

**TO ASSESS THE EFFECTIVENESS OF VIDEO  
ASSISTED TEACHING ON KNOWLEDGE OF  
MENSTRUAL DISORDERS AND ITS EFFECT ON  
CONCEPTION AMONG STUDENTS OF SELECTED  
COLLEGES, CHENNAI**



*Dissertation submitted to*

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

*In partial fulfillment of the requirement  
for the degree of*

**MASTER OF SCIENCE IN NURSING**

**APRIL – 2014**

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**Certified that this is the bonafide work of**

**Ms. Annet Merin Abraham**

**II Year M.Sc., Nursing**

**M.A.Chidambaram College of Nursing**

**V.H.S., Adyar, T.T.T.I. Post,**

**Chennai -600 113**

**Signature-----**

**Prof.,Dr.,Mrs.Shyamala Manivannan,**

**R.N.,R.M.,M.Sc(N),Ph.D.**

**Principal and Professor in Nursing**

**M.A.Chidambaram College of Nursing**

**V.H.S., Adyar, T.T.T.I. Post,**

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**Approved by the Dissertation Committee in April 2013**

**PROFESSOR IN NURSING RESEARCH**

**Prof.Dr.(Mrs.)Shyamala Manivannan,**

**R.N., R.M., M.Sc(N), Ph.D (N),** .....

Principal and Professor in Nursing

M.A. Chidambaram College of Nursing

V.H.S., Adyar, T.T.T.I. Post

Chennai - 600 113.

**CLINICAL SPECIALITY EXPERT**

**Mrs. Prema Janardan,**

**R.N., R.M., M.Sc(N),** .....

Reader in Nursing

M.A.Chidambaram College of Nursing

V.H.S., Adyar, T.T.T.I. Post

Chennai - 600 113.

**MEDICAL EXPERT**

**Dr. S.Janaki,**

**MBBS, DCH, MD.,** .....

Director, Clinical And Academic Affairs,

V.H.S, Tharamani, Chennai

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# **EFFECTIVENESS OF VIDEO ASSISTED TEACHING ON KNOWLEDGE OF MENSTRUAL DISORDERS AND ITS EFFECT ON CONCEPTION AMONG STUDENTS OF SELECTED COLLEGES, CHENNAI.**

## **ABSTRACT**

### **INTRODUCTION**

In women the period of growth and development extends throughout the life cycle; however, the period in which the principle changes occur is during the onset of menstruation, menarche is the hallmark of female pubertal development. The menstrual cycle is a very important indicator of women's reproductive health and their endocrine function. Menstrual disorders are the irregularity in the normal menstrual cycle a common presentation among females, 75% of girls experience some problem associated with menstruation like delayed, irregular, painful, and heavy menstrual bleeding are leading reasons for physician office visits by patient Guerin (2009)

The most positive aspect of the menstrual cycle is ability to become pregnant and give birth. When menstrual disorders are not treated in the early age then it leads to difficult to conceive. The investigator found the problem as significant one and decided to undertake the present study.

### **OBJECTIVE**

To assess the effectiveness of video assisted teaching on knowledge of menstrual disorders and its effect on conception.

## **METHODOLOGY**

Quasi-experimental design was used. Samples were from Arts and Science colleges in Chennai by proportionate sampling technique, total sample size was 100, 50 samples from Arts and 50 samples from Science group. Pre-test was conducted using structured questionnaire, video assisted teaching was administered, and post test was conducted. Both descriptive and inferential statistics were used for analysis.

## **RESULTS**

The findings of the study revealed that in the pre-test mean score was 37.428 with Standard deviation 14.171 and in post-test mean score was 95.171 with Standard deviation 9.844. The paired 't' value was 38.052 showed that there is a statistically significant difference between the knowledge in the pre-test and the post test at  $p < .001$ . Statistical significance. Comparing the post test knowledge score of arts and science students shows that there was statistically significant difference in the knowledge between the arts and science students at  $p < .001$  level. There was a statistical significant association between the post-test knowledge of menstrual disorders and its effect on conception and course of study at  $P < 0.001$ . Study findings concluded that video assisted teaching was effective.

