

**A COMPARATIVE STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED
TEACHING PROGRAMME ON KNOWLEDGE, ATTITUDE AND PRACTICE
REGARDING MENARCHE AND MENSTRUAL MANAGEMENT AMONG
SCHOOL GIRLS IN SELECTED URBAN AND RURAL SCHOOLS
AT COIMBATORE.**

Reg. No. 301420452

**A DISSERTATION SUBMITTED TO THE TAMILNADU
Dr. M. G. R. MEDICAL UNIVERSITY, CHENNAI, IN
PARTIAL FULFILLMENT OF REQUIREMENT
FOR THE DEGREE OF MASTER OF
SCIENCE IN NURSING
OCTOBER 2016**

CERTIFICATE

This is to certify that the Dissertation entitled “**A COMPARATIVE STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE, ATTITUDE AND PRACTICE REGARDING MENARCHE AND MENSTRUAL MANAGEMENT AMONG SCHOOL GIRLS IN SELECTED URBAN AND RURAL SCHOOLS AT COIMBATORE.**” is submitted to the faculty of nursing, **THE TAMILNADU Dr.M.G.R. MEDICAL UNIVERSITY, CHENNAI** by **Reg. No. 301420452** in partial fulfillment of requirement for the degree of Master of Science in Nursing. It is the bonafide work done by her and the conclusions are her own. It is further certified that this dissertation or any part thereof has not formed the basis for award of any degree, diploma or similar titles.

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ACKNOWLEDGEMENT

The chain of my gratitude begins with **GOD Almighty** for refinement, blessings and direction which strengthened me to do the work and sustained me throughout this endeavour.

I am immensely thankful to **Dr. Nalla.G. Palaniswamy, M.D., AB (USA), Chairman and Managing Director**, Kovai Medical Center and Hospital and to **Dr. Thavamani D Palaniswamy M.D., AB (USA), Managing trustee**, Kovai Medical Centre and Educational Trust for granting me the opportunity to undertake this study in their esteemed institution.

I express my deep gratitude from bottom of my heart to **Prof. DR. S. Madhavi, M.Sc (N), Ph.D., Principal, KMCH College of Nursing**, who was my research guide for her valuable suggestions, timely support and constant moral support, which contributed to enrich the strength to complete this study successfully.

I convey my special thanks to **Prof. Sivagami.R. M.Sc. (N), vice Principal, KMCH College of Nursing** for her generous support, encouragement and timely advice to fulfil this work.

I am exceedingly thankful to my medical guide, **Dr. Jayanthi Veerappan M.D., D.G.O., Consultant Obstetrics & Gynaecology, Kovai Medical Centre and Hospital** for his advocacy, generosity, guidance and readiness to spend his time even in his engaged schedule.

It is my proud privilege to express my deep sense of thanks to **Prof. S. Renuka, MSc (N), Head of the department obstetrics and Gynaecological nursing, and Prof. R. Indumathi M.Sc. (N), Associate Professor, Department of Obstetrics and Gynaecological nursing** for their extensive guidance, consultation and continued help.

With sincere heart I express extensive sense of gratitude to my clinical Guide **Mrs. P. Padma, M.Sc. (N), Associate Professor Department of Obstetrics and Gynaecological nursing**, for her enthusiasm and interest that provided me with strength and encouragement to complete the study. I express my sincere thanks for her valuable guidance and timely suggestions throughout my study.

I wish to thank the **Principal of PSGG-Kanya Gurukulam Higher Secondary School and GRD-CPF higher Secondary School** for granting me to conduct my study in their esteemed school.

I am exceeding my thanks to **Mr.Pradeep Kumar., Statistician, KMCH College of Pharmacy,**and**Mrs.Vennila. Statistician, KMCH College of Pharmacy,**for his guidance in statistical analysis and interpretation of data during the study.

I am exceedingly thankful to **Mrs. A. Bhuvaneswari, M.A., and M.phil. Assistant professor,** KMCH College of Nursing, for her guidance in English language and Grammar check for my study.

I express my sincere thanks to our chief librarian**Mr.Dhamodharan and all assistant librarians** for permitting and facilitating me to make use of the reservoir of knowledge.

Parents are the first teachers in each one's life and they are the first and foremost representatives of God on earth. I would like to thank **my loving father Mr. Rajan without** whom I cannot climb the steps of my life. Words are not enough to express my gratitude to **my beloved mother Mrs.Rugmini** for her constant love and support. I extend my love to **my angel sister Mrs. Nisha** for her support and encouragement always keep my spirits high. I would like to thank **my brother in law Mr. Jayaprasad** for his integrity, morals and thoughtfulness will always make me strive to be a better person.

My special thanks to **my classmates Mrs.Jesslin, Ms.Sowmya, Ms.Chachu,Mr.Chandiran, Ms.Chinnu,Mrs.Benita, Ms.Sharoon,** who directly and indirectly encouraged and helped me throughout this study.

I would like to extend my sincere thanks to the **king of kings** for my professional quality of the computer work to complete the form of my study.

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Q	Copy of certificates of content validity
R	Copy of certificates of content validity
S	List of Experts

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CHAPTER I

INTRODUCTION

Adolescence is a changeover period from childhood to adulthood. This complex passage from childhood to adulthood is particularly hectic for girls. The healthy adolescent population is considered as a social agent of change toward a population with a healthier way of life. The period of adolescence for a girl is a time of physical and psychological preparation for secure maternity. One of the major physiological change that take place in adolescent girls is onset of menarche which is generally connected with a number of troubles. With the developmental milestone associated with the adolescence the onset of initial menstrual phase is a qualitative episode of main consequence in women's life. Menstruation is still regarded as something unclean or dirty in India. The reaction of girls towards the menstruation depends upon the manners in which she learns. Although the menstruation is a natural process with several misconception and practice. This results lots of health problem **(Anice.G.J 2005)**.

WHO has defined adolescence as the age range of 10 – 19 years. It is the period between babyhood and adulthood, noticeable by improved food necessity and basal metabolic activities and biochemical behavior endogenous processes include hormonal secretion with their influence on the various organ systems **(WHO 2001)**.

In India, adolescent population is nearly 21% which is maximum among 6 populous countries that is china, United States of America, Russian federation, Indonesia, Brazil and japan. The proportion of adolescent population is around 21% while the proportion has increased from 18.3% to 19.2% **(Census 2011)**.

From the beginning of their lives, girls are groomed to carry out male dominance and pay no attention to their own needs. Discrimination against the girl child in health, nutrition and education is relatively heightened in adolescence. Onset of puberty decreases autonomy and mobility, with increasing limitations on communication, look conduct and relations with the opposite sex. Girls inherit their mother's domestic chores and adopt stereotypical gender roles. In alignment with plans values and approaches, it focused on working hand in hand with best, local followers and national and international organization programs increased educational opportunity for girls and formative years, ensure access to lifesaving reproductive

health and services, and strengthened women's ability to become leaders in their communities and nations (**CEDPA 2012**).

Menarche or menstruation is a major stage of puberty in girls, it is one of the many physical symbol that a teenager going through, to turn into a women. Like lot of other changes associated with puberty, menstruation can be mystifying for a lot of girls. Some girls can't stay to start their periods, whereas others may feel afraid or anxious. Several girls don't have a whole thoughtful of a woman's reproductive system or what actually happens during the menstrual phase, building the process seem even extra strange Menarche marks the beginning of women's menstrual and reproductive living and occur during early on puberty. When teenage girls are beginning to emotionally separate themselves from their family, as well as to grapple with their unfolding feminine sexuality. Thus, it is pertinent to examine various influencing factor of adolescent girls' outlook of menarche to make easy the understanding of their transition to womanhood, which may have significant implications for the overall promotion of their health (**Chaturvedi 2001**).

Menstruation has dual implication for women. Menstrual disorder not only India but millions of women in the United States and represent a major health problem. The most general menstrual disorder is dysmenorrhea and headache; these conditions are leading cause of work or school absence and considerably impact quality of life. This study is an approach to evaluation and managing of dysmenorrhoea and menorrhagia that consider the cultural, social and personal significance of symptoms and managing choice. Cultural influences, for example a woman's status within society, her life stage, religion, education and employment, conclude whether a woman seek medical assist for menstrual problems, and the personal significance of dysmenorrhoea. Evaluation involves concern of pain, associated symptoms, effect on lifestyle and activities of on a daily basis living, and a psychosocial and cultural assessment. Management involves specific treatment of underlying pathology, psychosocial hold and individualizing action according to impact of the pain, associated symptoms, reproductive phase, price, and the woman's personal morals and attitude (**Reddish.S, 2006**).

Menstruation is a normal biological process and a key symbol of reproductive fitness yet in a lot of cultures it is treated as something negative, shameful or dirty. The sustained silence about menstruation combined with limited access to information

at home and in schools results in millions of women and girls have very small awareness about what is happening to their bodies when they menstruate and how to contract with it. A study from UNICEF exposed that 1 out of 3 girls in South Asia knew nothing about menstruation previous to receiving it while 48% of girls in Iran and 10% of girls in India believe that menstruation is a disease (**Water Aid 2013, Menstrual Hygiene Matters**).

A study on, providing for pre-adolescent girls in India- in Insights Education. Menstruation is measured a pollute aspect between Hindus. In many places menstruating girls and women are considered vulnerable girls learn from early on teenage years that through their monthly cycle they may not touch anything in the kitchen or visit a holy place as an further instance, it is usually believed that pickles made by a menstruating girl woman will not. Some of such taboo are also widespread among non-Hindu. Such attitudes and practices are doubtful to create a constructive person-image within girls (**Shukla.S., et al 2004**).

Myths and taboos about menstruating women such as the need to abstain during sex or being prohibited to prepare foodstuff while not having disappeared entirely, have generally diminished in western setting This likely serve to strengthen misunderstanding about natural bodily processes, and to perpetuate the stigma that is emotionally involved to menstruating women and girls. Girls explain that menstruation is a forbidden subject even within their own family telling a ‘traditions of silence’ with regard to their menstruation. They feel not capable to talk about physiological alter throughout puberty including menstrual issues with their mothers and surely not with their fathers. Not being able to talk about their experience and having inadequate information means that these issue becomes something disgraceful and a little to secrete, and is consequently unseen in families, schools and communities (**Kirk.j., 2004**).

According the survey being conducted by the group of Obstetrics’ and Gynecologists’ Society of India 7 Sep 2006, the age of attain sexual development among girls in urban India has drop to 11 from 13. The reverse is true in rural India, where girls are getting puberty even later on than 13. So far we had accepted the worldwide average (around 13 years). More than 80% of the girls in cities are getting puberty approximately age 11, indicates the survey that is being carried out in 100

centers together urban and rural from corner to corner four regions. So the investigator feels the need to provide knowledge and practice to the pre-adolescent girls previous to attaining puberty (**FOGSI 2006**).

Reducing stress, increasing exercise, and building nutritional change around the moment of menstruation be able to prevent PMS symptoms from worsening. Women should be encouraged to have usual well-reasonable meals. A diet low down in salt and sugar, adequate in protein, moderate in fat, and high in compound carbohydrates (fruit, vegetables, and whole grains, good value protein, nuts and seeds) will all help rebalance and continue hormones. While experience PMS, Shashankasana & a easy breathing exercise called Anulome Vilome can be perform at any occasion of the day to calm down the muscles and nerves, which are under constant stress, strain and irritation (**yogashhasthra**).

A recent analysis of menstrual disorders in developing countries in journal revealed high rates of menstrual morbidity in people based study by late adolescence, 75% of girls experience some problem linked with menstruation. Late, irregular, throbbing, and heavy menstrual bleeding are most important reason for physician office visit by young people and dysmenorrhoea is the foremost reason for school absenteeism among girls(**Lee L K, et.al. 2001**).

The true incidence and prevalence of dysmenorrhea are not obviously recognized in India. In recent times, George and Bhaduri concluded that (87.87%) dysmenorrhea is a common problem in India. In Sweden the prevalence was >2–4%. Similar conclusion had been report by Jayashree and Jayalakshmi, in rural wedded women of Andhra Pradesh. Dysmenorrhea has been predictable to be the most cause of time lost from work and school in the United States. (**Aggarwal.A.K. et al 2010**).

NEED FOR THE STUDY

The beginning of menstruation is one of the most important changes occurring among the girls during the adolescent years. The bodily changes associated with puberty will have an impact in the girls physical, psychological, and social development. Hence adolescent girls constitute a vulnerable group, particularly in India. Where female child is discriminated in the society.

At 2005 world summit reproductive health as a target millennium development goals framework is fully dedicated to mobilizing hold up and scale up hard work to make reproductive health for all by **(UNFPA 2015)**.

A descriptive cross sectional study conducted to assess the Menstrual Attitude and knowledge among Egyptian female adolescence in 3 public schools. 200 randomly chosen students were complete the self administer tool. More than half of the participants reported that menstruation is event happens to the girl during the puberty. 50% of the participants reported that the girl must look for medical advice when menstruation is irregular and associated with severe pain (21%). As regard to participant's attitude towards menstruation the participant somewhat agree that menstruation is a debilitating (4.22±0.83) natural event (4.95±1.32) and a bothersome (4.35±1.20) furthermore they slightly agree that they can anticipate their menstruation (4.25±1.32) and they denial the effect of it. Results shows that participants who have informed about menarche before its onset they have more positive attitudes before menstruation **(Eswi.A et, al.2012)**.

A cross sectionl study conducted regarding the relationship between dysmenorrhoea and and menstrual attitudes among 1000 adolescent school girls between the age group of 11-28 yrs in Urban area south India. A purposeful sampling was done to select the candidates. Menstrual attitude questionnaire and numerical pain scale as used as a tool for data collection. The results of this study shows that 70.2% of participants were dysmenorrhoeic and nearly 705 experienced moderate to severe dysmenorrhoea. There was a significant association between attitude towards menstruation and dysmenorrhoea was found. **(Omidvar.S. et.al.2015)**.

A quantitative study conducts about attitude and believe of the experience of menstruation in female students at the University of Western Cape. The objective was to determine the biological factor, psychological factor, Socio cultural factor. Simple random sampling was used for 200 female students between the age group of 18-21 years. Survey containing biographic information as well as questions from the beliefs attitudes towards menstruation questionnaire (BATM) was used as a tool. The study revealed that significant difference between normal and late onset of menarche on the level of disability associated with menstruation. It focus on the attitude and believe of the experience of the menstruation will have a say to the information base of

menstruation in the south African context, as well as informing intervention which focus on cultivating women regarding menstruation, so as to promote positive attitudes & prevent form of societal control forced on women because of menstruation. **(Gesselleen.M.V. 2014).**

A cross sectional study conducted on menstrual pattern among 745 adolescent school girls at Govt.Higher secondary school Bhavnagar Gujarat. The aim of the study was to find out the age of menarche, menstrual pattern, hygienic practices, prevalence, and type of menstrual troubles. Questionnaire was use as a means of data compilation tool. The result shows 88% of girls had the information before they achieved the menarche remaining the girls were not informed about the menstruation. The main source of information was mother (57.2%). The girls got information from teacher was (1.7%). Other sources were elder sister, relatives, friends, and book. The study concludes that girls should be knowledgeable well in advance about the menstruation, physiological development, and its impotence. **(Dr.P.B. Varma, et al. 2012).**

A study conducted on menstruation and menarche and sexuality in the public school curriculum. Convenience sample method was adopted for 39 school nurses attending a yearly state wide continuing education workshop. Questionnaire was used as a tool. Items included like content of nurses role in school health nursing, involvement in teaching and consult with teachers related to menstruation, menarche, and reproductive health. The study suggests that the nurse in this population are significantly involved in education concerning menstruation and related topics of reproductive wellbeing and sexuality. It also appears that the way of information was presented is in accordance with recommendation in the future. **(Swenson.IE., et, al. 2009).**

A study conducted to evaluate menstrual hygienic practice and absentism in western Uganda. Multiple methods used in this study. Total 30 schools were recruited with a target of 30 girls in each, aged 14 and above. At the beginning started with questionnaire following that interviews were carried in two separate schools. One school selected on the basis that girls had not completed the questionnaire, the second was selected by random from the remaining schools. The result shows that menstruation is a contributor to school girl's absentism. It is key to

note that many girls are missing schools because they lack appropriate products and facilities within the school do not cater for their needs. (Guerry.E. 2013).

Girls need more information regarding menstrual management in their early age. Most of them are attaining menarche early that time they are getting physical and psychological stress. To overcome these structured planned teaching is essential to inculcate their knowledge, attitude and practice. There is a need to be sensitive to the environment in which it is specified and to the sensibility of female students who at least initially may feel shy and embarrassed to speak in relation to menstruation and teenage changes at school. Strategies to address this include, for example, dividing girls and boys into take apart discussions, and give them appropriate knowledge and healthy practices regarding attaining puberty.

STATEMENT OF THE PROBLEM

A comparative study to assess the effectiveness of structured teaching programme on knowledge, attitude and practice regarding menarche and menstrual management among school girls in selected urban and rural schools at Coimbatore.

OBJECTIVES

- ❖ To assess the average age at menarche among rural and urban schools girls.
- ❖ To assess the knowledge, attitude and practice on menarche and menstrual management among school girls in selected urban and rural schools at Coimbatore.
- ❖ To determine the effectiveness of structured teaching programme on knowledge, attitude and practice regarding menarche and menstrual management among school girls in selected rural and urban schools at Coimbatore.
- ❖ To compare the effectiveness of structured teaching programme between the rural and urban school girls in terms of knowledge, attitude and practice.
- ❖ To associate the pretest knowledge score with selected demographic variables of rural and urban school.

OPERETIONAL DEFINITION

Structured teaching programme

It refers to the systematically organized instructions and discussion of knowledge and practices regarding menarche and menstrual management with the help of LCD.

Knowledge

It refers to understanding about menarche and menstrual management as measured through self administered questionnaire.

Attitude

It refers to individual person's innermost perception about menarche and menstrual management as measured through self administered attitude scale.

Practice

It refers to ability to maintain monthly menstruation hygienically and comfortably as measured through self administered practice checklist.

Menarche

It refers to attaining first menstrual cycle by the school girls.

School girls:

It refers to girls belongs to the age group of 12-13 yrs.

