67%	1	33%		
	7001 and above	0	0%	3	100%		
Residence	Village	4	24%	13	76%	X^2=0.5267 P=0.4680 Not Significant	1
	Town	3	38%	5	5%		
Length of cycle	< 20 Days	1	100%	0	0%	X^2=3.379 P=0.3368 Not Significant	3
	28-30 Days	4	24%	13	76%		
	35 Days	1	20%	4	80%		
	>36 Days	1	50%	1	50%		
Amount of flow	< 30 Ml	4	25%	12	75%	X^2=0.1984 P=0.6560 Not Significant	1
	30-100 Ml	3	33%	6	67%		
Duration of bleeding	3-5 Days	4	29%	10	71%	X^2=0.6315 P=0.7293 Not Significant	2
	6-8 Days	2	22%	7	78%		
	8 days and above	1	50%	1	50%		
Family History of dysmenorrhoea	Yes	6	32%	13	68%	X^2=0.5030 P=0.04782 Not Significant	1
	No	1	17%	5	83%		
other Symptoms	Nausea and vomiting	4	24%	13	76%	X^2=0.7333 P=0.6930 Not Significant	2
	Headache	1	50%	1	50%		
	Fatigue	2	33%	4	67%		

Fig. 17: Cone diagram showing diagram association between age and pain (experimental group pre test)



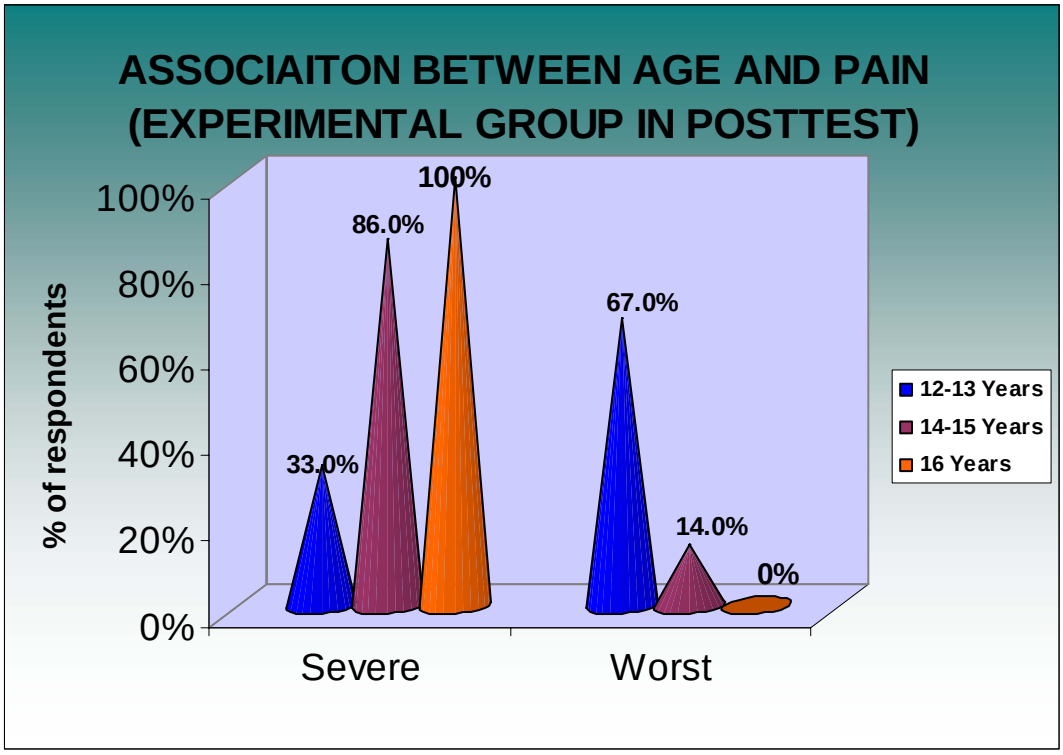
Cone diagram showing the association between the age and pain in experimental group shows that age group of 12-13 yearsaere showing the severe pain of 100.0% and 14-15 years are showing the 14.0%and 16 years are showing the 25% of mean score

In control group worst pain shows that 12-13 years of age group showing 0.00% and 14-15years are showing the 86.0% and 16 years are showing the 75% of pain score.