## **CONCLUSION**

The study was conducted to assess the effectiveness of video assisted teaching on knowledge of menstrual disorders and its effect on conception among students studying in selected colleges. There was a statistically significant ( $p > 0.01$ ) increase in post test knowledge score of menstrual disorders and its effect on

conception among students studying in selected colleges. Therefore it is concluded that providing video assisted teaching is an effective teaching strategy in increasing the knowledge of menstrual disorders and its effect on conception among students studying in selected colleges.

## **REFERENCES**

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## **CHAPTER-I**

### **INTRODUCTION**

Women are the vital set up and heart of the family. Procreation is an essential event in every woman's life. Menstruation being a normal physiological process in every woman's life can be a major cause for conception difficulties due to variations in the menstruation process.

Menstruation is shedding of the endometrial lining of the uterus. This generally occurs monthly by releasing blood and tissues from the uterus. A healthy menstrual cycle is a probable sign of fertility. The menstrual cycle tells all about what is happening in the body whether the uterus is getting enough circulation, hormones are balanced and information regarding ovulation.

Menstrual cycle is necessary for human reproduction, the uterine lining prepares itself to receive and nourish a fertilized egg. When fertilization doesn't happen, the lining sheds and this is menstruation. Most women attain menarche at the age of 14 years, and continue having them until around the age of 50 years. Entire menstrual cycle is dynamic and intricate changes of hormonal levels and corresponding bodily changes prepare for pregnancy. The bleeding happens approximately every 20 to 40 days like individual clockwork. It's amazing how complex human reproduction really is and how most of the women go through life without fully grasping what goes on "beneath the hood". If a pregnancy does not take place during a given cycle, then the entire process is repeated each month starting with the onset of puberty and lasting until the onset of menopause.

Susan Wysocki, RNC, NP, FAANP, President and CEO of the National Association of- Nurse Practitioners in Women's Health (NPWH) said that if there is a change in the bleeding pattern, it is an indication that something is wrong in the reproductive cycle. Cycles may become irregular, infrequent, or stop altogether and this is called menstrual disorder.

Menstrual disorders are irregularities or abnormalities of the menstrual cycle, including the absence of menstrual periods (amenorrhea), discomfort associated with the menstrual period (dysmenorrhea), excessive menstrual blood flow (menorrhagia), and abnormal frequent bleeding (metrorrhagia). Menstruation is affected by the severity and duration of symptoms, underlying cause, duration and frequency of bleeding, type of treatment, response to treatment and individual's job requirements.

Until when woman is trying to get pregnant, woman may not care whether menstruation is regular. In fact, the only problem they might be aware of is occasional cramps. But things change when trying to conceive. The first step to conceive is learning about the changes in reproduction and fertility and this means understanding the "epic story" of body and the various hormonal fluctuations that occur during menstrual cycle. So it is important to remember that most of the menstrual disorders will interfere with the future fertility.

## **BACKGROUND OF THE STUDY**

Menstrual disorders can range from heavy, painful periods to no periods. There are many variations in menstrual patterns, but in general women should be concerned about when does periods come whether fewer than 21days or more than



three months apart, or if it last for more than 10 days. Such events indicate menstrual disorders. The factors that trigger the menstrual problems are hormonal imbalances, medical diseases, genetic factors, clotting disorders, pelvic diseases, mental and emotional status, physical strain, environmental conditions and nutritional status.

Menstrual disorders are common problem of woman at early ages of fertility. Menstrual disorders account for about 20% of clinical visits and 25% of all gynaecological conditions (Michelle, 2000). Menstrual disorders adversely affect on personal, familial and social aspects of a woman's life.

Menstrual disorders interfere with the sexual activity as well as conception. The menstrual experiences vary among women being strongly affected by cultural influences. Although these conditions are not life threatening, they are seriously decreasing the quality of life of many women and affect their mental health and their productivity (Dunson, 2002). The number of women seeking treatment for menstrual disorders is on the rise especially in India and world, but the aetiology of the condition is poorly understood.