HYPOTHESIS

H1- There will be a significant increase in knowledge scores regarding menarche and menstrual management among school girls in selected urban and rural schools.

H2- There will be a significant change in attitude scores regarding menarche and menstrual management among school girls in selected urban and rural schools.

H1- There will be a significant improvement in practice scores regarding menarche and menstrual management among school girls in selected urban and rural schools.

ASSUMPTION

Knowledge is the base for practice. Early adolescent girls are in need to get proper education regarding their reproductive health, which will promote healthy life.

CONCEPTUAL FRAMEWORK

Nursing is a complex field of study with a need for practical and hands- on training as well as knowledge of the theoretical and the historical basis. Conceptual framework for this study was developed on the basis of an important theory called prescriptive theory of nursing, formulated by Ernestine Weidenbach who was an early leader in the field of nursing, who proposed her theory in 1969 as a prescriptive theory that directs action towards an explicit goal.

Elements of nursing

According to weidenbach there are four components to the field of nursing

1. Philosophy of nursing

Philosophy of nursing includes the attitudes and beliefs about life the nurse maintains and how these beliefs affect the reality. Philosophy leads the nurse to act in a certain way.

2. Nursing purpose

The purpose of nursing includes what a particular nurse wishes to accomplish through the profession and the activities which are directed to the overall good of the patient.

3. Nursing practice

The practice of nursing involves identifying and administering the required needs of a patient and determining whether or not the actions were helpful to the patient.

4. Art of nursing

Weidenbach encouraged nurses to see nursing as an art which includes understanding the patient concerns and needs and addressing them accordingly.

The five realities identified by Weidenbach are agent, recipient, goal, means and framework.

- Weidenbach's view of nursing as an art based on goal directed care
- Weidenbach's vision of nursing practice closely parallels the assessment, implementation and evaluation steps of nursing process.

- According to her factual and speculative knowledge, judgment and skills are necessary for effective nursing practice.
- According to Weidenbach, nursing practice consists of identifying a patients need for help, ministering the need help and validating that the need for help was met.

The attributes adopted in this study are:

Central purpose

The central purpose of the study is to assess the effectiveness of structured teaching programme on knowledge, attitude and practice regarding menarche and menstrual management among school girls.

Prescription:

The investigator plans the prescription that will fulfill the central purpose (increasing knowledge, attitude and practice) by identifying the various needs to achieve the goal.

Realities:

1. Agent-investigator
2. Recipient-school girls
3. Goal-increasing knowledge, attitude and practice
4. Means-structured teaching programme
5. Framework-rural and urban school

Identification:

This includes the identification of the present knowledge, attitude and practice regarding menstrual management.

Ministration:

Refers to structural teaching programme with the help of LCD teaching among school girls.

Validation:

Refers to the evaluation of the effectiveness of structured teaching programme.



Figure No: 1 conceptual frame work of modified Weidenbach's theory of helping art of clinical nursing (1969)

CHAPTER II

REVIEW OF LITERATURE

A review of literature will give thorough background support to the study. A familiarization well before with previous studies can be useful in suggesting research topic in identifying aspects of problems about more research is needed. It gives new knowledge insight to the researchers.

The related literature is reviewed for the present study in order to determine the knowledge, attitude, and practice regarding different aspects of menstrual management.

- Literature related to age at menarche
- Literature related to menstrual hygiene
- Literature related to menstrual problems
- Literature related to home remedies for menstrual problems
- Literature related to knowledge, attitude and practice regarding menarche and menstruation

LITERATURE RELATED TO AGE AT MENARCHE

Menarche is the beginning of menstruation and it is single most important milestone in a woman's life. They represent age at menarche vary from population to population and is known to be a sensitive pointer of a mixture of uniqueness of people including food status, ecological location, environmental circumstances and extent of socioeconomic inequality in a civilization. Studies suggested that menarche tends to appear earlier in life as the hygienic, dietetic and financial conditions of a society improve. For most females, it occurs among the age of 10 and 16 years; though, it show a notable series of variation. The normal series for ovulatory cycles is between 21 and 35 days. While most periods end from three to five days, duration of menstrual flow normally ranges from two to seven days. For the first few years following menarche, irregular and longer cycles are common (**Thomas F et al. 2001**).

A descriptive study was conducted on menstrual patterns among 30 adolescent girls age between 10 to 19 yrs with different types of disabilities on residents of a residential institution caring for abandoned children. Here they have studied the clinical history and medical records of the students and carried out detailed clinical examination of all girls. Based on these findings the disabilities were diagnosed and categorized. The variables include diagnosis, type of disability, secondary sexual characteristics, menarche, menstrual pattern, menstrual hygiene, and menstrual problems. The study concludes that onset of menarche is towards the extremes of normal age range in girls with intellectual disabilities or visual impairment but not in the girls with hearing and loco motor disabilities. Girls with disabilities have probably for independent menstrual be concerned. Menstrual disorders were managed conservatively. **(Joshi.G.A., et al. 2015).**

A study conducted on onset of menstrual cycle and menses features among secondary school girls in Italy. The aim of the study was to provide an updated picture of age at menarche, and main menstrual characteristics and complaints in Italian population. They were selected 3,783 adolescent secondary school girls by randomly selected 13 cities in northern Italy. Self administered anonymous questionnaire was used which includes anthropometry, smoking, drinking habit, use of contraceptive, socioeconomic status, age at menarche, menstrual pattern, physical/psychological menstrual complaint. The result shows that the mean age was 17.1 yrs and the mean BMI was 20.3 kg/m², 5.0% girls belongs to the families with small societal score, strong physical motion was declared by 9.7% of the girls, smoking habit by 30.3% and drinking alcoholic beverage by 54.0%. pills was used as a method for contraception by 8.5% of girls, while 4.8% consumed pills to regular menses. The study provides an overview of epidemiological data on frequency of menstrual abnormality to assist reproductive health professional in managing adolescent gynecology. **(Sanctis.V.D. et al.2014).**

A cross sectional study was conducted on secular trends in menarcheal age and time to establish regular menstrual cycling in Japanese women born between 1930 and 1985. Data from 48,104 female nurses have collected with self administered survey questionnaire by post between 2001 to 2007. The questionnaire consists of age at menarche were divided into 9 categories: ≤9, 10, 11, 12, 13, 14, 15, 16, ≥17. Then

onsets of menstrual cycle, irregularity have been added. The study reveals that age at menarche of Japanese women born between 1930's and 1980's decreased. And the interval from the menarche to the onset of regular menstrual cycle extended for the younger generations. The distribution of high risk group of estrogen dependent disease has been increasing significantly among younger generations of Japanese women's. **(Hosokawa.M.,et, al. 2012).**

A study conducted on delayed menarche in young German women with type 1 diabetes mellitus. Cumulative anonymized data for 643 young women's out of 11,629 young women's under 20 years old were selected. Which is based on availability of menarche data, age < 20 yrs at the last visit prior to 1 January 2006. The aim of this study is to investigate in young German women with T1DM menarcheal age and factors potentially affecting menarche, including glycemic control, BMI, relative T1DM duration, insulin dose and insulin therapy & intensity. Mean age at menarche (\pm SD) was 13.22 ± 1.31 yrs representing a delay of 0.52 yrs ($P < 0.001$) relative to the general population. Signs delay ($P < 0.05$) was also found for relative T1DM duration, BMI SD score, insulin dose, and HbA_{1c} with a 1% increase in HbA_{1c} resulting in a delay in menarche by 0.07% years. The study pointed that age at menarche is delayed with relative T1DM & poor quality of glycemic control. **(Rohrer.T., et,al.2007).**

A qualitative study conducted to explore lived experience of getting ready for menarche from the perspectives of young adolescent girls and also to describe the influence of information of preparation for this event. Phenomenological approach was chosen. The purposive sampling of 4 premenarcheal participants selected between the age group of 10-14 yrs. The four essential themes of personal meanings of menarche, trust, and support and privacy, and advice to other girls be a symbol of the core of the experience getting ready for menarche. Mothers, female health teachers, books are identified as common source of information learning for the participants. Two of the participants who attended a private girl's school said they were comfortable talking with and asking questions to health teacher. The participants clearly shown learning about pads, and tampons, and how to use this equipment were had from their mothers or school health educators. **(Graham.C.A 2002).**

LITERATURE RELATED TO MENSTRUAL HYGIENE

The effective, hygienic management of menstruation is essential for women and girls to contribute in society with self-respect and comfort. Effective menstrual hygiene management (MHM) includes access to clean absorbents, with facilities to change, hygienic or dispose of these as wanted and access to soap and water for cleaning the body and absorbents needed (**sommer M et al 2013**).

A systemic review and Meta analysis conducted on menstrual hygiene management interventions improve education and psychosocial outcomes for women's and girls in low and middle profits countries. Ordered systematic searches were conducted in peer reviewed and grey literature to identify the studies evaluating education and resource provision interventions for menstruation management. Individual and cluster randomized controlled trial were qualified for inclusion. Eight studies described in ten citations were eligible for inclusion. Study was extremely heterogeneous in design and context. 6 included for assessment of education intervention, 3 provided assessment of the provision of the different types of sanitary products (menstrual cups, disposable sanitary pads, reusable sanitary pads) A moderate but non-significant standardized mean difference was found for the two studies review the impact of clean pad provision on school attendance: 0.49 (95% CI - 0.13, 1.11). Included studies were heterogeneous with significant danger of bias. Trials of education interventions reported positive impacts on menstrual knowledge and practices, though, lots of studies unsuccessful to assess other relevant outcomes. No trials assessed or reported harms. The review suggest that further more results studies needed exhibit the role of menstrual hygiene management. (**Hennegan.J., et.al. 2016**).

A both quantitative and qualitative descriptive cross sectional study was conducted on menstrual hygiene and management in secondary schools in Tanzania. The schools were selected by stratified random sampling based on single/co-education, day/boarding, and government/private. The study population was obtained by using systemic random sampling. Out of 12 schools involved in the study, 8 were private owned and the remaining schools were owned by the government. Of these 12 schools involved in the study, 3 schools were single girl's schools and the remaining 9

were co-education. A self-administered ordered close-ended questionnaire survey, Observation (inspection visits), checklist (quantitative), focus group discussions (FGD) and half-structured in-depth interviews (qualitative) were applied to collect the information. 149 participated in the survey, 84 participated in FGD, 23 head/deputy head of schools and matrons participated in semi structured in depth interview. The results show that all surveyed schools are having some sort of menstrual hygiene management education. A larger group girls still need more information, The major problems are Lack of soap, hand wash services privacy in restroom and free pads to attend emergency needs. The study highlights the urgent need of toilet, disposal facilities, teaching programme related to menstrual hygiene management. **(Guya.E., et.al. 2014).**

A cross sectional observational study was conducted on menstrual hygiene and Reproductive Morbidity in adolescent girls in Dehradun, India. Multistage random sampling was used with total 453 girls between 9th to 12th std girls. Girls were individually interweaved for the information about awareness about menstruation, source of information, practices to keep menstrual cleanliness, troubles related to menstruation, and symptoms related to reproductive tract infections by using a pre designed and pretest schedule. Education was given in every aspect after the pretest. The results show that during menstruation, 38.4% and 34.9% girls were using sanitary napkins, cloth/rags respectively. Among sanitary napkin users, the use was significantly higher among rural girls as compared to the urban girls. The practice of reuse of cloth after wash was considerably more among rural girls. The practice of daily bathing was significantly higher among urban girls ($p < 0.05$). A physically and mentally healthy adolescent girl can become a healthy adult female in her possible living. The studies ending that girl should be conscious about menstrual hygiene before they attaining menarche. **(Juyal R,et.al. 2014).**

A cross sectional quantitative study conducted on age at menarche and knowledge about menstrual cleanliness management amongst adolescent girls in Amhara Province, Ethiopia. Samples were randomly selected between 9th to 12th high school girls. Structured self administered questionnaire was used as a tool for data collection. It consists of socio demographic characteristics, age at menarche,

menstrual hygiene materials and knowledge, use of sanitary pads. The present study revealed that the mean age of menarche was found to be 14.

± 1.4 years. The study find out that students are having adequate knowledge regarding menstrual hygiene. School teachers and mothers are the primary source of information. From among the risk factors, place of residence and their mother are instructive rating were found to be independent predictors of menstrual hygiene management. The study recommends that knowledge influences attitude and practice over, parents should be made to acknowledge the need to support their children at school with hygienic menstrual resources in addition to other basic hygienic products. **(Gultie.T, et,al. 2013).**

A study regarding India moves towards menstrual hygiene: subsidized sanitary napkins for rural adolescent girls- issues and challenges. In this study reveals the sanitary napkin scheme. In June 2010, the Government of India proposed a new scheme towards menstrual hygiene by provision low rate sanitary napkins. But there were lots of issues like alertness, availability and excellence of napkins, regular supply, privacy, and water supply, disposal of napkins, reproductive health education, and family support. The study reveals that menstrual hygiene education is very important part in each adolescent girl to escalate their healthy life. **(Garj.R., et,al. 2012)**

A quasi experimental one group pretest and post test was conducted on impact of structured teaching education regarding menstrual hygiene practices among adolescent girls. The aim of the study is to assess the knowledge regarding menstrual hygiene practices, to find association between existing knowledge and demographic variables. Total 100 girls between 8th to 9th were selected by purposive sampling method. Among these 23% in pretest answered about sun drying of the used and washed cloths, 58% samples keep the sanitary cloths in hidden places. In post test there was a significant gain in knowledge is seen. The results indicated that equal positive reaction to the designed teaching was institute really useful for them. It concludes that structured teaching programme is effective on the subject of menstrual hygiene practices amongst adolescent girls. **(Bhudhagaonkar.J.,et,al. 2012)**

A cross sectional study was conducted on knowledge, practice regarding menstrual hygiene among adolescent girls at Nagpur district. The objective of the study is to assess the knowledge and the practices of menstrual hygiene among rural and urban school going adolescent girls, to assess the restriction which were practiced by adolescent school girls during menstruation. Totally 387 girls were selected for this study purposively between 8th and 9th std. the data collection tool was by using pre designed pretested structured questionnaire which consists of awareness about menstruation, resource of information concerning menstruation, hygienic practices during menstruation, restricted activities practices during menstruation. The demographic information including family details, parent's education, occupation, housing condition, house type, toilet facility, water supply in the toilet were enquired and documented. The result shows that only 36.95% of the girls were aware about menstruation before menarche. The major source of information was their mothers, the mean age at menarche was 12.85 ± 0.867 years, 49.35% were used sanitary pads, and the practice of the use of the old cloth was account in 45.74% of the respondents. Satisfactory cleaning of the genitalia was practiced by 33.85%. The study bring to a close that wakefulness regarding the necessitate of menstrual practices have the vital role to reduce reproductive health problems. **(Subhash B. Thakre, et,al. 2012)**

A cross sectional study was conducted on menstruation and menstrual cleanliness amongst teenager school girls in kano, Northwestern Nigeria. 400 students between the age group of 10-19 yrs by multistage sampling from a list of all secondary schools The mean age of the students was 14.4 ± 1.2 years; The students attained menarche at 12.9 ± 0.8 years. Most of them used sanitary pads as a hygienic material, changed menstrual dressing concerning 1-5 times per day; and increased the times of bath. And improving access of the adolescents to youth friendly services by way of meeting the adolescent reproductive health requirements in Nigeria. **(Lawan UM, et,al. 2010)**

LITERATURE RELATED TO MENSTRUAL PROBLEMS

Although not a serious medical problem, dysmenorrhoea is usually intended to describe a female with menstrual sign severe adequate to remain her from functioning for a day or two every month. Several teens don't experience from

dysmenorrhoea, as their uterus is at rest growing, and yet they may get it numerous years later than their first episode begin. Symptoms may start one to two days prior to menses, peak on the first day of flow, and subside during that day or over numerous days. The pain is usually described as boring, aching, and cramping and often radiates to the lower back. Dysmenorrhea [**Online Accessed December 2011**]

A descriptive study conducted on Assessment and Evaluation of Knowledge and Impact of Dysmenorrhea among Nursing Students in Punjab. The study was conducted in Swift Institute of Nursing, Ghaggar Sarai, Rajpura and a sample of 100 nursing students was chosen by Proportionate stratified random sampling. The too ls developed and used for data collection were Performa for recognition and demographic information. Performa for structured knowledge questionnaire and a Performa of three point scale include 15 items to review the collision of dysmenorrhea. The results shows that out of total 100 subjects in this study, more than half (52%) respondents were in the age group of 16-20 years. (56%) of students were moderately affected from dysmenorrhoea where as (39%) and (05%) of participants were affected mildly and severely from dysmenorrhoea respectively. The study shows significant association of knowledge of dysmenorrhoea and its treatment with course of Nursing. The study completed that not any of the students was unaffected from dysmenorrhoea (**Kanika, et,al. 2015**).

A cross sectional survey conducted on menstrual patterns and disorders among secondary school adolescents in Egypt. The girl's among 11-19yrs were selected for the study. Well administered pretested questionnaire, rating scale were used as a tool for data collection. Totally 412 questionnaire were properly filled. The mean age of the girls was 14.67 ± 1.7 years. 12.49 ± 1.20 was the mean age at menarche. 382 respondents reported various menstrual disorders, giving a prevalence rate of 95 %. Dysmenorrhea was the most prevalent (93 %) menstrual disorder in our sample, followed by PMS (65 %), and abnormal cycle lengths (43 %). Menstrual disorders interfered with social and academic life of 33 and 7.7 % of respondents correspondingly. Most participant lack menstrual wellbeing knowledge and only 8.9 % of girls reported consulting a physician. The study recommends the further education to inculcate their knowledge. (**Hatem I, et,al. 2015**).

A descriptive cross sectional study was conducted on exploring dysmenorrhoea and menstrual experiences among Lebanese female adolescents. A descriptive cross sectional study was used, cluster random sampling adopted to select schools. Self administered questionnaire was used as a tool for data collection. Which consists socio demographic data, menstrual experience and behavior questionnaire. 389 overall schoolgirls completed the questionnaire. The mean age of menarche was 12.5 (SD 1.0) years (range 9–15years), with 85.9% of girls experiencing menarche between ages 11–13 years. Dysmenorrhoea was significantly associated with missing school days ($P = 0.03$) and with negative menstrual experience scores ($P < 0.001$). There were also significant relationships with dysmenorrhoea and younger age ($P < 0.001$), lengthy cycle ($P < 0.001$), duration of menses ($P < 0.001$) and suffer mood change ($P < 0.001$). Though, there were no important associations between dysmenorrhoea and schoolgirls' family earnings, cycle regularity or amount of menstrual flow. (Santina.T., et,al. 2012).