Table 4.10 Association - Experimental Group - Post Test

Demographic variables		Experimental Group Posttest				Chi Square	Df
		Moderate		Severe			
		F	%	F	%		
Age	12-13 Years	1	33%	2	67%	**X^2=7.285 P=0.0262 Significant**	2
	14-15 Years	12	86%	2	14%		
	16 Years	8	100%	0	0%		
Age at menarche	11 - 12 Years	3	75%	1	25%	X^2=0.4051 P=0.8166 Not Significant	2
	13 – 14 Years	10	83%	2	17%		
	15 - 16 Years	8	89%	1	11%		
Education of mother	Illiterate	4	67%	2	33%	X^2=1.949 P=0.3774 Not Significant	2
	Higher Secondary	15	88%	2	12%		
	Under Graduate	2	100%	0	0%		
Monthly income	< 3000	4	80%	1	20%	X^2=1.509 P=0.6801 Not Significant	3
	3001-5000	11	79%	3	21%		
	5001-7000	3	100%	0	0%		
	7001 and above	3	100%	0	0%		
Residence	Village	15	88%	2	12%	X^2=0.7090 P=0.3998 Not Significant	1
	Town	6	75%	2	5%		
Length of cycle	< 20 Days	1	100%	0	0%	X^2=2.197 P=0.5325 Not Significant	3
	28-30 Days	15	88%	2	12%		
	35 Days	4	80%	1	20%		
	>36 Days	1	50%	1	50%		
Amount of flow	< 30 Ml	14	88%	2	13%	X^2=0.4051 P=0.5245 Not Significant	1
	30-100 Ml	7	78%	2	22%		
Duration of bleeding	3-5 Days	12	86%	2	14%	X^2=1.911 P=0.3846 Not Significant	2
	6-8 Days	8	89%	1	11%		
	8 days and above	1	50%	1	50%		
Family History of dysmenorrhoea	Yes	16	84%	3	16%	X^2=0.00261 P=0.9597 Not Significant	1
	No	5	83%	1	17%		
other Symptoms	Nausea and vomiting	15	88%	2	12%	X^2=1.949 P=0.3775 Not Significant	2
	Headache	1	50%	1	50%		
	Fatigue	5	83%	1	17%		

Fig. 18: Cone diagram showing diagram association between age and pain (experimental group posttest)



Cone diagram showing the association between the age and pain in experimental group shows that age group of 12-13 years are showing the severe pain of 33% and 14-15 years are showing the 86.0%and 16 years are showing the 100% of mean score.

In control group worst pain shows that 12-13 years of age group showing 67.00% and 14-15 years are showing the 14.0% and 16 years are showing the 0% of pain score.

CHAPTER V

DISCUSSION

This chapter deals with discussion of the study with appropriate literature review, statistical analysis and findings of the study based on the objectives of the study. The aim of the present study was to evaluate the effectiveness of acupressure for adolescent girls who are all studying Sakthi Higher Secondary School, Nachimuthupruram. A total number of 50 adolescent girls were selected by using simple random selection by flip a coin method. Pre and post test was conducted by using acupressure for experimental group.

STATEMENT OF STATEMENT OF THE PROBLEM

"**A STUDY TO ASSESS THE EFFECTIVENESS OF ACUPRESSURE ON DYSMENORRHEA AMONG ADOLESCENT GIRLS (12-16 YEARS) STUDYING IN SAKTHI HIGHER SECONDARY SCHOOL, NACHIMUTHUPURAM, ERODE(DT)".**

OBJECTIVES:

1. To assess the level of menstrual pain among experimental and control group
2. To compare the level of pain before and after applied acupressure among experimental and control group.
3. To evaluate the effectiveness of acupressure for dysmenorrhea among adolescent girls.

4. To find out association of level of pain between control group and experimental group with selected demographic variables

COMPARISON OF LEVEL OF MENSTRUAL PAIN SCORES OF CONTROL GROUP AND EXPERIMENTAL GROUP WITH RESPECT TO PRE TEST & POST TEST.

Table 4.2 Showing the score regarding pain score of first day shows that the mean score (8.99± 0.98) 35.6 % of the total score was observed during pre test. The mean score (7.84± 0.98) 31.36 % of the total score was observed during post test. Further the difference in mean percentage of scores show that percentage was more or less equal and very less on first day among the control group.

In experimental group of mean, Standard Deviation and mean percentage score regarding pain score of first day shows that the mean score (8.99± 1.15) 35.6 % of the total score was observed during pre test. The mean score (6.44± 1.02) 25.76% of the total score was observed during post test. Further the difference in mean percentage of scores show that percentage was more or less equal and very less on first day among the experimental group.

Hence there is significant difference in the mean scores of the two groups of pre test and post test among control group as well as experimental group. It is observed from the table that in experimental group there is huge reduction in mean pain score. It shows the effectiveness of acupressure.

EVALUATE THE EFFECTIVENESS ACUPRESSURE FOR DYSMENORRHOEA AMONG ADOLESCENT GIRLS

In control group the pretest score was severe level of pain 14(56%), worst pain 11(44%), the post score was as the same way 15(60%) and 10(40%) and in experimental group in pretest severe 7(28%), in worst 18(72%).