There are several types of menstrual problems, an estimated 75 percent of women who menstruate have some degree of menstrual problems (David Cottrell, 2002), which can make them feel irritable, depressed, angry, fatigued, or bloated.

Another menstrual problem, polycystic ovary syndrome, is found in 5 to 10 percent of women. This disorder, in which cysts form in the ovaries, is the leading cause of infertility among women. (Susan, 2000).

Changes in cycle, or if cycle has just always been rather erratic, ability to get pregnant may be affected. Severe menstruation symptoms like cramps, heavy bleeding and long periods of bleeding may be a sign of fertility problem. (Kantha, 2000). It is important to find out what is causing these problems as they can cause difficulty in getting pregnant or can be a sign of another disease or disorder. There are effective treatments for menstrual disorders. Not all menstrual disorders will affect ability to conceive, but some will, so it is important to make an appointment with doctor to discuss any concerns about the cycle.

### **NEED FOR THE STUDY**

Menstrual disorders are generally perceived as only minor health concern and are not in much notice to the public health particularly among women in developing countries. Little attention is paid to identify and to treat menstrual disorders. Menstrual disorders, like other aspects of sexual and reproductive health is not included in global burden of disease estimation. In developing countries now reproductive and child health care system approaches for more morbidity, and are the major reason for decrease in quality of life of female. (Family Welfare Association Of India 2011)

This is an era of advancement in all fields where females have to pass through a lot of stress which affect their body physiology including menstruation. Sandeep Karol, 2004, stated that 75% of women of reproductive age suffer from menstruation associated health problems such as irregular cycles, menorrhagia, metrorrhagia and amenorrhea. Menstrual cycle is a vital sign for assessment of normal development of female reproductive system

Rich-Edwards et. al (1994) stated that about 30-40% of delay in conception is because of menstrual disorders, Most women expect to become pregnant when they feel the time is right to have a baby. However, (Babymed association, 2012) states that only about eight out of ten women will achieve a pregnancy within twelve months of trying, and about one in eight women have difficulties to concieve. This is mainly because of the hindering problem with menstruation.

Although menstruation is a normal physiological process, many young adults have little or no information about normal and abnormal menstruation. There is a lack of current information concerning the knowledge and attitudes of young adults regarding menstruation. A review was carried out among young females in Middlesex County by Governors Task force which showed that information received in the health education classes do not include information on normal and abnormal menstrual cycle. Among them some of the girls complained of excessive menstrual flow but did not take specific action. They usually did not consider the school nurse as a resource and often used other medical excuses to leave school. They were interested in knowing more about normal and abnormal menstruation; so that they could make correct decisions on when to seek medical attention and also they could support their neighbours and friends suffering with menstrual disorders . However studies have shown that most of what they know is often information obtained from their mothers and their peers.

The report of a study conducted on effect of menstrual symptoms and school attendance by Smith and Sherry,(1998) among the rural adolescents in India showed dysmenorrhea and irregular menses as the commonest menstrual problems for which only 5.3% consulted a doctor and only 22.4% took over counter

medications. The literature suggests that menstrual problems may be as common in developing countries as they are in developed countries, and when services are available, this will prompt women to seek care for menstrual complaints.

Since there is a lack of information regarding menstrual disorders among the young college students the investigator felt the need to prepare video assisted teaching based on the menstrual disorders, its treatment and how it will affect the conception in future. As a Chinese proverb says, “If I hear, I forget, If I see I remember”, investigator has selected video assisted teaching as the medium for giving information (education) regarding menstrual disorders and its effect on conception and to assess its effectiveness so that it can be utilized by various centers to educate the young females on menstrual disorders and its effect on conception.

### **STATEMENT OF THE PROBLEM**

A study to assess the effectiveness of video assisted teaching on knowledge of menstrual disorders and its effect on conception among students of selected colleges, Chennai.

### **OBJECTIVES**

- To assess the pre test knowledge of menstrual disorders and its effect on conception of arts and science students.
- To assess the post test knowledge of menstrual disorders and its effect on conception of arts and science students.