A descriptive study was conducted regarding Assessment of Dysmenorrhea and Menstrual Hygiene Practices among Adolescent Girls in a few Nursing Schools at EL-Minia Governorate, Egypt. Totally 160 eligible female students selected in this study.. This study conducted in a few nursing school at EL-Minia governorate (Mallawy, Abu- korkas) nursing schools. Interview and questionnaire was worn as a tool for data compilation. The study exposed that dysmenorrhoea is highly prevalent among adolescent nursing schools. The students present good menstrual cleanliness practice as regard physical exercise, change their perineal pads often, take hot bath and just one-fourth of them take rest at home during menstruation. However, the necessity to accept a well behavior, which include: correct nutrition, and appropriate use of medications based on a physician's prescription was very important issue the study recommends that school based programmers must be reconstructed to improve the students knowledge.(Neamat A., et,al. 2011).

LITERATURE RELATED TO HOME REMEDIES FOR MENSTRUAL PROBLEM

Home remedies are chase by a very fine percentage of people from time immemorial .For treating various ailments if the remedy follow by an person are caring in relieving or during their particular ailments, she will employ the similar

remedy in future for the ailment. This knowledge on home remedies will be poured on from generation to generation **(Griffiths V.2000)**.

A randomized cross-over study was performed on the effect of moxibustion on alleviating menstrual ache in a people of young nursing students. The aim of the study is to investigate the effect of moxibustation on alleviate menstrual ache and relieve the symptom of dysmenorrhoea in a cohort of young nursing students in china. A total 56 nursing students with menstrual pain were randomly allocated in two groups. The result shows that after the first treatment phase, the score of BRS-6 has important difference among two groups at the first menstrual cycle ($p < 0.05$). After three months' wash phase, the keep count of VAS, BRS-6, affective of PR, sensory of PRI, total score of PRI and VRS had significant differences involving two groups following the second treatment period ($p < 0.01$). And the frequency rating of leg ache, faintness, anxiety and the total gain had major difference between two groups after the second treatment phase ($p < 0.05$). And the harshness score of abdominal ache fault, leg aches, faintness, anxiety and the whole score had important difference among two groups gone the second treatment phase ($p < 0.05$). (**Jinga.G., et,al. 2015**).

A descriptive study was performing to assess the knowledge regarding home remedies to relieve dysmenorrhoea among adolescent's girls in selected schools in Ludhiana Punjab. Non experimental design was used in this study, totally 60 adolescents were selected purposively. Self administered questionnaire was used as a tool for data collection. Which consists of age, religion, class, area of residence, age at menarche, duration of menstrual cycle ,duration of menstrual period, education of parenthood, flow of menstruation and foundation of in rank findings revealed that maximum (83.3%) adolescent girls had average knowledge follow by (10%) excellent and (6.67%) had slightest below average score. There was a considerable connection with belief, education of blood relations, flow of menstruation, source of information. **(Deepika David2014)**.

LITERATURE RELATED TO KNOWLEDGE, ATTITUDE AND PRACTICE REGARDING MENARCHE AND MENSTRUATION.

An attitude towards menstruation is mental condition of women that is exhibited as overt appearance concerning the somatic discomfort. Since menstruation is a natural biological development of womanhood, it is main that it is recognized as a natural event and develops tolerance. In a few females there is a want for behavioral transform so as to develop the right attitude for safeguarding menstrual wellbeing. It may also aid in obtain ability for proper managing of symptoms and to lead a normal active life. (**Moron kola, O.2007**)

A descriptive cross sectional study conducted on coping strategies of menstrual disturbance among adolescent school girls between the age group of 13-17 years at selected urban and rural schools of Coimbatore. Multi stage sampling was adopted. Checklist was the tool. The study concluded that mean age of menarche was 13 years. Source of information showing only limited percentage go information from the teachers, mothers, elders, sisters and friends. Bulk of the girls had sufficient knowledge regarding characteristics of normal menstruation and hygienic practices. 78% girls reported health problem related to menstruation like abdominal pain, back pain, mood change were the most problems. The health care provider should be highly equipped with coping strategies of menstrual problem. Mothers and teachers have the major role in this aspect. Hence the education to these groups will enhance the reproductive health (**Umadevi 2014**).

A qualitative study conducted to explore young school girls between the age group of 12-16 years on attitudes and experience with menstruation in rural Western Kenya. In this study they have included information from six FGDs with parenthood and the public members. The study reveals that girls were poorly prepared for menarche and them unable to share it and felt alone. Secrecy around menstruation limits their ability to share experience leaving them to cope alone. Intervention to address these issues as a package of measure are required to improve the quality of girl's life. At community level strategies needed to improve the communication between the girl's parents, guardians, and at school with teachers. Certain lands of measures are needed to improve the quality of life of girls such as strengthening

schools, facilitate safe place for girls to clean and change, access to better, low cost sustainable sanitary products would improve the girls' well life's and diminish the barrier with engagement of school work, reduce school absenteeism. (**Masona.L., et.al. 2013**).

A epidemiological cross sectional study was conducted on knowledge and practices regarding menstrual sanitation along with urban and rural teenager girls in Udupi Taluk, Manipal, India. Total 550 school going adolescent girls in the age assembly of 13-16 years were elected from both urban and rural settings. Stratified cluster sampling was adopted in this study. Pre tested questionnaire was adopted as a method of data collection tool. Result shows that approximately 34% participant were attentive regarding menstruation prior to the menarche, mothers are the source of information in both groups. Overall, 70.4% of adolescent girls were using sanitary napkins as menstrual spongy while 25.6% were by means of both cloth and sanitary napkins. The studies conclude that there is a vital necessitates preparing the teenager girls with knowledge as regards safe, hygienic practices to enable them to maintain a reproductive health. (**Kamath R, et, al. 2013**).

A cross sectional study on perceptions regarding menstruation and practices during menstruation cycles among 506 adolescent girls between 8th- 10th std in rural areas. Pre designed structured self administered questionnaire was the tool. The average age was 14.08 with standard deviation of 1.06 and range between 12-16 years. 99.6% of the student had heard of menstruation & 57.9% had acquired this even knowledge before attaining menarche. Only 44.1% used sanitary pad during the menstrual cycle. Among those who used cloth 31.3%. Used soap and water to clean them 56.8% and used soap and water to clean their genitalia. 88.8% of the girls took daily bath during menstruation. The most common source of information was mother. Personal hygiene practices were founded to be unsatisfactory. The conclusion strengthen the necessitate to push safe and germ-free practices among the youngster girls and carry them out of traditional judge, misconceptions, restrictions regarding menstruation. (**Shanbhag D, 2012**)

A descriptive cross sectional study was conducted on menstrual think and apply among adolescent girls between 8th to 10th std at rural high schools. 160 girls were selected. Self administered questionnaire were used as a tool for data collection,

which consist of demographic Performa, menstrual believes, practices, source of information, restricted activities. The study highlights that the age of menstruating girls ranged from 12 to 15 yrs, 84% of girls being between 13 and 14 yrs of age group. Among 166 girls 143(86.1%) were Hindus, where as only 17(10.2%) girls were Muslim and 6(3.6%) were Christian girls. It shows that education is a essential piece of health education. It is known that outlook to menstruation and menstrual follow developed at menarche may be in the end of life. The way of getting education has a positive impact over girl's reproductive health. **(Karkada.E.C, et, al.2012).**

A descriptive cross sectional study was conducted on knowledge, attitude and behavior of minor girls in sub-ruhan districts of Tehran, Iran. Regarding dysmenorrhoea and menstrual hygiene. 250 volunteer girls linking 15-18 yrs preferred randomly from 20 high schools using cluster random sampling. Questionnaire was used as a tool for data collection. Study revealed that 178(71%) students reported dysmenorrhoea, 192(77%) students had some information about menstruation, from which 144(75%) students received this information from relatives. Out of 250 students only 8(3.2%) believed that some diets are effective to decrease the menstrual pain, while 87(35%) did not believe.110 (44%) did not have any idea in this. A significant difference involving learner in different age group was recognized on the topic of the effect of appropriate diet on menstruation pain ($p < 0.5$). Regardless of these findings many of the girls did not have appropriate knowledge about hygienic practices. The importance of educating the girls regarding menstrual period health taking behavior includes appropriate nutrition, excessive, physical activity, personal hygiene, and appropriate use of medication based on physicians prescription. **(Poureslami.M.,et,al. 2002).**

CHAPTER III

METHODOLOGY

Methodology gives up the blue print of the study. This chapter explains the methodology adopted by the researcher to determine the effectiveness of structured teaching programme on knowledge, attitude and practice among adolescent girls at urban and rural schools. The chapter deals with the research design, setting, population, sample size, sampling technique, criteria for sample selection, variables, description of the intervention, development and description of the tool, testing of the tool, procedure for data collection and statistical analysis.

RESEARCH DESIGN

The Quasi experimental pretest and posttest design is adopted for this study.

Schematic representation as follows

O1 X O2

O1 –Pretest on knowledge attitude and practice about menarche and menstrual management among school girls in selected urban and rural schools.

X – Structured teaching programme regarding menarche and menstrual management.

O2 –Post test on knowledge attitude and practice about menarche and menstrual management among school girls in selected urban and rural schools.

VARIABLES UNDER STUDY

DEPENDENT VARIABLE: In this study knowledge, attitude and practice are the dependent variable.

INDEPENDENT VARIABLE: Structured teaching programme is the independent variable.

SETTINGS OF THE STUDY

The study was collected among adolescent girls in two selected schools. Those schools are GRD-CPF Higher Secondary School at Neelambur and PSGG Kanya Gurukulam Higher Secondary School at Peelamedu.

The rural school was GRD- CPF Higher Secondary School, Which is located 5 km away from KMCH College of Nursing. The total school children were 1250. The total girls studying in 7th std were 115 girls in four sections.

The urban school was PSGG- Kanya Gurukulam Higher Secondary School. Which is located 3 km away from the KMCH College of Nursing. The total school children. The total school strength was 2300. Out of this 2300, 200 girls studying 7th std in five sections were chosen for the study.

POPULATION OF THE STUDY

The study population includes school girls on the age group of 12- 13 yrs in rural and urban schools at Coimbatore.

SAMPLE SIZE

The sample size of this study consists of 200 adolescent school girls. Among this 100 girls are from urban school and 100 girls are from rural school.

SAMPLING TECHNIQUE

Non Probability Purposive Sampling technique was adopted for this study.

CRITERIA FOR SAMPLE COLLECTION

Inclusion criteria

- The girls who belong to the age group of 12- 13 yrs studying in selected urban and rural schools.
- The school girls who attained and not attained menarche.

Exclusion criteria

- The girls who are absent from the urban and rural school during data collection period.

DESCRIPTION OF INTERVENTION

The intervention followed in this study was structured teaching programme. After pretest assessment on knowledge, attitude and practice regarding menarche and menstrual management, structured teaching programme carried out for a period of one hour. With the help of LCD slides the following contents like female reproductive system, menarche, pre pubertal physiologic changes, precocious puberty, menstrual

cycle, premenstrual syndrome, menstrual signs and symptoms, menstrual problems, home remedies for menstrual problems, hygienic practices, personal hygiene, ovulation calendar, menstrual myths and facts and diet during menstruation were clearly explained to the school girls. The post test was conducted after 2 weeks of teaching

DEVELOPMENT AND DESCRIPTION OF TOOL

The tool consists of four sections.

Section I: Demographic variables.

Section II: Self administered knowledge questionnaire.

Section III: Self administered attitude scale.

Section IV: Self administered practice Checklist.

Section I: Demographic variables. The socio demographic characteristics of the student include type of family, food habits, age at menarche, weight, height, BMI, family income, menstrual preparedness, source of information.

Section II: Self administered knowledge questionnaire to assess the knowledge of students on menarche and menstrual management.

It consists of questionnaire regarding knowledge on menarche and menstrual management prepared by the investigator after reviewing literatures and various books. A sum of 30 questions was prepared to assess the knowledge of students. Each question was given with four options with one correct option. The subjects have to write the correct option in the answer sheet. Using the scoring key prepared by the investigator. The correct answer was given as score 1 and wrong answers as 0. The total score earned by the subject reveals the knowledge about menarche and menstrual management. The minimum score was 0 and maximum score was 30. The total score was classified into

0-10: poor knowledge

11-20: average knowledge

21-30: good knowledge

Section III: Self administered attitude scale to assess the student's attitude on menarche and menstrual management.

It consists of statement regarding the myths and facts on menarche and menstrual management prepared by investigator after reviewing literatures and various books. A sum of 15 statements was prepared to assess the student's attitude towards menarche and menstrual management. Each statement consists of four options like strongly agree, agree, disagree, and strongly disagree. The subject had to record their correct option by writing it in the answer sheet. The total score earned by the subject reflect their attitude on menarche and menstrual management.

15-30: Negative attitude

31-45: neutral attitude

46-60: positive attitude

Section IV: Self administered practice Checklist to assess the students practice on menarche and menstrual management.

It consists question regarding menstrual practice prepared by investigator after reviewing literatures and various books. A sum of 15 questions was prepared to assess the students practice towards menstruation. Each question consists two options like yes or no. The subject had to record their correct option by writing it in an answer sheet. The score earned by the subject reveals their practice during menstruation.

0-5: poor practice

6-10: average practice

11-15 good practice

VALIDITY AND RELIABILITY

The validity of the tool was established by submitting the structured knowledge questionnaire, likert attitude scale, practice checklist to the experts in the Obstetrics and Gynecology nursing and medical. Based on their suggestions and recommendations the tool was modified for the study. The reliability of the tool was tested by using Spearman Brown Split Half method. The reliability for the knowledge

questionnaire was identified as 0.8, Attitude likert scale was 0.9, and Practice checklist was 0.9. Reliability shows that it is feasible.

PILOT STUDY

Pilot study was conducted among 10 urban and 10 rural students studying 7th std from both urban and rural area. The result of the pilot study revealed that the study was feasible. The pilot study sample was not included in the original study.

PROCEDURE FOR DATA COLLECCTION

The study was conducted in urban and rural schools Coimbatore .The formal permission was obtained from the Principal KMCH college of Nursing then from the concerned school principals. The study was conducted for a period of four weeks. The investigator informed the students about the study and maintained good rapport. The investigator introduced self. The purpose and the benefits of the study were explained to the students to ensure their cooperation. Assurance was given to the subjects regarding the confidentiality of the data collected from them. The first week of the data collection the self- structured questionnaire, practice checklist, attitude scale was administered to assess the pre- test knowledge, attitude and practice score in two schools for 200 samples. The second week structured teaching Programme was given to the 6th,7th,8th std students with the help of power point presentation regarding menarche and menstrual management. After two weeks of intervention post test knowledge, attitude and practice was conducted with the same tool among same students.

STATISTICAL ANALYSIS

Collected data were analyzed by descriptive and inferential statistics. The descriptive statistics included mean, and percentage. Inferential statistics included paired t - test used to analyze the effectiveness of structured teaching programme. Independent 't' test was used to compare the two school girls. Chi-Square test was used to associate the knowledge, attitude and practice level with demographic variables.

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of data collected to determine the effectiveness of structured teaching programme regarding menarche and menstrual management among school girls in selected urban and rural schools at Coimbatore.

ORGANIZATION OF FINDINGS

The collected data are grouped and analyzed using descriptive and inferential statistics as follows:

SECTION A: Distribution of respondents according to demographic variables.

SECTION B: Distribution of respondents according to age at menarche of rural and urban schools.

SECTION C: Distribution of respondents according to mean pretest knowledge, attitude and practice score of rural and urban school on menstrual management.

SECTION D: Distribution of respondents according to mean posttest knowledge, attitude and practice score of rural and urban school on menstrual management.

SECTION E: Comparison of mean pre and post-test knowledge, attitude and practice scores of rural and urban school respondents regarding menstrual management.

SECTION F: Comparison of mean pretest and posttest knowledge, attitude and practice scores between rural and urban school respondents regarding menstrual management.

SECTION G: Association of pretest knowledge scores with selected demographic variables of rural school.

SECTION H: Association of pretest knowledge scores with selected demographic variables of urban school.

SECTION A

Table No.1: Distribution of respondents according to demographic variables. N=200

Sl.No	Demographic Variable	No. of Subjects			
		Rural N=100	Percentage	Urban N=100	Percentage
1	Type of family				
	a) Nuclear	73	73.0	82	82.0
	b) Joint	27	27.0	18	18.0
2	Food habits				
	a) Vegetarian	26	26.0	25	25.0
	b) Non vegetarian	74	74.0	75	75.0
3	BMI				
	a) 10-15	15	15.0	14	14.0
	b) 15-20	60	60.0	58	58.0
	c) 20-25	19	19.0	24	24.0
	d) 25-30	6	6.0	4	4.0
4	Family income				
	a) 50000-15000	50	50.0	54	54.0
	b) 15000& above	50	50.0	46	46.0
5	Preparedness				
	a) Totally unprepared	34	34.0	33	33.0
	b) Somewhat unprepared	19	19.0	12	12.0
	c) Somewhat prepared	36	36.0	26	26.0
	d) Totally prepared	11	11.0	29	29.0
6	Information				
	a) No information	17	17.0	26	26.0
	b) Very little information	36	36.0	37	37.0
	c) Enough basic information	32	32.0	19	19.0
	d) Extremely well	15	15.0	18	18.0

The table no: 1 shows the demographic variables of 100 respondents of rural school and 100 respondents of urban school.

Rural school

Regarding the type of family 73 respondents (73%) were belongs to nuclear family, and 27 (27%) respondents belongs to joint family. According to their food habits 26 (26%) respondents were vegetarian and 74(74%) respondents were non vegetarian.

Considering the BMI 15 respondent (15%) were 10-15, 60 respondents (60%) were between 15-20, 19 respondents (19%) were between 20-25, 6 respondents (6%) were belongs to 25-30.