In experimental group the pre test score was moderate level of pain o(o%),severe pain7(28%),worst pain18(72%),the post test score was moderate level of pain 21(84%),severe pain 4(16%),worst pain 0(o%).

ASSOCIATION OF LEVELS OF PAIN BETWEEN EXPERIMENTAL AND CONTROL GROUP WITH SELECTED DEMOGRAPHIC VARIABLES REGARDING ACUPRESSURE.

There is a no significant association between the pain and demographic variables except age of respondents.

CHAPTER VI

SUMMARY, CONCLUSION & IMPLICATIONS

INTRODUCTION:

The primary aim of the study was to assess the effectiveness of acupressure on dysmenorrhea among adolescent girls studying in Sakthi Higher Secondary school, Nachimuthupuram, Erode (Dt).

OBJECTIVES:

1. To assess the level of menstrual pain among experimental and control group
2. To compare the level of pain before and after applied acupressure among experimental and control group.
3. To evaluate the effectiveness of acupressure for dysmenorrhea among adolescent girls.
4. To findout association of level of pain between control group and experimental group with selected demographic variables.

The conceptual framework is adopted for the study is based on the Roy adaptation theory

In this study review of literature is divided in to four part

1. Literature related to dysmenorrhoea

2. Studies related to alternative and complementary therapies in dysmenorrhea
3. Studies related to dysmenorrhea
4. Studies related to acupressure and dysmenorrhea

METHODOLOGY:

The research design provides an over all or blueprints to cutout the study. The research design used in this study was the **true experimental design**, "**Two group pretest, post test design"** was used for assessing the effectiveness of acupressure to reduce the dysmenorrheal among adolescent girls.the sample size was 50 adolescenr girls.in this .25 girls were selected for experimental group and 25 students for control group by purposive sampling method.adolescent girls were selected in sakthi higher secondary school,nachimuthupuram.

Data was collected by using structured questionnaire,this consist of two sections.

SECTION I: Demographic variables

SECTION II: Numerical pain scale.

RESULT:

. In control group pain score of first day shows that the mean score (8.99 ± 0.98) 35.6 % of the total score was observed during pre test. The mean score (7.84 ± 0.98) 31.36 % of the total score was observed during post test. Further the

difference in mean percentage of scores show that percentage was more or less equal and very less on both days among the control group.

In experimental group pain score of first day shows that the mean score (8.99 ± 1.15) 35.6 % of the total score was observed during pre test. The mean score (6.44 ± 1.02) 25.76% of the total score was observed during post test. Further the difference in mean percentage of scores show that percentage was more or less equal and very less on both days among the experimental group.

EVALUATE THE EFFECTIVENESS ACUPRESSURE FOR DYSMENORRHOEA AMONG ADOLESCENT GIRLS

In control group the pretest score was severe level of pain 14(56%), worst pain 11(44%), the post score was as the same way 15(60%) and 10(40%) and in experimental group in pretest severe 7(28%), in worst 18(72%).

In experimental group the pre test score was moderate level of pain o(o%),severe pain7(28%),worst pain18(72%),the post test score was moderate level of pain 21(84%),severe pain 4(16%),worst pain 0(o%).

ASSOCIATION OF LEVELS OF PAIN BETWEEN EXPERIMENTAL AND CONTROL GROUP WITH SELECTED DEMOGRAPHIC VARIABLES REGARDING ACUPRESSURE.

There is a no significant association between the pain and demographic variables except age of respondents.

CONCLUSION:

Introduction

If I hear, I forget.

If I see, I remember.

If I do, I know.

- **A Chinese Proverb**

Acupressure that can be used in all the areas of nursing intervention to prevent, to promote ,to maintain and to modify variety of pain in the adolescents.

In this study showed the effectiveness of acupressure. In pretest the most people in the worst level of pain 72%, after giving acupressure no one was in the worst level of pain category of the experimental group, so it showed the effectiveness of acupressure. From that we concluded that need of acupressure as a non pharmacological method for pain relieving measure.

IMPLICATIONS:

- The findings of the study have thrown new light on the implication of the future.
- It has implication related to nursing education, nursing practice, nursing administration and nursing research.

Nursing education:

- The important of the acupressure should be taught to the diploma and B.Sc.,(Nursing) students for different type of problems.
- The curriculum must emphasize the important of acupressure as a self treatment it should be in the part of the syllabus requirement for the nursing students who are the back bones of the health teams.

Nursing practice:

- Staff development program should be based on the acupressure and acupuncture it's important.
- Promote family centered nursing care and involve the acupressure as a part of its treatment regimen.
- Community health nurse should know about the acupressure and its importance.