- To assess the overall knowledge regarding menstrual disorders and its effect on conception before and after video assisted teaching among Arts and Science students.
- To compare the pre test and post test overall knowledge score of menstrual disorders and its effect on conception among Arts and Science students.
- To compare the post test knowledge score of Arts and Science students on menstrual disorders and its effect on conception among students.
- To associate the post test knowledge score of menstrual disorders and its effect on conception with the demographic variables.
- To associate the post test knowledge score of menstrual disorders and its effect on conception with the menstrual history.
- To associate the post test knowledge score of menstrual disorders and its effect on conception with the source of information.

## **HYPOTHESIS**

H<sub>1</sub>: There will be a significant difference between pre test and post test knowledge regarding menstrual disorders and its effect on conception among students.

H<sub>2</sub>: There will be a significant difference between the knowledge regarding menstrual disorders and its effect on conception among the arts and the science students.

H<sub>3</sub>: There will be a significant association between the post test knowledge regarding menstrual disorders and its effect on conception with the demographic variables.

H<sub>4</sub>: There will be a significant association between the post test knowledge regarding menstrual disorders and its effect on conception with the menstrual history.

H<sub>5</sub>: There will be a significant association between the post test knowledge regarding menstrual disorders and its effect on conception with the source of information.

#### **OPERATIONAL DEFINITIONS**

**ASSESS:** It refers to the act of obtaining information regarding menstrual disorders and its effect on conception through a structured questionnaire.

**EFFECTIVENESS:** It refers to the extent to which the knowledge is gained as a result of video assisted teaching.

**VIDEO ASSISTED TEACHING:** It is a planned schedule of teaching through video on menstrual disorders and its effect on conception.

**KNOWLEDGE:** It refers to correct understanding of the particular concept regarding menstrual disorders and its effect on conception.

**MENSTRUAL DISORDERS AND ITS EFFECT ON CONCEPTION:**

**MENSTRUAL DISORDER:** It refers to some selected conditions that would interfere with the normal menstruation.

**EFFECT ON CONCEPTION:** It refers to the impact of menstrual disorders on becoming pregnant.

**STUDENTS:** It refers to female candidates between the age group of 18-21 years, studying in selected colleges in Chennai.

**SELECTED COLLEGES:** It refers to Dr.M.G.R.Janaki College of Arts and Science for Women, Greenways Road, Chennai, and Chellammal Women's College of Arts and Science, Guindy, Chennai.

### **DELIMITATIONS**

The study period is delimited to four weeks of data collection.

### **PROJECTED OUTCOME**

- ✓ The study will help to identify the knowledge regarding menstrual disorders and its effect on conception among students studying in selected colleges in Chennai.
- ✓ Video assisted teaching will be effective in improving the knowledge regarding menstrual disorders and its effect on conception.
- ✓ The study will help to identify the influence of demographic variables on the knowledge regarding menstrual disorders and its effect on conception.

### **CONCEPTUAL FRAMEWORK**

Concept is something conceived in mind. It is a general idea derived or informed from specific instances or occurrences. Conceptual framework is described

as a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation. (Reichel and Ramwey, 1987). It is used in research to outline the possible course of action or to present a preferred approach to an idea or thought. Here the conceptual framework adopted for the study is based on the modified model of General System theory proposed by Ludewig Von Bertalanffy, 1968.

General system theory is a holistic theory that describes a complex system by examining the interactions between its components, rather than by analyzing the detailed structure of each component. General system theory serves as a model for viewing people as interacting with the environment. All living systems are open in which the system receives input and gives back output in the same form of energy, matter, and information. Gestalt (1999) a psychologist says that “the whole is greater than the sum of its part” an illustration which is also valid for the general system theory. Ludewig Von Bertalanffy described living organisms as “open system” that interacts comprehensively with their environment. Next he recognised that complex systems have emerged properties that cannot be predicted by knowing the properties of its components. In addition, he observed that such a system can also exert control over its components, such as in homeostasis, by using feedback loops.

A system is a complex of interacting elements. It can be open or closed. Open system are open for the exchange of matters, energy and information with their environment from which the system receives input and gives back output. Open system theory mainly consists of three elements such as, input, throughput, output.