With regard of family income 50 respondents (50%) were between the income of 5000-15000, 50 respondents (50%) were belongs to the income of 15000 & above.

Regarding the preparedness 34 respondents (34%) were totally unprepared, 19 respondents (19%) were somewhat unprepared, 36 respondents (36%) were somewhat prepared, 11 respondents (11%) were totally prepared.

Considering the information 17 respondents (17%) were not obtained any information, 36 respondents (36%) were obtained very little information, 32 respondents (32%) were obtained enough basic information, 15 respondents (15%) were obtained extremely well information.

Urban school:

Regarding the type of family 82 respondents (82%) were belongs to nuclear family, and 18 (18%) respondents belongs to joint family. According to their food habits 25(25%) respondents were vegetarian and 75(75%) respondents were non vegetarian.

Considering the BMI 14 respondent (14%) were 10-15, 58 respondents (58%) were between 15-20, 24 respondents (24%) were between 20-25, 4 respondents (4%) were belongs to 25-30.

With regard of family income 54 respondents (54%) were between the income of 5000-15000, 46 respondents (46%) were belongs to the income of 15000 & above.

Regarding the preparedness 33 respondents (33%) were totally unprepared, 12 respondents (12%) were somewhat unprepared, 26 respondents (26%) were somewhat prepared, 29 respondents (29%) were totally prepared.

Considering the information 26 respondents (26%) were not obtained any information, 37 respondents (37%) were obtained very little information, 19 respondents (19%) were obtained enough basic information, 18 respondents (18%) were obtained extremely well information.

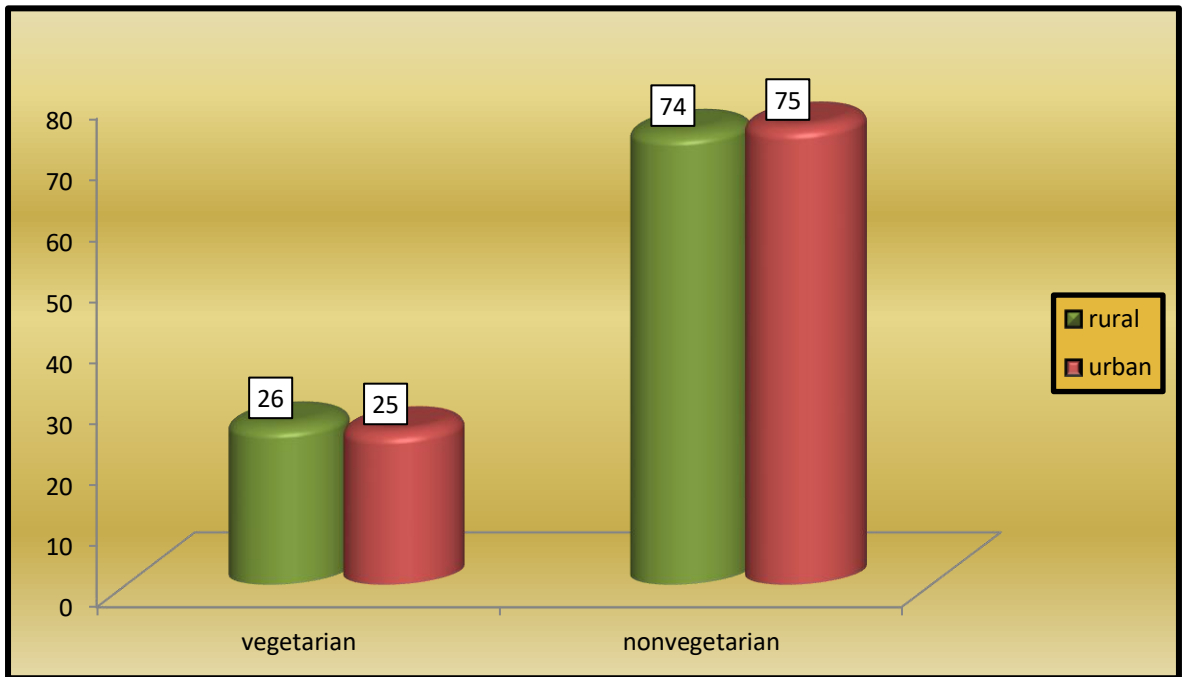


Fig 1: Distribution of respondents according to food habits.

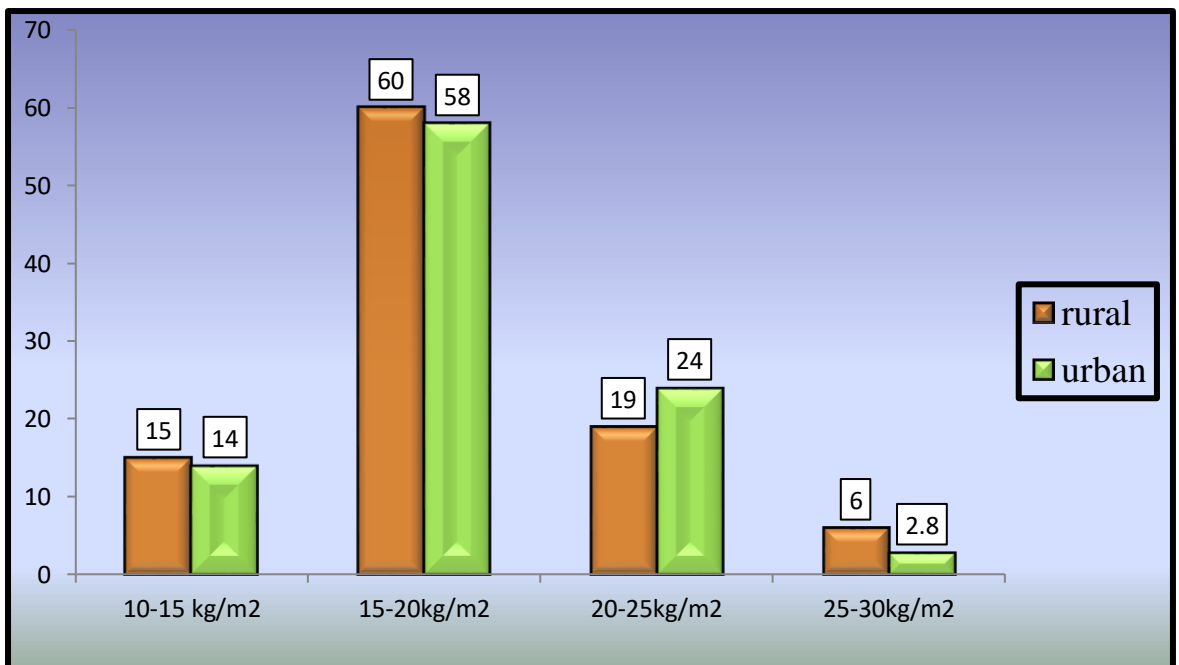


Fig 2: Distribution of respondents according to BMI

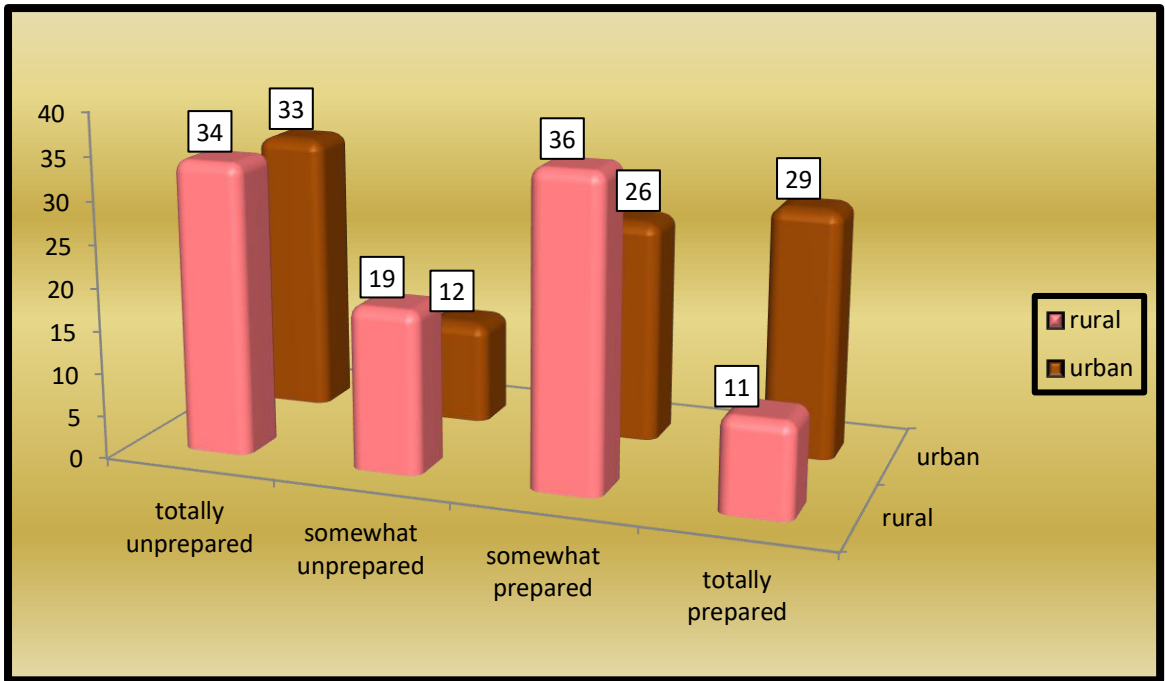


Fig 3: Distribution of respondents according to preparedness

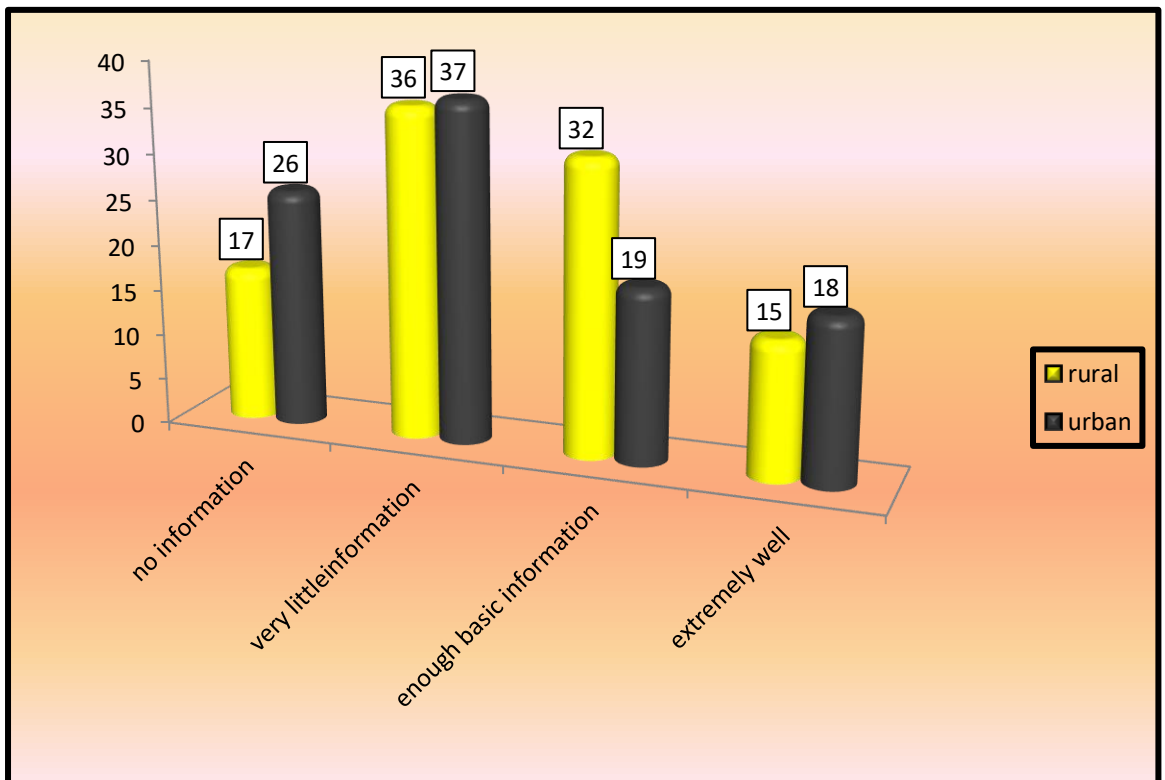


Fig 4: Distribution of respondents according to information.

SECTION B

Table No.2: Distribution of respondents according to age at menarche of rural and urban schools.

Sl. No	Age at menarche	Rural				Urban			
		Frequency	Percentage	Mean	SD	Frequency	Percentage	Mean	SD
1	10-11yrs	2	3%	12.11	.820	5	7%	12.12	.843
2	11-12yrs	15	20%			7	9%		
3	12-13yrs	30	41%			36	49%		
4	13-14yrs	27	36%			26	35%		

Table no: 2 shows that the distribution of age at menarche of rural and urban school. From rural school 2 respondents (3%) of them attained between 10-11 yrs, 15 respondents (20%) attained between 11- 12 yrs, 30 respondents (41%) attained between 12-13 yrs, 27 respondents (36%) attained between 13-14 yrs. From urban school 5 respondents (7%) of them attained between 10-11 yrs, 7 respondents (9%) attained between 11- 12 yrs, 36 respondents (49%) attained between 12-13 yrs, 26 respondents (35%) attained between 13-14 yrs.

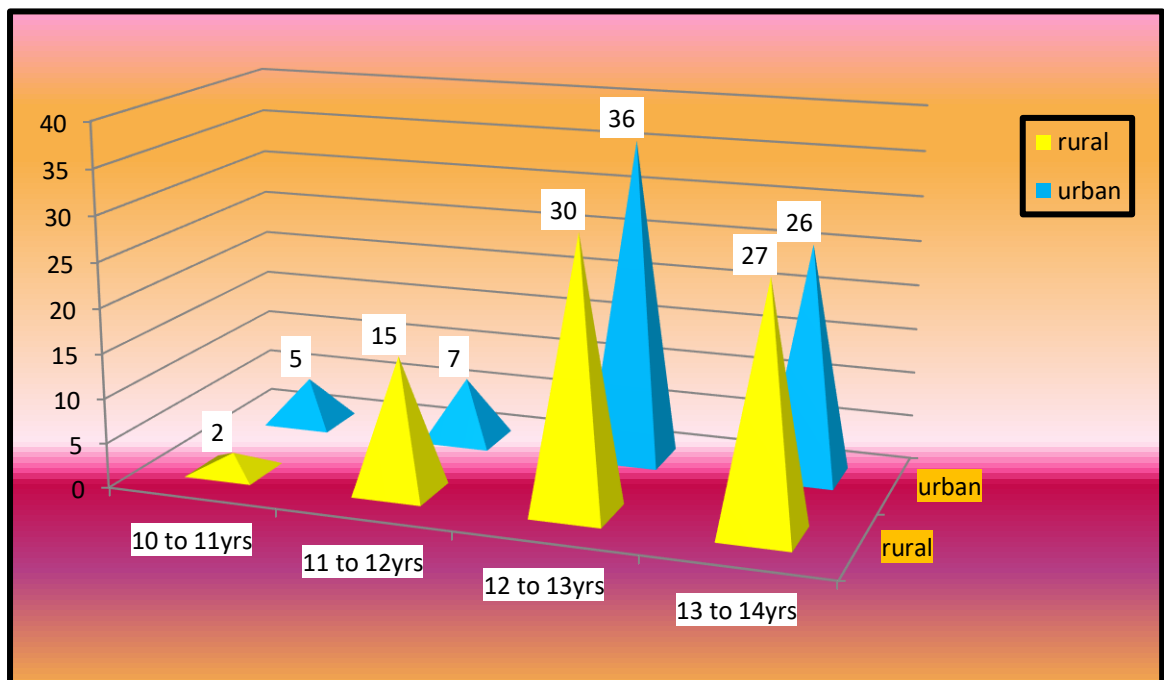


Fig 5: Distribution of respondents according to age at menarche of rural and urban schools.

SECTION C

Table No.3: Distribution of respondents according to mean pretest knowledge, attitude and practice score of rural and urban school on menstrual management.

Sl.NO	Variables	Pre test score	Rural		Urban	
			Frequency	percentage	Frequency	percentage
1	Knowledge	Poor knowledge(0-10)	80	80%	61	61%
		Average knowledge(11-20)	20	20%	37	37%
		Good knowledge(21-30)	0	0%	2	2%
2	Attitude	Negative attitude(15-30)	87	87%	59	59%
		Neutral attitude(31-45)	13	13%	39	39%
		Positive attitude(46-60)	0	0%	2	2%
3	Practice	Poor practice(0-5)	20	27%	34	46%
		Average practice (6-10)	48	65%	40	54%
		Good practice (11-15)	6	8%	0	0%

The table No: 3 rural school shows that 80 respondents (80%) pretest knowledge score was between 0-10, 20 respondents (20%) scored between 11-20, none of the respondents scored more than 21, 87 respondents (87%) pretest attitude score was between 15-30, 13 respondents (13%) scored between 31-45, none of them scored between 46-60, 20 respondents (27%) pretest practice score was between 0-5, 48 respondents (65%) scored between 6-10, 6 respondents (8%) scored between 11-15 and urban school shows that 61 respondents (61%) pretest knowledge score was between 0-10, 37 respondents (37%) scored between 11-20, 2 respondents (2%) scored more than between 21-30, 59 respondents (59%) pretest attitude score was between 15-30, 39 respondents (39%) scored between 31-45, 2 respondents(2%) scored between 46, 34 respondents (46%) pretest practice score was between 0-5, 40 respondents (54%) scored between 6-10 and none of the respondents scored between 11-15.