Nursing administration:

- The administrator should arrange regular in service education programmes about importance, selection and preparation of acupressure and acupuncture according to the problem of the patient.

Nursing research:

- Research in acupressure will support the basic importance of the reduction of pain during dysmenorrhea and supportive evidence regarding effectiveness of acupressure.
- Research related to utility of acupressure for different age group and also different kind of physical problems.
- Thus promoting the utilization of the research findings by the health provider in the delivery of comprehensive health of the humans.

RECOMMENDATION:

- A similar study can be replicated for adults and their findings can be generalized to a large group.
- A comparative study can be conducted in one type of home remedies and acupressure for the same problem.
- An exploratory study can be conducted to find out the effect of acupressure for other problems.
- A similar study can be done for large samples.

SUGGESTION:

- Various educational programmes like continuing nursing education and staff development.
- Research studies can be conducted on acupressure for other problems.
- Every health providers must have some knowledge regarding acupressure.

BIBLIOGRAPHY

BOOKS:

- A.MJ .ChinMed, 1981 The treatment of dysmenorrhea by acupuncture," **JOURNAL OF OBSTRACTICS AND GYNECOLOGY OF INDIA**

- Adele pillitteri, A. (1995)" **MATERNAL AND CHILD HEALTH NURSING CARE OF THE CHILD BEARING FAMILY",**(2nd Edition). Philadelphia:J.B Lippincot comp

- Bobak and Duncan J.M..(1991) **"ESSENTIAL MATERNITY NURSING",**St.Louis: mosby year book.

- Button etal.(2000)"**ALTERNATIVE MEDICINE**"spring house corporation , penusylvania.

- Daftary(2002) "**REPRODUCTIVE ENDOCRINOLOGY**"sprng house corporation .penusylvania

- Dawn C.S. (1993)**"UNDERGRADUATE AND POST GRADUATE TEXT BOOK OF GYNECOLOGY AND CONTRACEPTION"**.(loth Edition).Dawn books, Calcutta.

- Dewhurst's. (1994)**,"TEXT BOOK OF GYNAECOLOGY FOR POST GRADUATE"** (15th Edition) setritetypesetters company.

- Dickason, et.a!. (1994)**"METERNAL INFANT NURSING CARE"** (2nd Edition U.S.A Mosby company.

- Dutta. (2004)**"TEXT BOOK OF OBSTETRICS"** (6th Edition) New central book agency, Calcutta.

- Geoffrey. V.P.Chamberlain (1995) **"GYNAECOLOGY BY TEN TEACHERS"** (16th Edition) ELBS.
- Julia.M.L & Patricia,E.K.(1992**)."FOUNDATION OF NURSING** PRACTICE (3rd Edition), W.B.Saunders Company, Norbilk.
- Mahajan.B.K. (1991) "**METHODS IN BIOSTATISTICS",** l.P.Brothers (Ist Edition), Nee Delhi.
- Margaut, A.A.et.al., (I 998**)."TANSCULTURAL CONCEPT IN NURSING CARE**" (3rd Edition) Lippincott publication: Philadelphia.
- Mariah synder.(2005) "**COMPLEMENTARY AND ALTERNATIVE THERAPIES IN NURSING**",the mac million company
- Novaks**."TEXT BOOK OF GYNECOLOGY** (II th Edition) Baltimore, Williams and vikm's publication.
- Padubidri.V.N.Daftarys.N. (1997**) "TEXT BOOK OF GYNECOLOGY"** (11 th Edition), BJ Churchill Livingston publication.
- Pillai. R.S.N & Bhagavathi V. **"TEXT BOOK OF STATISTICS** (1ST Edition) Chand Company, New Delhi.
- Polit. D.F & Hugler B.P. (1989) **"NURSING RESEARCH PRINCIPLES AND METHODS** (3rd Edition) J.P. Lippincott company, Fhiladelphia,.
- R.Nicoil, M.Henein, Ginger"INTERNA **TIONAL JOURNAL OF CARDIOLOGY".**
- Sheila.W.Malathi.K.Premila.S., Menstural and gynecological disorder in school

girls," **JOURNAL OF OBSTRACTICS AND GYNECOLOGY OF INDIA"**

- Sunder.Rao & RichedJ. (1997) **"INTRODUCTION TO BIOSTATISTICS A MANUAL FOR STUDENT IN HEALTH SCIENCE"** (3rd Edition) Prentice Hall ofIndia PVT LTD, New Delhi.
- Talbot.L.A..(1995)."**PRINCIPLE AND PRACTICE OF NURSINGRESEARCH**" (1st Edition), Mosby publication, Missouri.