**INPUT:**

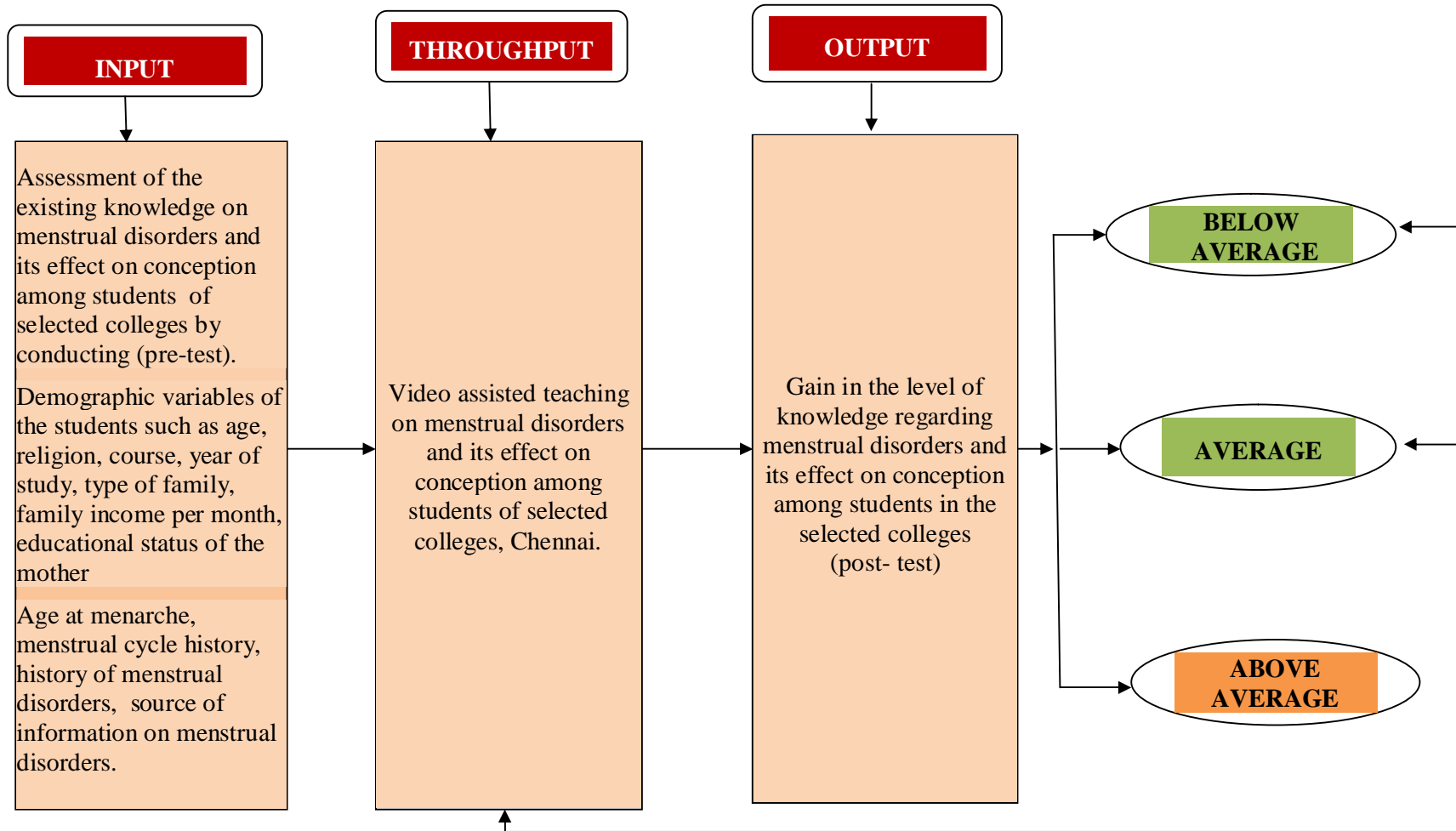
Refers to the stimuli and imported material from the external environment. The system uses regulation to maintain the equilibrium or homeostasis. Inputs are used always in their original state where as other process requires complex transformation. In this study, the input is assessment of existing knowledge using structured questionnaire regarding menstrual disorders and its effect on conception among students in the selected colleges.