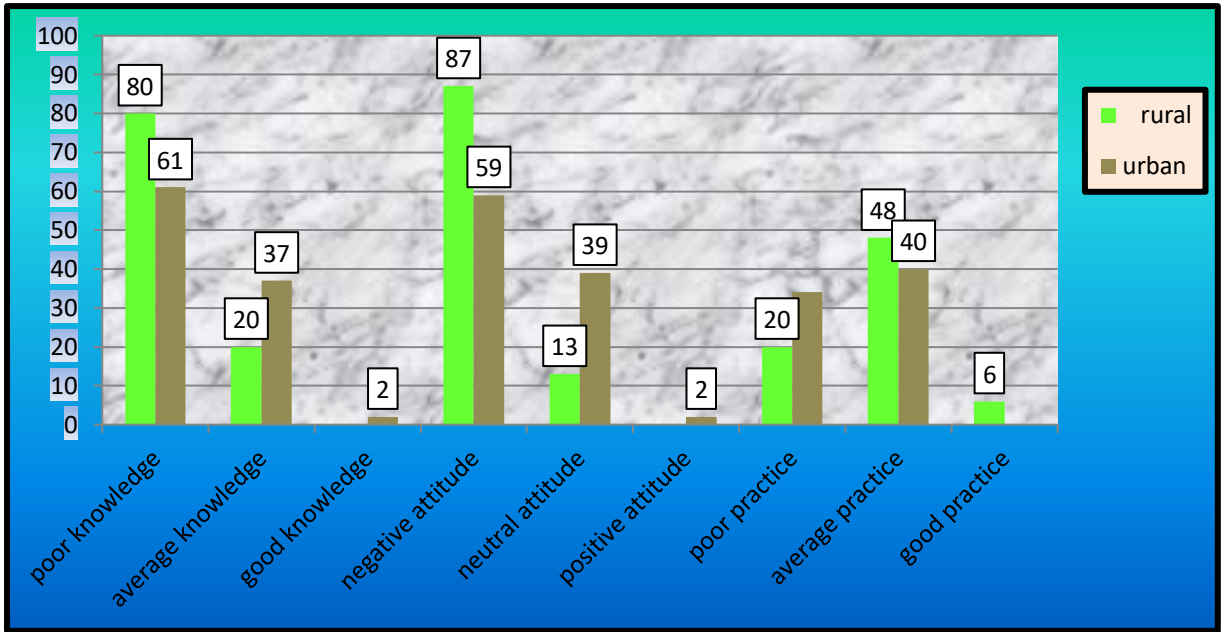


Fig 6: Distribution of respondents according to mean pre test knowledge, attitude and practice score of rural and urban school on menstrual management.

SECTION D

Table No.4: Distribution of respondents according to mean post test knowledge, attitude and practice score of rural and urban school on menstrual management.

Sl.No	Variables	post test score	Rural		Urban	
			Frequency	percentage	Frequency	Percentage
1	Knowledge	Poor knowledge(0-10)	0	0%	0	0%
		Average knowledge(11-20)	28	28%	24	24%
		Good knowledge(21-30)	72	72%	76	76%
2	Attitude	Negative attitude(15-30)	0	0%	0	0%
		Neutral attitude(31-45)	19	19%	32	32%
		Positive attitude(46-60)	81	81%	68	68%
3	Practice	Poor practice(0-5)	0	0%	0	0%
		Average practice (6-10)	2	3%	5	7%
		Good practice (11-15)	72	97%	69	93%

The table No: 4 rural school knowledge score shows that none scored between 0-10, 28 respondents (28%) scored between 11-20, 72 respondents (72%) scored between 21-30, attitude score shows that none of the respondents between the score of 15-30, 19 respondents (19%) scored between 31-45, 81 respondents (81%) scored between 46-60, practice score shows that none of the respondents scored between 0-5, 2 respondents (3%) scored between 6-10, 72 respondents (97%) scored between 11-15, urban school knowledge score shows that none scored between 0-10, 24 respondents (24%) scored between 11-20, 76 respondents (76%) scored between 21-30, attitude score shows that none of the respondents between the score of 15-30, 32 respondents (32%) scored between 31-45, 68 respondents (68%) scored between 46-60, practice score shows that none of the respondents scored between 0-5, 5 respondents (7%) scored between 6-10, 69 respondents (93%) scored between 11-15.

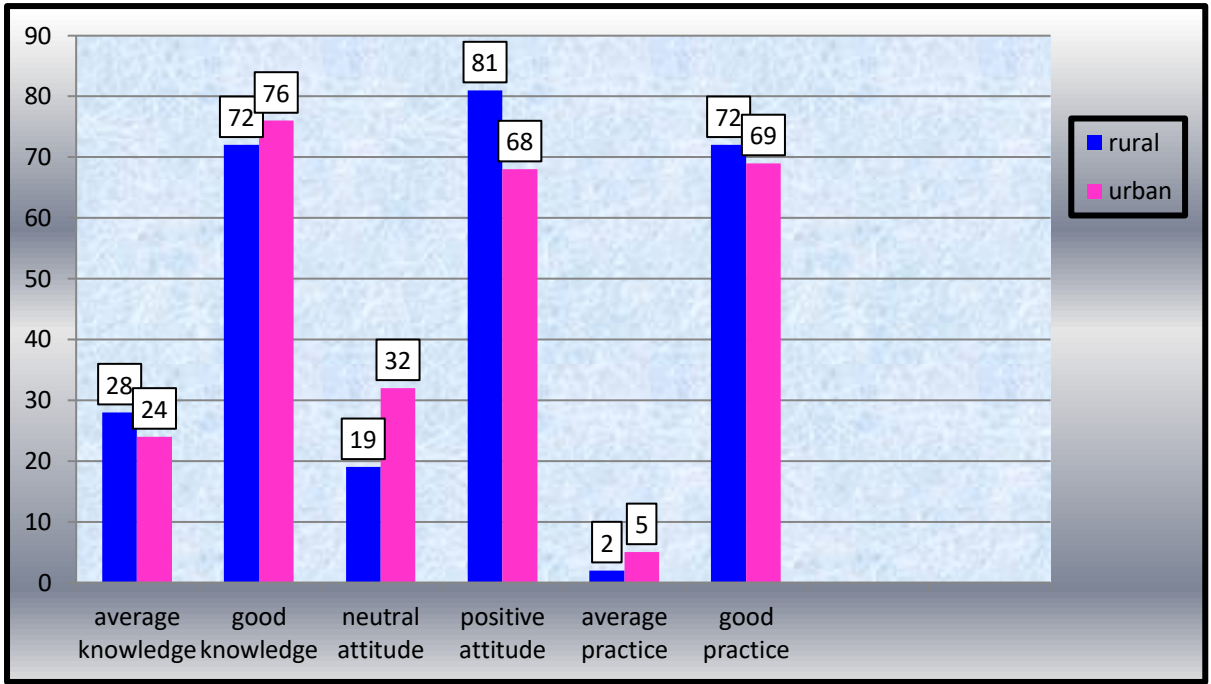


Fig7: Distribution of respondents according to mean post test knowledge, attitude and practice score of rural and urban school on menstrual management.

SECTION E

Table No.5: Comparison of mean pre and post-test knowledge, attitude and practice scores of rural and urban school respondents regarding menstrual management.

Sl.No	variables	scores	Rural			Urban		
			Mean	S.D	Paired 't' value	Mean	S.D	Paired 't' value
1	Knowledge	Pretest	9.58	2.872	31.296**	10.44	4.031	23.409**
		posttest	21.84	3.507		21.16	2.377	
2	Attitude	Pretest	27.24	5.294	34.714**	30.97	4.992	26.732**
		posttest	48.48	3.678		47.29	3.613	
3	practice	Pretest	7.58	2.483	14.683**	5.64	1.802	25.463**
		posttest	12.68	1.356		12.04	1.187	

****p<0.01**

Table no: 5 reveals that comparison of mean pretest and posttest knowledge scores of rural school shows that computed paired 't' value 31.296 was statistically significant at $p < 0.01$ levels. This establishes that there is significant difference in mean pretest and posttest knowledge score of rural school respondents on menstrual management. The comparison of mean pretest and posttest attitude score shows that the computed paired 't' value 34.714 was statistically significant at $p < 0.01$ level. This establishes that there is significant difference in mean pretest and posttest attitude score of rural school respondents on menstrual management. The comparison of mean pretest and

posttest practice score of rural school shows that the computed paired' value 14.683 was statistically significant at $p < 0.01$ level. This establishes that there is significant difference in mean pretest and posttest practice score of rural school respondents on menstrual management. The comparison of mean pretest and posttest knowledge score of urban school respondents shows that computed paired' value 23.409 was statistically significant at $p < 0.01$ levels. This establishes that there is significant difference in mean pretest and posttest knowledge score of urban school respondents on menstrual management. The comparison of mean pretest and posttest attitude score shows that the computed paired' value 26.732 was statistically significant at $p < 0.01$ levels. This establishes that there is significant difference in mean pretest and posttest attitude score of urban school respondents on menstrual management. Comparison of mean pretest and posttest practice score shows that the computed paired' value 25.463 was statistically significant at $p < 0.01$ level. This establishes that there is a significant difference in mean pretest and posttest practice score of urban school respondents on menstrual management.

SECTION F

Table No.6 Comparison of mean pretest and posttest knowledge, attitude and practice scores between rural and urban school respondents regarding menstrual management.

Sl.No	variables	scores	Rural		Urban		Independent 't' value
			Mean	S.D	Mean	S.D	
1	Knowledge	Pretest	9.58	2.872	10.44	4.031	1.738**
		posttest	21.84	3.507	21.16	2.377	5.126**
2	Attitude	Pretest	27.24	5.294	30.97	4.992	5.456**
		posttest	48.48	3.678	47.29	3.613	1.605 (NS)
3	practice	Pretest	7.58	2.483	5.64	1.802	2.308**
		posttest	12.68	1.356	12.04	1.187	3.032 (NS)

****p<0.01, NS- Non Significant**

The table No 6: Describes the comparison of mean pretest knowledge score of rural and urban school respondents on menstrual management. The computed independent 't' value 1.738 was statistically significant at P<0.01 level. This establishes there is a significant difference in mean pretest knowledge score of urban and rural school respondents regarding menstrual management.

The comparison of mean pretest attitude score of rural and urban school respondents shows that the computed independent 't' value 5.126** was statistically significant at

P<0.01 level. This establishes there is a significant difference in mean pretest attitude score of urban and rural school respondents regarding menstrual management. The comparison of mean pretest practice score of rural and urban school shows that the computed independent 't' value 5.456 was statistically significant at P<0.01 level. This establishes there is a significant difference in mean pretest practice score of urban and rural school respondents regarding menstrual management. The comparison of mean posttest knowledge score of rural and urban school respondent computed independent 't' value 1.605 was statistically significant at P<0.01 level. This establishes there is a significant difference in mean posttest knowledge score of urban and rural school respondents regarding menstrual management. The comparison of mean posttest attitude score of rural and urban school respondents shows that the computed independent 't' value 2.308 was statistically not significant. This establishes there is no significant difference in mean posttest attitude score of urban and rural school respondents regarding menstrual management. The comparison of mean posttest practice score of rural and urban school respondents shows that the computed independent 't' value 3.032 was statistically not significant. This establishes there is no significant difference in mean posttest practice score of urban and rural school respondents regarding menstrual management.

SECTION G

Table 7: Association of pretest knowledge scores with selected demographic variables of rural school.

SI.No	Demographic Variable	Knowledge score		df	χ^2
		1-10	11-20		
1	Type of family			1	21.160*
	a) Nuclear	55	18		
	b) Joint	26	1		
2	BMI			3	68.880*
	a) 10-15	15	0		
	b) 15-20	47	13		
	c) 20-25	13	6		
	d) 25-30	6	0		
3	Family income			1	4.000*
	a) 5000-15000	39	11		
	b) 15000& above	42	8		

* $P < 0.05$

Table 7 shows there was significant association between type of family, BMI, family income at $p < 0.05$.

SECTION H

Table 8: Association of pretest knowledge scores with selected demographic variables of urban school.

Sl.No	Demographic Variable	Knowledge score			df	χ^2
		1-10	11-20	21-30		
1	Type of family				1	40.960*
	a) Nuclear	52	28	1		
	b) Joint	10	7	2		
2	BMI				3	66.080*
	a) 10-15	13	1	0		
	b) 15-20	31	26	1		
	c) 20-25	15	8	1		
	d) 25-30	1	3	0		
3	Family income				1	0.640
	a) 5000-15000	34	20	0		
	b) 15000& above	25	20	1		

NS- Non significant, * P < 0.05

Table 8 shows there were no significant association between family income and there was significant association between type of family and BMI p<0.05.

CHAPTE R V

DISCUSSION, SUMMARY, CONCLUSION, IMPLICATIONS, LIMITATIONSAND RECOMMENDATION

This chapter deals with the discussion, summary and conclusion. It also clarifies the limitations of the study, implication and recommendations given for the different areas of nursing practice, nursing education, nursing administration and nursing research.

DISCUSSION

The present study was designed to assess the knowledge, attitude and practice regarding menarche and menstrual management among school girls in selected urban and rural schools. The research design adopted for the study was quasi experimental Pre-test Post-test design. Non probability purposive sampling technique was used to select 200 girls for this study. The data collected for the study was analyzed statistically and discussed based on the objectives.

Demographic variables of school girls participated in the study

According to type of family from rural school 73 respondents (73%) and from urban school 82 respondents (82%) were belong to nuclear family. Regarding food habits majority of the respondents were non vegetarian in both rural and urban school. Considering the BMI in rural school 15 respondents (15%) were underweight, 6 respondents (6%) were overweight and in urban school 14 respondents (14%) were underweight, 4 respondents (4%) were overweight. Family income shows that majority of the respondents in rural and urban were between the family income of 5000-15000. Regarding the preparedness in rural school 34 respondents (34%) and in urban school 33 respondents (33%) were totally unprepared. Considering the information in rural school 17 respondents (17%) and in urban school 26 respondents (26%) didn't obtain any prior information regarding menstruation.

The first objective of the study was to assess the average age at menarche among rural and urban schools girls.

The present study findings revealed that from rural school 2 respondents (3%) attained menarche between 10-11 yrs, 15 respondents (20%) attained between 11- 12 yrs, 30 respondents (41%) attained between 12-13 yrs, 27 respondents (36%) attained between 13-14 yrs. From urban school 5 respondents (7%) of them attained menarche between 10-11 yrs, 7 respondents (9%) attained between 11- 12 yrs, 36 respondents (49%) attained between 12-13 yrs, 26 respondents (35%) attained between 13-14 yrs. In rural school average age at menarche was 12.11 and in urban school 12.12. Age at menarche from both rural and urban school girls were started at 10 years.

K. P. Harden et al (2012), conducted a study on Environmental and genetic pathways between early pubertal timing and dieting in adolescence. Different measures have been used such as age at menarche, subjective perceptions of pubertal development, dieting to identify the factors for early menarche. The study result shows that genetic influences have the major role in early menarcheal age and increased risk for dieting. The study concludes that the genetic difference and dieting indicating the environmental risk.

The second objective of the study was to assess the knowledge, attitude and practice on menarche and menstrual management among school girls in selected urban and rural schools at Coimbatore.

The findings indicated that in rural school the pretest knowledge score of 80 respondents (80%) were between 0-10 and posttest shows that 72 respondents (72%) scored between 21-30. The pretest attitude score shows that 87 respondents (87%) scored between 15-30 and posttest shows that 81 respondents (81%) scored between 46-60. Pretest practice revealed that 48 respondents (64%) scored between 6-10, 6 respondents (8%) scored between 11-15 and posttest shows that 72 respondents (97%) scored between 11-15.

In urban school pretest knowledge score shows that 61 respondents (61%) scored between 0-10 and in posttest 76 respondents (76%) scored between 21-30. Pretest attitude score shows that 59 respondents (59%) scored between 15-30, and posttest 68 respondents (68%) scored between 46-60. Pretest practice shows that 40

respondents (54%) scored between 6-10, and posttest shows that 69 respondents (93%) scored between 11-15.

Sushila Kumari (2013) conducted a study to assess the Effectiveness of Planned Teaching Programme on the Knowledge on the topic of Menstrual Hygiene among Adolescence Girls Studying in the Selected Schools, Kolhapur At the end of the study it is found that maximum of 80% students scored good in the questionnaire, 20% scored average and 0% scored poor. The knowledge level on menstrual hygiene was maximum good in more than half of the participants 24 (80%), 6 (20%) were average and no one performed poor. The study conclude that more awareness programme needed to improve the knowledge of urban and rural area adolescent girls

The third objective was to determine the effectiveness of structured teaching programme on knowledge, attitude and practice regarding menarche and menstrual management among school girls in selected rural and urban schools at Coimbatore.

In rural school mean pretest and posttest knowledge score before and after teaching was 9.58 and 21.84 respectively and the computed paired' vale 31.296 was statistically significant at $p < 0.01$ level. Mean pretest and posttest attitude score before and after teaching were 27.24 and 48.48 respectively and the computed paired t vale 34.714 was statistically significant at $p < 0.01$ levels. Mean pretest and posttest practice score before and after teaching were 7.58 and 12.68 and the computed paired' vale 14.683 was statistically significant at $p < 0.01$ level. This establishes that there is significant difference in mean pretest and posttest knowledge, attitude and practice of rural school respondents on menstrual management.

In urban school mean pretest and posttest knowledge score before and after teaching were 10.44 and 21.16 respectively. The computed paired' value 23.409 was statistically significant at $p < 0.01$ levels. Mean pretest and posttest attitude score before and after teaching were 30.97 and 47.29. The computed paired' value 26.732 was statistically significant at $p < 0.01$ level. Mean pretest and posttest practice before and after teaching were 5.64 and 12.04. The computed paired' vale 25.463 were statistically significant at $p < 0.01$ level. This establishes that there is a significant

difference in mean pretest and posttest knowledge, attitude and practice of urban school respondents on menstrual management.

A similar study conducted by Shrestha Sandhya., et al. (2013) on A Study to determine the effectiveness of Planned Teaching Program on Adolescence Girl's Knowledge, Attitude and Practices towards menstrual cleanliness in preferred Schools of Hemja, Kaski, Nepal. Pretest and posttest shows marked difference in knowledge, attitude and practice. Pre test knowledge shows that 60.0% had fair knowledge, after the teaching programme 43.33% had good knowledge, 48.33% had fair knowledge. Attitude score shows that majority of respondents were had favorable attitude. Practice shows that majority of respondents 96.66% used to dry their cloths under sunlight throughout menstruation. The study brings to a close that teaching has made significant changes in adolescents knowledge, attitude and practice during menstruation.

The fourth objective was to compare the effectiveness of structured teaching programme between the rural and urban school girls in terms of knowledge, attitude and practice.