JOURNALS :

- Balachander G.S.Soundara R.Rajaram P.Gynvological problems in adolescents " **JOURNAL OF OBSTRATICS AND GYNECOLOGY OF INDIA**
- Bryer.E," **JOURNAL OF MIDWIFERY AND WOMENS HEALTH**", Volume 50.
- C.Witt, T.Reinhold, **AMERICAN JOURNAL OF OBSTETRICS ANDYNECOLOGY**, Volume 198.
- Jones.A.E, managing (2004 March) the pain of primary and secondary dysmenorrihea,"**NURSES TIMES**.
- Lovellen.M..et.al. (1993), Mensural problems among adolescents "**THE NURSING JOURNAL OFINDIA** "LXXXX.
- Mbizro.M.T (1987).et.al. Effects of a randomized health education intervention on aspects of reproductive health knowledge and reported

behavior among adolescents." **JOURNAL OF FAMILY WELFARE AND CHILD HEALTH PROGRAME.**

- Rama Rao.A. A study on menstruation in adolescents, "**JOURNAL OF INDIAN ASSOCIATION**"
- Reid.R.L. (1985).Menstural problems" **JOURNAL OF OBSTETRICS GYNECOLOGY.**

WEBSITE:

- www.google.com
- www.yahoo.com
- www.pubmed.com
- www.acupuncture.com
- www.accupresure.com
- www.alternativemedicine.com

ANNEXURE I

Phone : 04256-247321

SRI ADICHUNCHANAGIRI SHIKSHANA TRUST®

COLLEGE OF NURSING

DHARMARATHNAKARA Dr. MAHALINGAM INSTITUTE OF PARAMEDICAL SCIENCES & RESEARCH

(Kannada Linguistic Minority Institution)

Sakthinagar - 638 315. Bhavani Taluk, Erode District, Tamilnadu.

Ref. No. : *Date* .....

To THE PRINCIPAL
SRI VIVEKANANDHA VIDHYA BHAVAN MATRIC HR-SECONDARY SCHOOL
VIJAYA COLONY-
c

Dear Sir / Madam,

SUB: Dharmarathnakara Dr.Mahalingam Institute of Paramedical Sciences & Research, Sakthi Nagar – Permission to conduct study – Mrs.A.Premalatha – Reg.

In anticipation to the above subject and as per the curricular requirement, I kindly request you to grant permission to Mrs.A.Premalatha M.Sc., (N) II year Post graduate student to conduct Pilot study at your esteemed institution / Hospital.

Kindly oblige and grant her to undergo her study.

Thanking you,

Yours Faithfully,

(Prof.Mrs.R.Vasanthi)
Principal
PRINCIPAL,
COLLEGE OF NURSING
Dharmarathnakara Dr.Mahalingam Institute of Paramedical Sciences and Research,
(Sri Adichunchanagiri Shikshana Trust)

7/11/08

R.PREMALATHA M.Sc.,B.Ed.,M.phil.,
PRINCIPAL
S. V. V. B. Mat. Hr. Sec' School,
SAKTHI NAGAR-638 315.

Head Office : Sri Adichunchanagiri Shikshana Trust®, Sri Adichunchanagiri Kshethra. PIN : 571 811.
Nagamangala Taluk, Mandya Dist., Karnataka. Phone : 08234 - 287333, 287444

ANNEXURE II

LETTER SEEKING PERMISSION TO CONDUCT STUDY

From

Mrs.A.Premalatha.,M.Sc. (N) II Year,
(Specialty – OBG),
Dr. Mahalingam College of Nursing,
Sakthi Nagar (Po),
Bhavani (TK), Erode (DT),
Tamilnadu.

Permitted
A.S.
HEADMASTER.
Sakthi Hr. Sec. School
Nachimuthupurm.
Sakthi Nagari Po 638318.

To

The Head Master,
Sakthi Higher Sec School,
Nachimuthupuram.

Through:

The Principal,
Dr. Mahalingam College of Nursing,
Sakthi Nagar (Po),
Bhavani (TK), Erode (DT).
Tamilnadu

PRINCIPAL,
COLLEGE OF NURSING
Dharmarathnakara Dr.Mahalingam Institute
of Paramedical Sciences and Research,
(Sri Adichunchanagiri Shikshana Trust)

Respected Sir / Madam,

SUB: Permission to conduct study - Reg.

- - - - -

I am II year M.Sc., Nursing student of Dr. Mahalingam College of Nursing, Sakthi Nagar. As a partial fulfillment of Master of Science in Nursing, I have Undertaken the following research study, which has to be submitted to The Tamilnadu Dr.M.G.R. medical University, Chennai.

RESEARCH STUDY :

"A Study to Assess the Effectiveness of Acupressure to reduce Dysmenhorea among Adolescent Girls (12 – 16) years of age group at Sakthi Higher Secondary School at Nachimuthupuram ".