**THROUGHPUT:**

Refers to the use of different operational procedures implemented within the process of system. In this study, it refers to the video assisted teaching which is planned for a duration of 30 minutes which includes introduction, meaning of menstrual disorders, conception, causes, signs and symptoms, diagnosis, management, and menstrual disorders and its effect on conception among the students studying in the selected colleges.

**OUTPUT:**

It refers to the result or the response to the ultimate outcome of the study. In this study the output is the gain in the level of knowledge regarding menstrual disorders and its effect on conception which will be assessed by the structured questionnaire. If the output is moderate or inadequate, it would suggest that the students studying in the selected colleges are in need of strengthening their throughput hence, reinforcement will be given through the video assisted teaching once again.



**FIG 1. CONCEPTUAL FRAMEWOKK BASED ON GENERAL SYSTEM (LUDEWIG VON BERTALANFFY-1968)**

## **CHAPTER-II**

### **REVIEW OF LITERATURE**

A literature is an organized written presentation of what has been published on a topic by scholars. (Burns and Groove, 2004)

This chapter mainly deals with the review done on related materials for this study from various sources (Texts, Journals and Internet etc). The review enabled the researcher to develop an insight into the problem area. Various studies revealed review also have helped the investigator in building the base for this study.

The review of literature in this chapter is presented under the following heading.

**Part-I** General information on menstruation, ovulation and conception.

**Part-II** Studies related to menstrual disorders and its effect on conception.

#### **PART-I GENERAL INFORMATION ON MENSTRUATION, OVULATION, AND CONCEPTION**

Shabnam (2009) stated that menstrual cycle is the cyclical shedding of endometrium every  $28 \pm 7$  days in response to hormones. It is a natural phenomenon that occurs throughout the reproductive years of every woman's life during which blood loss per cycle is not greater than  $80 \pm 50$  ml with or without discomfort. A woman on an average undergo 400 menstrual cycles prior to menopause. The

average menstrual cycle lasts for about 5 days, which accounts to approximately 67 months of menstrual bleeding over a lifetime.

Jabbour HN, Kelly RW, (2006) stated in an article on “endocrine regulation of menstruation” that in women, endometrial morphology and function undergo characteristic changes during every menstrual cycle. These changes are to prepare the endometrium for implantation of a conceptus. In the absence of pregnancy, the human endometrium is sloughed off during menstruation over a period of few days. During this time tissue repair, growth, angiogenesis, differentiation, occurs to prepare the endometrium for implantation in the next cycle. Clearer understanding of regulation of normal endometrial function will provide an insight into causes of menstrual dysfunction such as menorrhagia (heavy menstrual bleeding) and dysmenorrhea (painful periods).

Diaz, Laufer (2000) stated that “menstrual cycle are vital sign for assessing the normal reproduction in girls” Young patients and their parents often are unsure about what represents normal menstrual patterns, It is important to educate young patients and their parents regarding what to expect of a first period and about the range for normal cycle length of subsequent menses and to differentiate between normal and abnormal menstruation, and the skill to evaluate young patients' conditions appropriately by own. Using the menstrual cycle as an additional vital sign adds as a powerful tool to the assessment of normal development and the exclusion of pathological conditions.

Baby Med Organisation (2011) stated that ovulation happens when the mature egg is ejected from the ovary. The time of the menstrual cycle and ovulation

is one of the most important thing a woman should understand about the body since it is the determining factor in getting pregnant and preventing pregnancy.

American Pregnancy Association for Promoting Pregnancy Wellness (2010) states that ovulation is the release of the matured egg from the ovary. In response to a hormonal signal, the follicle (holding the egg) bursts open and frees the egg this is ovulation. Ovulation typically occurs around 14 or 15 days from the first day of the female's last menstruation cycle. Once you ovulate, the ovum (egg) travels into the fallopian tube and is receptive to fertilization by a sperm.