The comparison of mean pretest and posttest value of knowledge score between rural and urban school shows that the computed independent 't' value was 1.738 and 1.605 respectively was statistically significant at $P < 0.01$ level. Comparison of mean pretest attitude score of rural and urban school respondents shows that computed independent 't' value 5.126 was statistically significant at $P < 0.01$ level. and posttest attitude score of rural and urban school respondents shows that computed independent 't' value 2.308 was statistically not significant. comparison of mean pretest practice score of rural and urban school respondents shows that computed independent 't' value 5.456 was statistically significant at $P < 0.01$ level and posttest practice score of both school respondents shows that the computed independent 't' value 3.032 was statistically not significant .

The fifth objective of this study was to associate the knowledge, attitude and practice on menarche and menstrual management with selected demographic variables.

In this study among rural school in pretest knowledge shows that there was significant association between types of family, BMI, family income at $p < 0.05$.

In urban school among pretest knowledge, attitude and practice shows that there was no significant association between age family incomes, and there was significant association between types of family, BMI at $p < 0.05$.

SUMMARY

A comparative study was done to assess the effectiveness of structured teaching programme on knowledge, attitude and practice regarding menarche and menstrual management among school girls in selected urban and rural schools at Coimbatore for which the following objectives are formulated.

1. To assess the average age at menarche among rural and urban schools girls.
2. To assess the knowledge, attitude and practice on menarche and menstrual management among school girls in selected urban and rural schools at Coimbatore.
3. To determine the effectiveness of structured teaching programme on knowledge, attitude and practice regarding menarche and menstrual management among school girls in selected rural and urban schools at Coimbatore.
4. To compare the effectiveness of structured teaching programme between the rural and urban school girls in terms of knowledge, attitude and practice.
5. To associate the pretest knowledge score with selected demographic variables of rural and urban school.

The present study adopted the quasi experimental pretest and posttest design, the sample size was 200 school girls out of which 100 respondents from rural school and 100 respondents from urban school. Girls were selected by using non probability purposive sampling technique. The investigator developed tool for data collection was structured self administered questionnaires, attitude scale and practice checklist by

referring various journals and books. Researcher have selected 200 students for knowledge and attitude test but for practice, only the girls who attained menarche was selected so equal number of 74 students taken from each school.

The collected data was calculated and analyzed using both descriptive and inferential statistics based on the objective of the study. Chi square was used to find the association between demographic variables with knowledge score.

The study tested and accepted the hypothesis that there is a significant difference in the pre-test and post-test knowledge, attitude, practice scores regarding menarche and menstrual management among school girls in both urban and rural schools.

MAJOR FINDINGS OF THE STUDY

- ❖ The mean average age at menarche in rural school were 12.11 and urban school were 12.12
- ❖ The mean pretest knowledge score of the respondents in rural school were 9.58
- ❖ The mean posttest knowledge score of the respondents in rural school were 21.84
- ❖ The mean pretest attitude score of the respondents in rural school were 27.24
- ❖ The mean posttest attitude score of the respondents in rural school were 48.48
- ❖ The mean pretest practice score of the respondents in rural school were 7.58
- ❖ The mean posttest practice score of the respondents in rural school were 12.68
- ❖ The mean pretest knowledge score of the respondents in urban school were 10.44
- ❖ The mean posttest knowledge score of the respondents in urban school were 21.16
- ❖ The mean pretest attitude score of the respondents in urban school were 30.97
- ❖ The mean posttest attitude score of the respondents in urban school were 47.29
- ❖ The mean pretest practice score of the respondents in urban school were 5.64
- ❖ The mean posttest practice score of the respondents in urban school were 11.87
- ❖ The paired' value is 31.296 for the mean difference pretest and posttest knowledge score of rural school respondents which is statistically significant at $P < 0.01$ level.

- ❖ The paired 't' value is 34.714 for the mean difference pretest and posttest attitude score of rural school respondents on which is statistically significant at $P < 0.01$ level.
- ❖ The paired 't' value is 14.683 for the mean difference pretest and posttest practice score of rural school respondents which is statistically significant at $P < 0.01$ level.
- ❖ The paired 't' value is 23.409 for the mean difference pretest and posttest knowledge score of urban school respondents which is statistically significant at $P < 0.01$ level.
- ❖ The paired 't' value is 26.732 for the mean difference pretest and posttest attitude score of urban school respondents on which is statistically significant at $P < 0.01$ level.
- ❖ The paired 't' value is 25.463 for the mean difference pretest and posttest practice score of urban school respondents which is statistically significant at $P < 0.01$ level.
- ❖ The independent 't' value is 1.738 for the mean difference in the pretest knowledge score of rural and urban school respondents which is statistically significant at $P < 0.01$ level.
- ❖ The independent 't' value is 5.126 for the mean difference in the pretest attitude score of rural and urban school respondents which is statistically significant at $P < 0.01$ level.
- ❖ The independent 't' value is 5.456 for the mean difference in the pretest practice score of rural and urban school respondents which is statistically significant at $P < 0.01$ level.
- ❖ The independent 't' value is 1.605 for the mean difference in the posttest knowledge score of rural and urban school respondents which is statistically significant at $P < 0.01$ level.
- ❖ The independent 't' value is 2.308 for the mean difference in the posttest attitude score of rural and urban school respondents which is statistically not significant.
- ❖ The independent 't' value is 3.032 for the mean difference in the posttest practice score of rural and urban school respondents which is statistically not significant.

- ❖ In rural school among pretest knowledge score shows that there was significant association between type of family, BMI, family income at $p < 0.05$
- ❖ In urban school among pretest knowledge shows that there was no significant association between family income and there was significant association between type of family and BMI at $p < 0.05$.

CONCLUSION

The following drawn from the study

- The study shown that the upcoming generation girls are more vulnerable to get precocious puberty
- The pretest score of both urban and rural school regarding knowledge, attitude and practice is highlighting the need of information.
- Structured teaching programme is highly effective among school girls.
- The study proven that there is a significant difference in knowledge, attitude and practice of pretest and posttest between urban and rural schools at $p < 0.01$
- Rural school shows significant association between type of family, BMI, family income at $p < 0.05$
- Urban school shows there was no significant association between family income and there was significant association between types of family, BMI at $p < 0.05$

IMPLICATIONS

Healthy adolescents indicates healthy nation. It is consider that area of adolescents health have a major role in building a well structured country. The present generations are more prone to acquire precocious puberty due to life style changes and lack of information regarding menarche and menstrual management. As a health professional we all are responsible to share the information's that what we had. This study has its implications in nursing practice, nursing education, nursing administration and research.

NURSING PRACTICE

- Midwives play a major role in collecting and analyzing the information regarding adolescent period problems
- Midwives have to demonstrate the hygienic practice of using and disposing the sanitary napkins.
- Midwives have to conduct the programme to share the knowledge to the mothers having adolescent girls to improve their attitude, knowledge regarding menstrual management. This will point a good source of information for the girls.

NURSING EDUCATION

- Nurse educator should motivate the teachers to participate in school health programmes
- Nurse educator have to build a healthy adolescents through education like school health programmes, community health programmes, these will help the girls to improve their basics knowledge regarding menstrual management.

NURSING ADMINISTRATOR

- ❖ Nurse administrator have to orient each community health nurse to arrange and conduct the adolescent health related programmes
- ❖ Nurse administrator have to initiative for getting permission from higher authority to conduct these kind of programmes
- ❖ Nurse administrator should maintain adequate supervision and control over the team

NURSING RESEARCH

- ✓ Future studies can be built on the basis of present study
- ✓ Future studies can be conducted by including different levels of students
- ✓ Future studies can be conducted including more schools

LIMITATIONS

- The study was limited with two schools
- The population was homogeneous

RECOMMENDATIONS

- A similar study can be done in different settings
- A study can be conducted to assess the particular problem about menstrual management
- A qualitative study can be done to assess the difficulties of adolescent girls during menstruation
- A similar study can be conducted among adolescent girls mothers to assess their level knowledge and attitude
- A video assisted teaching can be conducted regarding the hygienic practices related to menstruation

ABSTRACT

The present study entitled, “**A comparative study to assess the effectiveness of structured teaching programme on knowledge, attitude and practice regarding menarche and menstrual management among school girls in selected urban and rural schools at Coimbatore**” **Objectives:** The main objective of my study was to assess the average age at menarche, assess the effectiveness of structured teaching programme, compare and associate the knowledge, attitude and practice between rural and urban school girls. **Design:** The quasi experimental pre test and post test design. **Sampling technique:** Non probability purposive sampling technique. **Conceptual framework:** modified weidenbach’s theory of helping art of clinical nursing. **Tool for data collection:** Structured self administered questionnaire to assess the knowledge, likert scale to assess the attitude, checklist to assess the practice. **Intervention:** LCD teaching was given to both schools after pre test assessment. **Results:** In rural school the average age at menarche was 12.11 and in the urban school 12.12 and it shows girls attained menarche at minimum age of 10 yrs. The paired t test value of pre test and post test of urban and rural school shows highly significant at $p < 0.01$ regarding knowledge, attitude and practice. The comparison between rural and urban school shows that it was significant in pre test of knowledge, attitude and practice but post test shows that there was no significant difference between post test attitude and practice. The association of rural school shows that there was significant association between types of family, BMI, family income at $p < 0.05$. In urban school there was no significant association between family incomes and there was significant association between types of family, BMI at $p < 0.05$. **Conclusion:** The study concluded after teaching programme there were a marked difference between the knowledge, attitude and practice among rural and urban school girls regarding menstrual management. The study highlights that as professionals we have to conduct this kind of school health programme to ensure the quality of health. **Keywords:** Structure teaching programme, adolescent girls, menstrual management.

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APPENDIX – A

SECTION A

DEMOGRAPHIC DATA

- Sample no :
Name :
1. Type of family : nuclear/ joint family
2. Food habits : Vegetarian / Non vegetarian
3. Age at menarche :
4. Weight :
5. Height :
6. BMI :
7. Family income :
8. How prepared do you think you were for your first menstruation?

Totally unprepared (1)	Somewhat unprepared (2)	Somewhat prepared (3)	Totally prepared (4)
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9. How much information did you received prior to your first menstruation?

No information (1)	Very little information (2)	Enough basic information (3)	Extremely well (4)
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APPENDIX-B

STRUCTURED SELF ADMINISTERED QUESTIONNAIRE TO ASSESS THE KNOWLEDGE OF ADOLESCENT GIRLS ON MENARCHE AND MENSTRUAL MANAGEMENT.

1. Which one is female reproductive organ?
 - a) Uterus
 - b) Kidney
 - c) stomach
 - d) Intestine

2. Where the bleeding starts during menstruation?
 - a) Bladder
 - b) urethra
 - c) rectum
 - d) uterus

3. What is the length of the fallopian tube?
 - a) 6cm
 - b) 8cm
 - c) 10cm
 - d) 12cm

4. Where are the Ovaries situated?
 - a) Either side of the uterus
 - b) Inside the uterus
 - c) Below the uterus
 - d) Above the uterus

5. What is the shape of the uterus?
 - a) Pear shape
 - b) Oval shape
 - c) Cylindrical
 - d) Round shape

6. What are the Physical changes occurs during puberty?
 - a) Menstruation and breast development
 - b) kidney development
 - c) Brain development
 - d) Bone growth

7. What is Menarche?
 - a) First menstruation
 - b) Periods in which reproductive organs reach maturity
 - c) Growth of body size
 - d) Ovulation

8. What is Menstruation?
 - a) Monthly Bloody discharge through vagina
 - b) watery discharge through vagina
 - c) White discharge through vagina
 - d) No discharge through vagina

9. What is the main lead to menstruation?
 - a) Age
 - b) Hormones
 - c) Curse
 - d) Enzymes

10. What is the duration of normal menstrual flow?
 - a) 3-5 days
 - b) 6-7 days
 - c) 8-10 days
 - d) Don't know

11. What is the average length of menstrual cycle?
 - a) 18 days
 - b) 22 days
 - c) 28 days
 - d) 40 days

12. How many napkins will get wet during first 3 days of menstruation?
 - a) 1-2 napkin/day
 - b) 3-4 napkins/day
 - c) 4-6 napkins/day
 - d) Don't know

13. What is the average blood loss during menstruation?
 - a) 40-60 ml
 - b) 80-100 ml
 - c) 90-120ml
 - d) 100-150 ml

14. What are the measures to reduce menstrual problems?
- a) Hot water application to abdomen
 - b) Mild exercise
 - c) No intake of food or water
 - d) I) a, c ii) a, b iii) a, b, c iii) b, c
15. What are the premenstrual symptoms?
- a) Headache, Anxiety, emotional disturbances, fatigue, breast tenderness
 - b) Itching in genital area, night sweats
 - c) Increase urination, pain during urination, blood in the urine
 - d) Don't know
16. What are the Home Remedies for dysmenorrhoea?
- a) Intake of salty and high sugar foods
 - b) Intake of spicy & fried food items
 - c) Intake of fast food items & cakes
 - d) Intake of fenugreek & coriander seeds tea
17. Which of the following is safe to use during menstruation?
- a) Cloth and underwear
 - b) Sanitary napkins and underwear
 - c) Tampons
 - d) Both a & b
18. Which Layer of the uterus will shed down during menstruation?
- a) Endometrium
 - b) Myometrium
 - c) Perimetrium
 - d) Epithelium
19. How to use sanitary pads?
- a) Peel the paper at the bottom & stuck to the bottom of the underwear
 - b) Don't peel the paper at the bottom & stuck to the bottom of the underwear
 - c) Don't use with underwear
 - d) Use only the cotton pack inside the pad
20. How to prevent infection, bad smell, itching in genital area?
- a) Wet cloths should be used
 - b) Cotton cloths dried under sunlight
 - c) Cloths that dried in indoors should be used
 - d) Shared cloths should be used

21. How to remove the pad?
- a) Fold it forward & don't wrap it
 - b) Fold it in backward & wrap it in a paper
 - c) Fold it in forward & wrap it in a paper
 - d) As your will
22. How many hours once the sanitary pad must be changed?
- a) 4 hrs once
 - b) 6hrs once
 - c) 8 hrs once
 - d) 10 hrs once
23. Where to dispose the sanitary pads?
- a) street
 - b) closed waste bin /incineration
 - c) open waste bin
 - d) toilet
24. Which one is not a menstrual abnormality?
- a) excessive bleeding with clots
 - b) amenorrhea (absence of bleeding)
 - c) menstruation lasting more than a week
 - d) mild dysmenorrhoea (abdominal pain)
25. What is meant by Healthy Diet?
- a) Diet consist of balanced food
 - b) Diet consist of only fruits, vegetables
 - c) Diet of high fat and sugar
 - d) Diet which consist of more spicy items
26. Which type of food item will prevent anemia?
- a) Iron rich foods
 - b) Plenty fruits
 - c) Spicy foods
 - d) Fast food
27. Which one of this is a calcium rich food?
- a) Rice
 - b) Meat
 - c) Milk
 - d) Orange

28. Which one of the following should be avoided?

- a) Protein & carbohydrate
- b) Fruits and vegetables
- c) vitamin and minerals
- d) High in fat and sugar

29. What are the Iron rich food?

- a) Ground nut candy, Jaggery & green leafy vegetables, mutton liver, dates
- b) Chocolates
- c) Rice
- d) Meat

30. Which kind of food items should be avoided during periods?

- a) Iron rich foods
- b) Fast foods & spicy foods
- c) Calcium rich foods
- d) Fruit

APPENDIX-C

MULTIPLE CHOICE QUESTIONS ON MENARCHE AND MENSTRUAL MANAGEMENT

QUESTION NUMBER	a	B	C	D
1	1	0	0	0
2	0	0	0	1
3	0	0	1	0
4	1	0	0	0
5	1	0	0	0
6	1	0	0	0
7	1	0	0	0
8	1	0	0	0
9	0	1	0	0
10	1	0	0	0
11	0	0	1	0
12	0	1	0	0
13	1	0	0	0
14	0	0	0	1
15	1	0	0	0
16	0	0	0	1
17	0	1	0	0
18	1	0	0	0
19	1	0	0	0
20	0	1	0	0
21	0	1	0	0
22	1	0	0	0
23	0	1	0	0
24	0	0	0	1
25	1	0	0	0
26	1	0	0	0
27	0	0	1	0
28	0	0	0	1
29	1	0	0	0
30	0	1	0	0

APPENDIX-D

ATTITUDE SCALE

Sl. No	Content	strongly agree	agree	Disagree	strongly disagree
1	Should not attend any religious function during menstruation.				
2	During menstruation girls should be in a separate room during menstruation.				
3	During menstruation girls should not take bath				
4	Should not participate in any family function during menstruation.				
5	I believe menstruation is a debilitating event				
6	Menstrual flow is dirty and unclean.				
7	Menstruation is a bothersome event				
8	During menstruation girls should not touch any utensils				
9	I am ashamed of myself during menstruation				
10	Menstruation is a punishment given by the God.				
11	Menstruation as a natural event				
12	Anticipation and predication of the onset of the menstruation is essential part of menstrual management.				
13	Do not touch anyone during this time.				
14	I feel to find hard to spend time with my family.				
15	I am unable to accept menstruation.				

APPENDIX-E
PRACTICE CHECKLIST

SI.NO	CONTENT	YES	NO
1	Did you take bath during this period time?		
2	Are you using sanitary pad? (stay free, whisper)		
3	Have you peel off the paper at the bottom of the sanitary pad before use?		
4	Do you check the correct place before stuck the sanitary pad?		
5	Are you changing pads 4 th hourly?		
6	While removing have you fold it in backward?		
7	Do you clean the genital area after removing the pad?		
8	Do you wrap the sanitary pad in a paper before disposing?		
9	Are you disposing the used pads in a closed waste bin ?		
10	Do you washed your hands with soap after disposing and before using next sanitary pad?		
11	Have you taken any tablet for menstrual problems?		
12	Have you taken any home remedies for menstrual problems?		
13	Have you maintained a regular diet rich in iron and protein rich in these days?		
14	Do you changed the pad after passing motion?		
15	Do you drink 2 liters of water in these days?		