I Kindly request you to permit met to do the study to assess the effectiveness of acupressure on dysmenorrhea among adolescent girls (12-16 years) studying in sakthi higher secondary school, Nachimuthupuram, Erode District with effect from 11.11.2009 to 30.11.2009

I kindly request you to permit me to conduct the proposed study and provide necessary facilities. Please do the needful.

THANKING YOU

Date :

Yours Sincerely,

Place :

(Premalatha.A)

ANNEXURE III

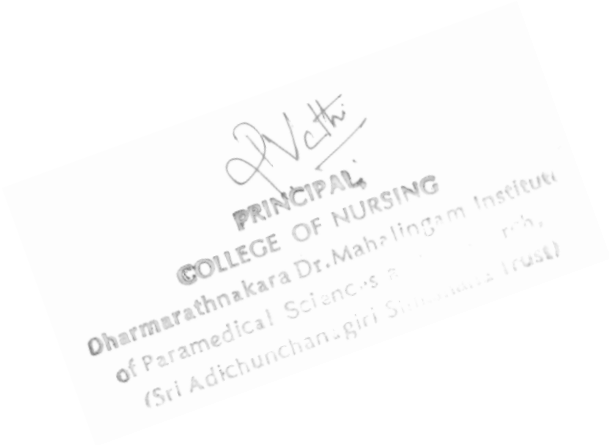
LETTER SEEKING EXPERT OPINION FOR TOOL VALIDATION

From

Mrs. Premalatha.A, M.Sc., (N) II Year
(Speciality – Obstetrics and Gynecological Nursing),
Dr.Mahalingam College of Nursing,
Sakthi Nagar (Po),
Bhavani (TK),
Erode (DT),
Tamilnadu.

To

Through,
The Principal,
Dr.Mahalingam College of Nursing,
Sakthi Nagar (Po),
Bhavani (TK),
Erode (DT).



Respected Sir /Madam,

Sub: Request for to conduct Pilot study-reg..

I am II year M.Sc., Nursing student of Dr. Mahalingam College of Nursing, Sakthi Nagar. As a partial fulfillment of Master of Science in Nursing, I have undertaken the following research study, which has to be submitted to The Tamilnadu Dr. M.G.R. Medical University, Chennai.

"A study to assess the effectiveness of acupressure on dysmenorrhea among adolescent girls (12-16 years) studying in Sakthi Higher Secondary School, Nachimuthupuram, Erode Dt".

ANNEXURE IV

CONTENT VALIDITY CERTIFICATE

This is to certify that the student Mrs. Premalatha.A is studying in Final M.Sc., (N) Post graduate Degree course of Dharmarathnakara Dr. Mahalingam Institute of Paramedical sciences and Research, Sakthi Nagar.

Topic Entitled:

"A STUDY TO ASSESS THE EFFECTIVENESS OF ACUPRESSURE ON DYSMENORRHEA AMONG ADOLESCENT GIRLS (12-16 YEARS) STUDYING IN SAKTHI HIGHER SECONDARY SCHOOL, NACHIMUTHUPURAM, ERODE DT".

Her content for the study is validated and was found reliable.

Date :

Place :

Signature of guide with seal

Dr. AMBIKA RAJAMANICKAM, M.D.,D.G.O.,
CONSULTANT OBSTETRICIAN & GYNAECOLOGIST
REG. NO : 45843
P.G.R. HOSPITAL, BHAVANI

CONTENT VALIDITY CERTIFICATE

This is to certify that the student Mrs. Premalatha.A is studying in Final M.Sc., (N) Post graduate Degree course of Dharmarathnakara Dr. Mahalingam Institute of Paramedical sciences and Research, Sakthi Nagar.

Topic Entitled:

"A STUDY TO ASSESS THE EFFECTIVENESS OF ACUPRESSURE ON DYSMENORRHEA AMONG ADOLESCENT GIRLS (12-16 YEARS) STUDYING IN SAKTHI HIGHER SECONDARY SCHOOL, NACHIMUTHUPURAM, ERODE DT".

Her content for the study is validated and was found reliable.

Date : 15/10/ 09

Place : Coimbatore

Signature of guide with seal

CONTENT VALIDITY CERTIFICATE

This is to certify that the student Mrs. Premalatha.A is studying in Final M.Sc., (N) Post graduate Degree course of Dharmarathnakara Dr. Mahalingam Institute of Paramedical sciences and Research, Sakthi Nagar.

Topic Entitled:

"A STUDY TO ASSESS THE EFFECTIVENESS OF ACUPRESSURE ON DYSMENORRHEA AMONG ADOLESCENT GIRLS (12-16 YEARS) STUDYING IN SAKTHI HIGHER SECONDARY SCHOOL, NACHIMUTHUPURAM, ERODE DT".