APPENDIX – F

LESSON PLAN

ON

MENARCHE AND MENSTRUAL MANGEMANT

Subject : Obstetrics and Gynecological Nursing
Topic : Menarche and Menstrual management
Group : Adolescent girls
Number of girls : 200
Place : Rural and Urban schools
Date : 18.02.2016 & 28. 03. 2016
Time : 9.00 am - 10 .00 am
Teaching method : Lecture cum Discussion
Instructional Aids : LCD

General objective

At the end of the teaching the school girls will acquire in depth knowledge regarding menarche and menstrual management and develop positive attitude towards it in a view to maintain hygienic practices.

Specific objective

At the end of the structured teaching programme each schools girls will be able to

1. Describe female reproductive system
2. Define menarche
3. List out the pre pubertal physiological changes
4. Define prevention puberty
5. List out the causes of precocious puberty
6. Explain about menstrual cycle
7. Describe premenstrual syndrome
8. Enlist the signs and symptoms of menstruation
9. Explain menstrual problems
- 10.Enumerate home remedies for menstruation
11. Explain the hygienic practices
- 12.Mention the personal hygiene
- 13.Narrate the ovulation calendar
- 14.Brief out the myths and facts related to menstruation
- 15.Explain the diet during menstruation.

SL.N O	SPECIFIC OBJECTIVE	CONTENT	TEACHERS &LEARNER S ACTIVITY	A.V AIDS	EVALUATION
1	Introducing the topic	<p>INTRODUCTION</p> <p>Menstruation is a normal biological process and a key sign of reproductive maturity. Today's adolescents are tomorrow's mothers. It is highlighting that health practices during menstruation will help to build healthy mothers and baby in future. A study from UNICEF revealed that 1 out of 3 girls not have knowledge regarding menstruation prior to getting it while 48% of girls in Iran and 10% of girls in India believe that menstruation is a disease. (Water aid 2013, Menstrual Hygiene Matters).</p>	Lecture cum discussion	LCD	
2	Describe female reproductive system	<p>FEMALE REPRODUCTIVE SYSTEM</p> <ol style="list-style-type: none"> 1. VULVA 2. VAGINA 3. UTERUS 4. FALLOPIAN TUBE 5. OVARIES <p>1.VULVA Is the visible external genital organ. Which covers opening to the vagina and other reproductive organs located inside the body.</p> <p>2.VAGINA It is a muscular and hollow tube that extend from the vaginal opening to the uterus. It is about 3-5 inches.</p> <p>3.UTERUS</p> <ul style="list-style-type: none"> ▶ It is a hollow muscular pear shaped organ ▶ It weighs 40-60gms ▶ The part consists fundus, body, cervix ▶ It composed of three layers perimetrium, Myometrium, Endometrium. <p>4.FALLOPIAN TUBE</p> <ul style="list-style-type: none"> ❖ Fallopian tubes are about 10cm long 			

3	Define menarche	<ul style="list-style-type: none"> ❖ Extend from either sides of the uterus between the body and fundus 			
4	List out the pre pubertal physiological changes	<p>5.OVARIES</p> <ul style="list-style-type: none"> ▶ Ovaries are female gonadal glands ▶ Which are two in number situated on each sides of the uterus ▶ It produce hormones like estrogen and progesterone <p>MENARCHE</p> <ul style="list-style-type: none"> ▶ Menarche is the first monthly menstrual bloody discharge through vagina. ▶ The girl become mature and moves to early adolescent stage. <p>PRE PUBERTAL PHYSIOLOGICAL CHANGES .</p> <ul style="list-style-type: none"> <input type="checkbox"/> The uterus, fallopian tube, ovaries reach maturity. <input type="checkbox"/> The breast development <input type="checkbox"/> Pubic and axillary hair begins to grow <input type="checkbox"/> There is increase in rate of growth in height and widening of the pelvis <input type="checkbox"/> There is increased in the amount of fat deposited in hips and breasts. 			
5	Define precocious puberty List out the prevention of precocious puberty	<p><i>Precocious puberty</i> Puberty occurring at an unusually early age .Onset before 8 yrs in girls or before 9 years in boys.</p> <p>Prevention of precocious puberty</p> <ul style="list-style-type: none"> ❖ Children’s diet should focus on whole plant foods rather than animal foods – this will keep a protein intake in a safe range. ▶ Minimize excessive dairy products in children’s diet. ▶ Encourage children to exercise and play. ▶ Minimize processed foods- these are calorie dense and nutrient poor & they promote obesity and other diseases. ▶ Use organic food products ▶ Do not use plastic bottles if they are old because it releases BPA. ▶ Use BPA free bottles. ▶ Do not microwave in plastic containers. 			

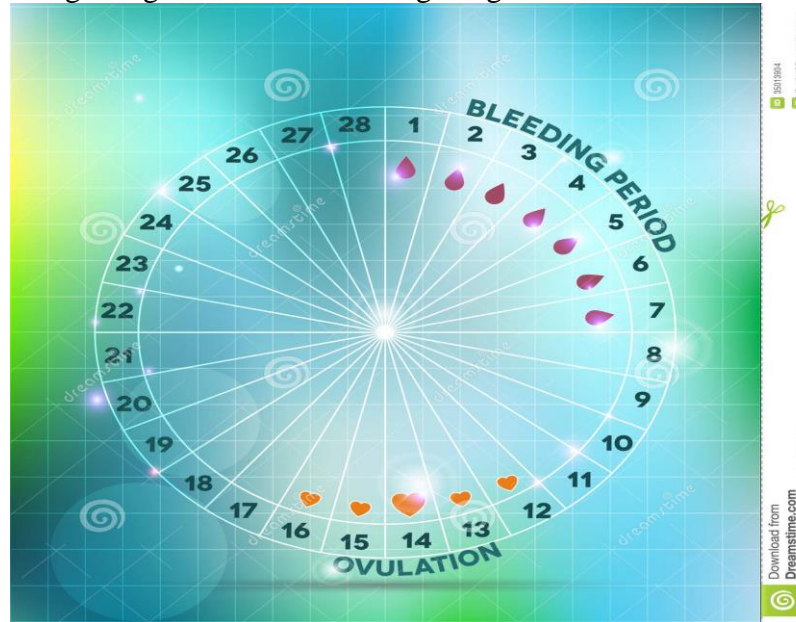
6

Explain about menstrual cycle

- ▶ Minimize the use of canned foods

Menstrual cycle

- ❑ About once in a month the endometrium grows as thickened lining and gets shed down through vagina.



- ❑ The average length of menstrual cycle is 28 days once for 3-5 days.
- ❑ Average blood loss during this time is 40-60ml.

PREMENSTRUAL SYNDROME

- ▶ PMS is a psychosomatic disorder often noticed just prior to menstruation.
- ▶ There is cyclic appearance of a large number of symptoms during the last 7-10 days of menstrual cycle.

7

Describe premenstrual syndrome

8	Enlist the signs and symptoms of menstruation	<p>Criteria for PMS</p> <ul style="list-style-type: none"> ▶ Not related to any organic lesion ▶ Regularly occurs during the luteal phase of menstrual cycle. ▶ Symptom-free period during rest of the cycle. <p>Symptoms of PMS</p> <p>RELATED TO WATER RETENSION</p> <ul style="list-style-type: none"> ○ Abdominal bloating ○ Breast tenderness ○ Swelling of the extremities ○ Weight gain <p>RELATED TO EMOTIONAL INSTABILITY</p> <ul style="list-style-type: none"> <input type="checkbox"/> Irritability <input type="checkbox"/> Depression <input type="checkbox"/> Insomnia <input type="checkbox"/> anxiety <input type="checkbox"/> Headache <input type="checkbox"/> Pelvic pressure <input type="checkbox"/> Backache <input type="checkbox"/> Food cravings <input type="checkbox"/> Difficulty in concentrating <p>Menstrual signs and symptoms</p> <p><u>Primary sign</u></p> <p>Bleeding from the vagina</p> <p>Associated symptoms(not to everybody)</p> <ol style="list-style-type: none"> a. Abdominal pain b. Pelvic pressure c. Backache d. Difficulty in concentrating e. Mood swings and irritability f. Headache and fatigue 			
9	Explain	<p>Menstrual problems</p> <p><u>1.Premenstrual tension and menstrual cramps</u></p>			

menstrual problems	<p>Diversion therapy To relieve these symptoms</p> <ul style="list-style-type: none"> ➤ exercise to improve blood circulation throughout the body. ➤ Brisk walk and mild exercise ➤ Keep your abdomen warm. Use a heating pad or hot water bottle to ease your cramps. ➤ Avoid too much caffeine, it increases tension and constrict blood vessels ➤ Take a time to reduce stress by meditating having massage or taking a warm bath <p><u>Medical attention</u> menstrual abnormalities</p> <ul style="list-style-type: none"> ▶ Periods are heavier than usual ▶ If last longer than a week ▶ If periods is skipped (once a regular pattern has been established) <p>Signs and symptoms of heavy flow</p> <ul style="list-style-type: none"> ▶ Periods more than 7 days ▶ Using more than 6 pads per day ▶ Severe menstrual cramps ▶ Menstrual blood clots ▶ Soaking pad every hour ▶ Becoming pallor, tired and fatigue. <p>Severe Menstrual cramps are generally associated with the heavy menstrual flow with blood clots .</p> <p><u>2. Severe Dysmenorrhea</u> painful menstruation is a common condition, the pain may felt either 2-3 days before or immediately before or during the flow due to hormonal imbalance</p> <p><u>3. Amenorrhea</u> Absence of women's periods after she has had it for sometime or total absence of her period even she is past the age when she should have started menstruating.</p>			
--------------------	--	--	--	--

10	Enumerate home remedies for menstruation	<p><u>causes</u></p> <ul style="list-style-type: none"> ✓ worry ✓ Grief ✓ Fright or emotional disturbances <p>4. menorrhagia Menorrhagia is the excessive menstrual flow</p> <p><u>Home remedies for dysmenorrhoea</u></p> <p>1. Coriander seeds- Dysmenorrhoea</p> <ul style="list-style-type: none"> ❖ 6gms of these seeds should be boiled in a half liter of the water. ❖ Decoction should be taken off the fire when only half the water remains. ❖ Sugar/Jaggery can be added ❖ Drink it when it is still warm <p>2. Fenugreek- dysmenorrhoea</p> <ul style="list-style-type: none"> ❖ Take few fenugreek ❖ put it in a glass of water for 1 hour ❖ Have the decoction along with fenugreek <p>3. ginger- Dysmenorrhoea</p> <ul style="list-style-type: none"> ➤ A piece of fresh ginger should be pounded and boiled in a cup of water for a few minutes. ➤ The infusion sweetened (jaggery) with ginger should be used thrice daily after meals as a medicine. <p>4. Sesame seeds- amenorrhoea, dysmenorrhoea</p> <ul style="list-style-type: none"> ❑ Half a teaspoon of these seeds take with hot water twice daily – reduce pain ❑ Two days prior to the expected periods-cures scanty menstruation <p>5. Hot water- dysmenorrhoea</p> <ul style="list-style-type: none"> ➤ Fill hot water in bottle/bag and place on the abdomen to relieve cramps ➤ Soak a kitchen towel with hot water, wring out excess water, ➤ Place on abdomen <p>6. cinnamon- dysmenorrhoea</p>			
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11	Explain the hygienic practices	<ul style="list-style-type: none"> ✓ use as a tea ✓ Sprinkle on toast or sweet rolls ✓ Drink cinnamon tea the day before or during period – heavy period <p>7. <i>mint</i>-dysmenorrhoea</p> <ul style="list-style-type: none"> ➤ Steep into a tea and drink a cup or twice a day. ➤ Try chewing a mint candy <p><u>MENSTRUAL HYGIENE</u></p> <ul style="list-style-type: none"> ▶ Menstrual hygiene is very important to prevent infection, local itching & bad odour. ▶ “good personal hygiene” will keep you confident during these days. <p>Hygienic practices</p> <p><i>Sanitary pads</i></p> <ul style="list-style-type: none"> ▪ The sanitary pads are cotton or covered with plastic product used for absorbing menstrual blood. ▪ 3-4 pads will be fully wet daily during first 3 days of menstruation. <p><i>How to use</i></p> <ul style="list-style-type: none"> ▶ Unwrap the pad ▶ Peel the bottom of the paper ▶ Stick the pad to the bottom of the underwear ▶ The pad should be changed 6 times a day. <p><i>Disposing</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Pulling it from the underwear <input type="checkbox"/> Fold it in backward <input type="checkbox"/> Make it in a small square <input type="checkbox"/> Wrap it in a paper <input type="checkbox"/> Dispose in closed bin. <p>Wash hands with soap & water after changing your pad.</p> <p><i>Do not;</i></p>			
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12	Mention the personal hygiene	<ul style="list-style-type: none"> ✓ pads should not be thrown on the street ✓ Never dispose into the toilet, it will clog the closet. <p><u>Personal hygiene</u></p> <p>The underwear</p> <ul style="list-style-type: none"> ➤ Underwear should be soft cotton cloth to prevent rashes and irritation ➤ Underwear should be washed in hot water with soap ➤ It should be dried under direct sunlight <p>Should not share underwear with anyone</p> <ul style="list-style-type: none"> ▶ Underwear should be washed in hot water with soap <input type="checkbox"/> Daily bath is essential <input type="checkbox"/> Observe for local itching and bad odour <p><u>Hair</u></p> <ul style="list-style-type: none"> ▶ Brushing your hair cleans and stimulates hair and scalp. ▶ Comb hair daily. ▶ Shampoo regularly <p>Fingernails and Toenails</p> <ul style="list-style-type: none"> ▶ File fingernails in one direction ▶ Cut toenails straight– never cut into corners ▶ Protect against ingrown toenails by avoiding tight shoes, very high heels <p>Wear cotton under garments instead of synthetic ones.</p> <p>Sanitary napkins should be changed every 4 hours once during the periods.</p> <p>Sanitary napkins should be changed every 4 hours once during the periods.</p> <p>Wash hands with soap & water before and after changing your pad, urination and defecation.</p> <p>Do not hold back urine when you want to urinate, as it causes stasis in the bladder and promotes infection .</p> <p><u>Ovulation calendar</u></p>			
13	Narrate the ovulation				

calendar

ovulation calendar calculator to estimate your cycle phases and cycle dates.

Ovulation calendar

ovulation calendar calculator to estimate your cycle phases and cycle dates.

Mon	Tue	Wed	Thu	Fri	Sat	Sun
				1 (24)	2 (25)	3 (26)
4 (27)	5 (28)	6 (x 1)	7 (2)	8 (3)	9 (4)	10 (5)
11 (6)	12 (7)	13 (8)	14 (9)	15 (10)	16 (11)	17 (12)
18 (13)	19 (14)	20 (15)	21 (16)	22 (17)	23 (18)	24 (19)
25 (20)	26 (21)	27 (22)	28 (23)	29 (24)	30 (25)	31 (26)

Menstrual myths and facts

➤ Myth

You should not participate any religious functions.

➤ Fact

It is complete myth which was actually created in olden days for the females to indicate that this 4-5 days are given for them to take rest.

➤ Myth

14

Brief out the myths and facts related to menstruation

15	Explain the	<p>While menstruating women should be separated from home</p> <ul style="list-style-type: none"> ➤ Fact <p>Women in religious basis while menstruating they are impure but it is not true. menstruation is natural process in females which helps to recognize as childbearing age.</p> <ul style="list-style-type: none"> ➤ Myth <p>Do not enter into kitchen while menstruating</p> <ul style="list-style-type: none"> ➤ Fact <p>There is no relationship with cooking food in kitchen and menstruation. It is complete myth which was actually created in olden days for the females to indicate that this 4-5 days are given for them to take rest.</p> <ul style="list-style-type: none"> ➤ Myth <p>Menstruating women need to be in the bed, or avoid strenuous activity</p> <ul style="list-style-type: none"> ➤ Fact <p>Exercise can ease the symptoms, it will not make pain worse. Women are not weaker during their periods, unless they have anemia.</p> <ul style="list-style-type: none"> ➤ Myth: <p>Females who are menstruating cannot exercise until it is over.</p> <ul style="list-style-type: none"> ➤ Fact: <p>False, it is possible to exercise when menstruating. During menstruation, a girl can do any activities she normally does.</p> <ul style="list-style-type: none"> ➤ Myth <p>You should not take bath in those days</p> <ul style="list-style-type: none"> ➤ Facts <p>Now again this is another myth. Taking bath is most important and the prime thing we usually do to keep the physical hygiene.</p> <ul style="list-style-type: none"> ➤ Myth <p>Menstrual flow is dirty and unclean</p> <ul style="list-style-type: none"> ➤ Fact <p>No, menstrual blood is clean, comprising of blood and body tissue</p>			
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	<p>diet during menstruation.</p>	<p><u>Diet during menstruation</u></p> <ol style="list-style-type: none"> 1. Drink more water at least 8 glasses preferably hot during periods as it provides good hydration to the body 2. Avoid junk and spicy foods that feels bloated and heavy 3. Eat iron rich green leafy vegetables to prevent anemia. 4. Have papaya and banana to improve digestion 5. For good sleep drink warm milk 6. Take food rich in magnesium and calcium. 7. Take food rich in calcium. 8. Have fish foods to relieve cramps. <p>balanced diet</p> <p>9. Meals – have foods from every group which is required by the body like carbohydrate, proteins, minerals, vitamins, fruits, vegetables.</p> <ul style="list-style-type: none"> ▶ Eat lots of fresh vegetables, whole grains, nuts, seeds, fruits ▶ Avoid eating fatty foods, sweets, <p>Stress can affect the length between periods. Hence...</p> <p>Stress management</p> <p><i>Asanas ...</i></p> <p>Meditation</p> <p style="text-align: center;"><u>SUMMARY & CONCLUSION</u></p> <p>At the end of the teaching the each student gained knowledge regarding various aspect of menarche and menstrual management like female reproductive system, Menarche, Pre pubertal physiological changes, Precocious puberty, Menstrual cycle, Premenstrual syndrome, Menstrual signs and symptoms And I assure you that it will be beneficial in your future.</p>			
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APPENDIX-C

MULTIPLE CHOICE QUESTIONS ON MENARCHE AND MENSTRUAL MANAGEMENT

QUESTION NUMBER	a	B	C	D
1	1	0	0	0
2	0	0	0	1
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27	0	0	1	0
28	0	0	0	1
29	1	0	0	0
30	0	1	0	0

APPENDIX - L

Letter for requisition to the medical expert



KMCH COLLEGE OF NURSING

(Approved by the Government of Tamil Nadu & The Tamil Nadu Nurses & Midwives Council, Chennai.
Recognized by the Indian Nursing Council, New Delhi and Affiliated to the Tamil Nadu Dr. M.G.R. Medical University, Chennai)
KMCH Campus, Avinashi Road, Coimbatore – 641 014. INDIA



Ph: (0422) 4323740, 2369321 Telefax : (0422) 2627525 Website: kmchcon.ac.in E-mail: nursing@kmch.ac.in

Ref: KMCT/4001 /12/15

18-12-2015

TO

Dr. Jayanthi Veerappan M.D., D.G.O.,
Consultant Obstetrics & Gynaecology
Kovai Medical Center & Hospital,
Coimbatore-14

Dear Madam

Sub: Requisition to be the medical expert for the study

Greetings to you

I submit that one of our M. Sc (N) final year student by the name Ms.Anusha.R specializing in Obstetrics and Gynaecological Nursing in our college desires to conduct a study entitled "A comparative study to Assess the Effectiveness of Structured Teaching Programme on Knowledge, Attitude and Practice Regarding Menarche and Menstrual Management among School girls in Selected urban and Rural Schools at Coimbatore." as part of her M.Sc (Nursing) Curriculum.