Her content for the study is validated and was found reliable.

Date : 18/10/09

Place : Salem

Signature of guide with seal

CONTENT VALIDITY CERTIFICATE

This is to certify that the student Mrs. Premalatha.A is studying in Final M.Sc., (N) Post graduate Degree course of Dharmarathnakara Dr. Mahalingam Institute of Paramedical sciences and Research, Sakthi Nagar.

Topic Entitled:

"A STUDY TO ASSESS THE EFFECTIVENESS OF ACUPRESSURE ON DYSMENORRHEA AMONG ADOLESCENT GIRLS (12-16 YEARS) STUDYING IN SAKTHI HIGHER SECONDARY SCHOOL, NACHIMUTHUPURAM, ERODE DT".

Her content for the study is validated and was found reliable.

Date :20/10/09

Place : Salem

Signature of guide with seal

CONTENT VALIDITY CERTIFICATE

This is to certify that the student Mrs. Premalatha.A is studying in Final M.Sc., (N) Post graduate Degree course of Dharmarathnakara Dr. Mahalingam Institute of Paramedical sciences and Research, Sakthi Nagar.

Topic Entitled:

"A STUDY TO ASSESS THE EFFECTIVENESS OF ACUPRESSURE ON DYSMENORRHEA AMONG ADOLESCENT GIRLS (12-16 YEARS) STUDYING IN SAKTHI HIGHER SECONDARY SCHOOL, NACHIMUTHUPURAM, ERODE DT".

Her content for the study is validated and was found reliable.

Date : 12/10/09

Place : Thirunchegodu

K. Gomilavani
Signature of guide with seal
K. Gomilavani.
Ass. Prof. Vivekanandha
College of Nsg
Tirunchengodu.

ANNEXURE V

TOOL I

PART I: DEMOGRAPHIC VARIABLES

Date of Data Collection:

The investigator places a tick ( ) mark in the relevant answer.

1. Age in years

    1.1. 12 – 13 years

    1.2. 14 – 15 years

    1.3. 16 years

2. Age at menarche

    2.1. 11 – 12 years

    2.2. 13 – 14 years

    2.3. 15 – 16 years

3. Education of mother

    3.1. Illiterate

    3.2. Higher Secondary

    3.3. Under Graduate

4. Monthly income of the family

    4.1. < 3000

    4.2. 3001 – 5000

    4.3. 5001 – 7000

    4.4. 7001 and above

5. Area of residence

    5.1. Village

    5.2. Town

6. Length of cycle in days

    6.1. < 20 days

    6.2. 28 – 30 days

    6.3. 35 days

    6.4. more than 36 days

7. Amount of blood flow during menstruation

    7.1. < 30 ml (<4 pads in a day)

    7.2. 30ml – 100 ml (5 to 10 pads in a day)

8. Duration of bleeding in days

    8.1. 3 – 5 days

    8.2. 6-8 days

    8.3. 8 days and above

9. Any family history of dysmenorrhea?

    9.1. Yes

    9.2. No

10. What are the other symptoms of dysmenorrhea present during menstruation?

    10.1. Nausea and vomiting

    10.2. Headache

    10.3. Fatigue

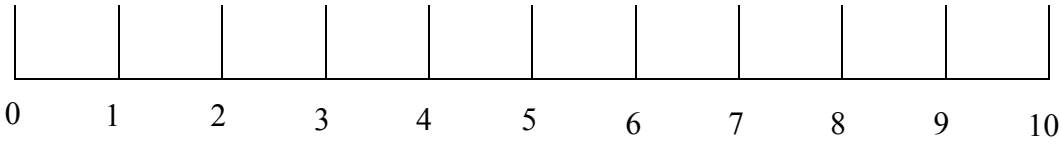
TOOL II

Numerical pain scale

The scale shows 0-10 markings in that 0 shows no pain, 1-3 shows mild pain, 4-6 shows moderate pain, 6-9 shows severe pain and 10 shows severe pain.

Instructions:

According to the intensity of your pain place a tick mark in the scale given below.



Description:

0 : No pain

1-3 : Tolerable and pain does not prevent any activities

4-6 : Tolerable and pain prevent some activities

7-9 : Intolerable pain prevent the activities of reading and writing

10 : Intolerable pain prevent the verbal communication.

ANNEXURE VII

ANNAI ACUPUNCTURE CLINIC

16, Bazaar Street, Near Time Tower,
SATHYAMANGALAM - 638 401.
Erode District.
Email: gurusamyaccup@gmail.com

Dr. P. GURUSAMY M.D.(Acu)., D.M.T., Cell: 93455-28144

Consultant:
Acupuncture, Magneto Therapy, Yoga & Alternative Medicines

Date.....

This is to certify that Ms.A. Premalatha II year M.Sc (nursing) student has undergone training programme in techniques of acupressure for dysmenorrhoea in Annai Acupuncture clinic from 1/10/2009 to 10/10/2009 for 2 hours/day. She can perform the techniques effectively for dysmenprrhoea.

Dr. P. குருசாமி, M.D (Acu) D.M.T.
அக்குபஞ்சர் நிபுணர்

ANNEXURE – VIII

LIST OF EXPERTS

1. Dr.Ambika Rajamanikam MBBS, MD, DGO,

   Reg.No:45843

   P.G.R Hospital, Bhavani.

2. Mrs.Gokilavani M.Sc., (Nursing)

   Asst. Professor,

   Vivekananda College of Nursing

   Trichengodu.

3. Mrs.Renuka M.Sc., (Nursing)

   Asst .Professor,

   KMCH College of Nursing,

   Coimbatore.

4. Mrs.Amudha M.Sc.,(Nursing),

   Asst .Professor

   Gokulam College of Nursing,

   Salem.

5 .Mrs.Thilagavathi M.Sc (Nursing)

   Professor,

   Shanmuga College of Nursing,

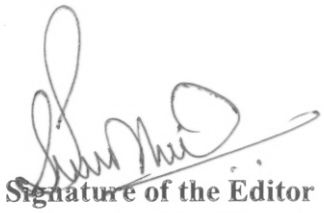
   Salem.

CERTIFICATE BY THE EDITOR

This is to certify that the dissertation entitled "a study to assess the effectiveness of acupressure on dysmenorrhea among adolescent girls (12-16 years) studying in sakthi higher secondary school, Nachimuthupuram, Erode Dt" is a bonafide research work done by Mrs Premalatha.A II Year M.Sc., (Nursing) student of Dharmarathnakara Dr.Mahalingam Institute of Paramedical Sciences & Research, Sakthi Nagar, Bhavani Taluk, Erode District. Mrs.T.S.Sumithra Devi., M.A., (M.Phil) edited this manuscript on behalf of the partial fulfillment of the prerequisite for the degree of **Master of Science in Nursing** (Obstetric and Gynecology Nursing)

Date:

Place: Sakthi Nagar



Signature of the Editor

TECHNIQUES OF ACUPRESSURE IN DYSMENORRHEA

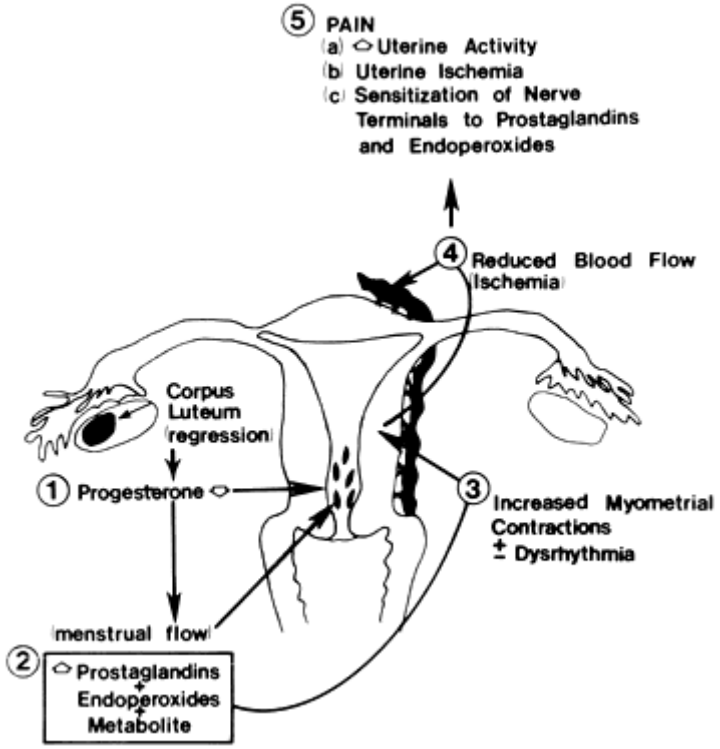
Technique 1: Sp-6 (Spleen Point)

Technique 2: ST-36 (Stomach Point)

Technique 3: Liver-3 (Great surge)

ANNEXURE IX

PAIN PATHWAY



If a pain stimulus is not sufficiently strong or if it is superseded by a different stimulus, the substantia gelatinsu may inhibit it's passage. In the gate contrast theory the substantia gelatinosa is linked to a gate. The age may be closed by competeting stimulus such as acupressure.