As she is in need of medical expert to complete her study, I request you to guide the student.

Thanking you

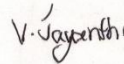
Yours truly


18/12/15

Prof. DR. S. Madhavi, M.Sc.(N)., Ph.D.,
Principal.

The Principal,
K.M.C.H. College of Nursing,
P.B. No : 3209, Avinashi Road,
Coimbatore - 641 014.





Dr Jayanthi Veerappan
M.D., D.G.O.,
Reg No: 31468

Administrative Office :

Kovai Medical Center Research and Educational Trust
No.940/1A&B, Kovai Estate, Kalapatti Road, Coimbatore - 641 048. INDIA
Ph : (0422) 2369321 E-mail : info@kmch.ac.in

APPENDIX – M

Letter for Ethical Clearance



KMCH ETHICS COMMITTEE
KOVAI MEDICAL CENTER AND HOSPITAL LIMITED

Post Box No. 3209, Avanashi Road, Coimbatore - 641 014. INDIA

© : (0422) 4323800, 4323619 Fax : (0422) 4270805

E-mail : ethics@kmchhospitals.com

EC Reg. No : ECR / 112 / Inst / TN / 2013



Ref: EC/AP/426/02/2016
01.02.2016

To:
Mrs.P.Padma M.Sc (N)
Associate Professor
OBG Department
KMCH College of Nursing
Coimbatore-- 641 014
Tamilnadu, India.

APPROVED

Dear Mrs.P.Padma,

The proposal entitled “**A Comparative Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge, Attitude, and Practice Regarding Menarche and Menstrual Management Among School Girls in Selected Urban and Rural Schools at Coimbatore**” Submitted by **Anusha.R** under your guidance was reviewed by the Ethics Committee in its meeting held on 30.01.2016 and permission is granted to carry out the study at Urban and Rural Schools at Coimbatore, India.

Thanking you,

Yours faithfully,


Dr. P. R. Muthuswamy
Chairman, KMCH Ethics Committee

Dr. P. R. MUTHUSWAMY,
MA.,ME.A.,FDPM(HM-A)Ph.D.,
Chairman
Ethics Committee
Kovai Medical Center and Hospital
Avanashi Road,
COIMBATORE-641 014.

Copy to: Medical Guide:
Dr.Jayanthi Veerappan M.D., D.G.O.,
Consultant Obstetrics & Gynecology
Kovai Medical Center and Hospital
Coimbatore

Research Guide:
Prof. DR. S. Madhavi,
M.Sc (N), Ph.D.,
Principal
KMCH College of Nursing
Coimbatore

APPENDIX – N

Copy of permission letter to conduct study from rural school



GRD - CPF MATRICULATION HIGHER SECONDARY SCHOOL

AVINASHI ROAD, NEELAMBUR, COIMBATORE - 641 062.

(OPP. To PSG Institute of Technology and Applied Research)

Phone : 0422 - 3205757 Mobile : 98422 - 25005

E-mail : geeaardee@gmail.com

Ref. No.

Date 18.11.2016.....

To
The Prof.Dr.S.Madhavi,M.Sc(N)., Ph.D.,
KMCH College of Nursing,
KMCH Campus
Avinashi Road,
Coimbatore

Dear Madam

Sub: Permission for Conducting the Programme
Ref: KMCT/3713/12/2015

We would like to inform you that Ms.Anusha.R is permitted to conduct the programme titled " A Comparative Study to Assess the Effectiveness of Structured Teaching Programme".We think the programme will be very useful for our students.

Thanking you,
Yours truly,

PRINCIPAL

GRD-CPF MATRIC. HR. SEC. SCHOOL
AVINASHI ROAD, NEELAMBUR POST
COIMBATORE-641 062.

APPENDIX – O

Copy of permission letter to conduct study from urban school



PSGG KANYA GURUKULAM HIGHER SECONDARY SCHOOL FOR GIRLS

CIVIL AERODROME POST, COIMBATORE - 641 014. PHONE : 0422 - 2573350

Mrs.G.Sathiavathi M.Sc., B.Ed., M.Phil,
Headmistress

27-01-2016

To
The Principal,
KMCH College of Nursing
Coimbatore-641014.

Dear Madam,

Sub – Permission to conduct a Teaching programme -Reg

This is to inform you that I permit to **Miss.Anusha.R** studying in, KMCH College of Nursing, Coimbatore-14, to conduct a study Programme regarding Menarche and Menstrual Management among our school students.

(G.Sathiavathi)

Headmistress
PSGG KANYA GURUKULAM
HIGHER SECONDARY SCHOOL FOR GIRLS
CIVIL AERODROME POST,
COIMBATORE - 641 014.

APPENDIX – P

Copy of certificates of content validity

EXPERT OPINION FOR CONTENT VALIDITY

From

II Year M.Sc. Nursing

KMCH College of Nursing

Coimbatore – 14

To

Dr. R.Renukadevi , MD., (O&G) DNB.,

Consultant Obstetrician & Gynaecologist

Kovai Medical Center and Hospital

Coimbatore – 14.

Through

The Principal

KMCH College of Nursing

Coimbatore - 14

Respected Madam,

Sub: Seeking expert opinion and content validity.

I am the student of KMCH College of Nursing. As a part of my partial fulfillment of my post graduate nursing programme, I wish to undertake a study titled **“A comparative study to assess the effectiveness of structured teaching programme on knowledge, attitude and practice regarding menarche and menstrual management among school girls in selected urban and rural schools at Coimbatore”**. It will be immense help to me if you could pursue the proposal and research tool. Here with I am enclosing the copy to the same.

Kindly do the needful

Thanking You

Place: *Coimbatore*

Date: *14/3/16*

R. Renukadevi

Dr. R. RENUKADEVI, MD(O&G)DN
Obstetrician and Gynaecologist
Reg. No : 50127
Kovai Medical Center and Hospital
Coimbatore - 14, 014

[Signature]
The Principal,
K.M.C.H. College of Nursing,
P.B. No : 3209, Avanashi Road,
Coimbatore - 641 014.

Yours faithfully

[Signature]
Anusha .R

APPENDIX – Q

Copy of certificates of content validity

EXPERT OPINION FOR CONTENT VALIDITY

From

II Year M.Sc. Nursing

KMCH College of Nursing

Coimbatore – 14

To

Dr. C.S.Dhevasena , DGO., DNB.,

Consultant Obstetrician & Gynaecologist

Kovai Medical Center and Hospital

Coimbatore – 14.

Through

The Principal

KMCH College of Nursing

Coimbatore - 14

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Kindly do the needful

Thanking You

Place: *Coimbatore*

Date: *14/3/16*

Yours faithfully

Anusha
Anusha .R

C.S.Dhevasena
CS
Dr. C. S. DHEVASENA DGO., DNB.
Consultant Obstetrician and Gynaecologist
Reg. No: 52293
Kovai Medical Center and Hospital
COIMBATORE - 641 014.
The Principal,
K.M.C.H. College of Nursing,
P.B. No : 3209, Avanashi Road
Coimbatore - 641 014.

APPENDIX – R

Copy of certificates of content validity

EXPERT OPINION FOR CONTENT VALIDITY

From

II Year M.Sc. Nursing

KMCH College of Nursing

Coimbatore – 14

To

Dr. Velam Thennavan M.B.B.S, DFFP, MRCOG (London)

Consultant Obstetrician & Gynaecologist

Kovai Medical Center and Hospital

Coimbatore – 14.

Through

The Principal

KMCH College of Nursing

Coimbatore - 14

Respected Madam,

Sub: Seeking expert opinion and content validity.

I am the student of KMCH College of Nursing. As a part of my partial fulfillment of my post graduate nursing programme, I wish to undertake a study titled **“A comparative study to assess the effectiveness of structured teaching programme on knowledge, attitude and practice regarding menarche and menstrual management among school girls in selected urban and rural schools at Coimbatore”**. It will be immense help to me if you could pursue the proposal and research tool. Here with I am enclosing the copy to the same.

Kindly do the needful

Thanking You

Place: *Coimbatore*

Date: *14/3/16*

f. Velam

Dr. VELAM THENNAVAN
MBBS., DFFP, MRCOG (London)
Consultant Obstetrician & Gynaecologist,
Reg. No. 63083
Kovai Medical Center and Hospital Limited,
P.B. No. 3209, Avanashi Road,
Coimbatore - 641 014. India.

The Principal,
K.M.C.H. College of Nursing,
P.B. No : 3209, Avanashi Road,
Coimbatore - 641 014.

Yours faithfully

Anusha .R



KMCH COLLEGE OF NURSING

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Ref: KMCT/4001 /12/15

18-12-2015

TO

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Dear Madam

Sub: Requisition to be the medical expert for the study

Greetings to you

I submit that one of our M. Sc (N) final year student by the name Ms.Anusha.R specializing in Obstetrics and Gynaecological Nursing in our college desires to conduct a study entitled “A comparative study to Assess the Effectiveness of Structured Teaching Programme on Knowledge, Attitude and Practice Regarding Menarche and Menstrual Management among School girls in Selected urban and Rural Schools at Coimbatore.” as part of her M.Sc (Nursing) Curriculum.

As she is in need of medical expert to complete her study, I request you to guide the student.

Thanking you

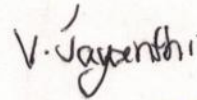
Yours truly


18/12/15

Prof. DR. S. Madhavi, M.Sc.(N).., Ph.D.,
Principal.

The Principal,
K.M.C.H. College of Nursing,
P.B. No : 3209, Avinashi Road,
Coimbatore - 641 014.





Dr Jayanthi Veerappan
M.D.,D.G.O.,
Reg No: 31466

Administrative Office :

Kovai Medical Center Research and Educational Trust
No.940/1A&B, Kovai Estate, Kalapatti Road, Coimbatore - 641 048. INDIA
Ph : (0422) 2369321 E-mail : info@kmch.ac.in



KMCH ETHICS COMMITTEE
KOVAI MEDICAL CENTER AND HOSPITAL LIMITED

Post Box No. 3209, Avanashi Road, Coimbatore - 641 014. INDIA

☎ : (0422) 4323800, 4323619 Fax : (0422) 4270805

E-mail : ethics@kmchhospitals.com

EC Reg. No : ECR / 112 / Inst / TN / 2013



Ref: EC/AP/426/02/2016
01.02.2016

To:

Mrs.P.Padma M.Sc (N)
Associate Professor
OBG Department
KMCH College of Nursing
Coimbatore-- 641 014
Tamilnadu, India.

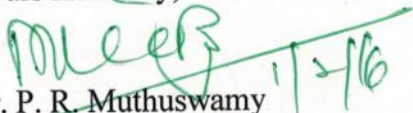
APPROVED

Dear Mrs.P.Padma,

The proposal entitled “**A Comparative Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge, Attitude, and Practice Regarding Menarche and Menstrual Management Among School Girls in Selected Urban and Rural Schools at Coimbatore**” Submitted by **Anusha.R** under your guidance was reviewed by the Ethics Committee in its meeting held on 30.01.2016 and permission is granted to carry out the study at Urban and Rural Schools at Coimbatore, India.

Thanking you,

Yours faithfully,


Dr. P. R. Muthuswamy
Chairman, KMCH Ethics Committee

Dr. P. R. MUTHUSWAMY,
MA.,MEA.,FDPM(IIM-A)Ph.D.,
Chairman
Ethics Committee
Kovai Medical Center and Hospital
Avanashi Road,
COIMBATORE-641 014.

Copy to: Medical Guide:

Dr.Jayanthi Veerappan M.D., D.G.O.,
Consultant Obstetrics &Gynecology
Kovai Medical Center and Hospital
Coimbatore

Research Guide:

Prof. DR. S. Madhavi,
M.Sc (N)., Ph.D.,
Principal
KMCH College of Nursing
Coimbatore



GRD - CPF MATRICULATION HIGHER SECONDARY SCHOOL

AVINASHI ROAD, NEELAMBUR, COIMBATORE - 641 062.

(OPP. To PSG Institute of Technology and Applied Research)

Phone : 0422 - 3205757 Mobile : 98422 - 25005

E-mail : geeaardee@gmail.com

Ref. No.

Date 18.11.2016.....

To
The Prof.Dr.S.Madhavi,M.Sc(N)., Ph.D.,
KMCH College of Nursing,
KMCH Campus
Avinashi Road,
Coimbatore

Dear Madam

Sub: Permission for Conducting the Programme
Ref: KMCT/3713/12/2015

We would like to inform you that Ms.Anusha.R is permitted to conduct the programme titled " A Comparative Study to Assess the Effectiveness of Structured Teaching Programme".We think the programme will be very useful for our students.

Thanking you,
Yours truly,

PRINCIPAL

GRD - CPF MATRIC. HR. SEC. SCHOOL
AVINASHI ROAD, NEELAMBUR POST
COIMBATORE-641 062.



PSGG KANYA GURUKULAM
HIGHER SECONDARY SCHOOL FOR GIRLS

CIVIL AERODROME POST, COIMBATORE - 641 014. PHONE : 0422 - 2573350

Mrs.G.Sathiavathi M.Sc., B.Ed., M.Phil,
Headmistress

27-01-2016

To
The Principal,
KMCH College of Nursing
Coimbatore-641014.

Dear Madam,

Sub – Permission to conduct a Teaching programme -Reg

This is to inform you that I permit to **Miss.Anusha.R** studying in, KMCH College of Nursing, Coimbatore-14, to conduct a study Programme regarding Menarche and Menstrual Management among our school students.

(G.Sathiavathi)

Headmistress

PSGG KANYA GURUKULAM
HIGHER SECONDARY SCHOOL FOR GIRLS
CIVIL AERODROME POST,
COIMBATORE - 641 014.

EXPERT OPINION FOR CONTENT VALIDITY

From

II Year M.Sc. Nursing

KMCH College of Nursing

Coimbatore – 14

To

Dr. R.Renukadevi , MD., (O&G) DNB.,

Consultant Obstetrician & Gynaecologist

Kovai Medical Center and Hospital

Coimbatore – 14.

Through

The Principal

KMCH College of Nursing

Coimbatore - 14

Respected Madam,

Sub: Seeking expert opinion and content validity.

I am the student of KMCH College of Nursing. As a part of my partial fulfillment of my post graduate nursing programme, I wish to undertake a study titled **“A comparative study to assess the effectiveness of structured teaching programme on knowledge, attitude and practice regarding menarche and menstrual management among school girls in selected urban and rural schools at Coimbatore”**. It will be immense help to me if you could pursue the proposal and research tool. Here with I am enclosing the copy to the same.

Kindly do the needful

Thanking You

Place: *Coimbatore*

Date: *14/3/16*

R. Renukadevi

Dr. R. RENUKADEVI. MD(O&G)DN
Obstetrician and Gynaecologist
Reg. No : 50127
Kovai Medical Center and Hospital
Coimbatore - 641 014

[Signature]
The Principal,
K.M.C.H. College of Nursing,
P.B. No : 3209, Avanashi Road,
Coimbatore - 641 014.

Yours faithfully

[Signature]
Anusha .R

EXPERT OPINION FOR CONTENT VALIDITY

From

II Year M.Sc. Nursing

KMCH College of Nursing

Coimbatore – 14

To

Dr. C.S.Dhevasena , DGO., DNB.,

Consultant Obstetrician & Gynaecologist

Kovai Medical Center and Hospital

Coimbatore – 14.

Through

The Principal

KMCH College of Nursing

Coimbatore - 14

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Kindly do the needful

Thanking You

Place: Coimbatore

Date: 14/3/16

Yours faithfully


Anusha .R



Dr. C. S. DHEVASENA DGO., DNB.
Consultant Obstetrician and Gynaecologist
Reg. No: 82293
Kovai Medical Center and Hospital
COIMBATORE - 641 014.

The Principal,
K.M.C.H. College of Nursing,
P.B. No : 3209, Avanashi Road
Coimbatore - 641 014.

EXPERT OPINION FOR CONTENT VALIDITY

From

II Year M.Sc. Nursing

KMCH College of Nursing

Coimbatore – 14

To

Dr. Velam Thennavan M.B.B.S, DFFP, MRCOG (London)

Consultant Obstetrician & Gynaecologist

Kovai Medical Center and Hospital

Coimbatore – 14.

Through

The Principal

KMCH College of Nursing

Coimbatore - 14

Respected Madam,

Sub: Seeking expert opinion and content validity.

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Kindly do the needful

Thanking You

Place: Coimbatore

Date: 14/3/16

f. Velam

Dr. VELAM THENNAVAN
MBBS., DFFP., MRCOG (London)
Consultant Obstetrician & Gynaecologist,
Reg. No. 63083
Kovai Medical Center and Hospital Limited,
P.B. No. 3209, Avanashi Road,
Coimbatore - 641 014. India.

The Principal,
K.M.C.H. College of Nursing,
P.B. No : 3209, Avanashi Road,
Coimbatore - 641 014.

Yours faithfully

Anusha .R