Oravec S, Hlavacka S. (2000) stated that there is a relation between disorders of thyroid function, menstrual disorders and conception. The treatment of young women with menstrual cycle dysfunction by thyroid gland treating later by pure thyroid hormones led to improvement of their menstrual cycle and frequently also to desired conception. Therefore a functional connection between thyroid and ovary, i.e. an effect of thyroid hormones on ovarian reproductive function was assumed.

Jacot-Guillarmod M, Renteria SC (2010) stated that “Menstrual disorders among adolescents an commonplace or worrisome”. The first menstrual cycles following menarche are often characterized by irregular or heavy bleeding. In 50-80% of cases these are anovulatory bleeding due to the immaturity of the gonadotrophic axis. Nevertheless pathologies such as Von Willebrand disease, genital infection, polycystic ovary syndrome, eating disorders, a tumor or a pregnancy may be diagnosed by bleeding abnormalities. Adolescents who experience abnormal bleeding must be counseled according to their perceptions and expectations to prevent further effects in future.

Jack Herrick (2013) stated that the basic to conceive is to count forward from the first day of last period. On average, most women ovulate 14 days after they first begin to menstruate. In regular cycles, often estimate the time of ovulation by dividing cycle in half. For example, if menstruation usually lasts 28 days, will likely ovulate around day 14 of cycle (14 days after begin menstruating). In longer cycle, ovulation occurs 20 days after menstruation.

Franklin (2008) states that women with regular menstruation have between 11 and 13 menstrual periods in one calendar year, which means that up to 13 chances to conceive each year. On the other hand, women with irregular menstruation fewer chances to conceive each year, potentially making the path to parenthood longer time, and tiresome. With irregular menstruation it is certainly possible to become pregnant, understanding the causes of irregular periods and how to restore cycle regularity help to improve conception rates.

Querin (2012) states that menstruation is a fact of life. Ovulation leads to a period (or pregnancy), so, without periods, there can be no pregnancy. The hardest part about trying to conceive is trying to get pregnant with irregular menstruation. Most women have menstrual cycles that average between twenty-eight and thirty-five days, some women have irregular menstruation. For a woman with a predictable cycle, planning the best few days to try to conceive is fairly easy. But having irregular and unpredictable menstruation causes problems trying to conceive.

## **PART-II      STUDIES RELATED TO MENSTRUAL DISORDERS AND ITS EFFECT ON CONCEPTION**

Khyrunnisa Begum (2012) conducted a study on Menstrual pattern among unmarried women from South India, A total of 194 girl students aged 18 to 27 years

were selected and asked to complete a questionnaire. Data regarding demographic features, menarche age, and menstrual pattern, Source of information about menarche and menstruation the participants depend was also elicited. Mean age of the subject's age at menarche was 10 to 17 years. Mean duration of menstrual flow was 5-7 days. The most prevalent menstrual symptoms were tiredness (47.9%), backache (38.3%), and anger (34.5%). Prevalence of menstrual irregularity was 11.9 and 78.2%. 6.7% of the participants had severe dysmenorrhea. 60.4% of the girls were aware of menstruation prior to menarche. Mothers and friends were the main sources of information (47.8%).

Jeyaseelan L (2010) to evaluate the effectiveness of planned teaching programme (PTP) on knowledge and attitude on menstrual disorders among rural high school students in Bangalore. The pre-test showed that majority 87.5% of the students had inadequate knowledge. The planned teaching programme facilitated them to update their knowledge and attitude related to menstrual disorders to 98.6%. The results showed that planned teaching programme was an effective strategy to improve the knowledge and attitude on menstrual disorders.

Shuby Nair (2009) conducted a cross sectional study to elicit information about knowledge and practices regarding menstruation among adolescent girls in an urban field of BLDEA's Shri B.M. Patil Medical College, Bijapur. 342 adolescent girls who had attained menarche were included in the study. Data was collected by questionnaire method. The result revealed that 324(94.74%) were literate, and only 63 (18.42%) had knowledge about menstruation prior to attainment of menarche, this association was found to be statistically significant. The main source of information was mother i.e., 195(57.01%). Nearly 81.58% adolescent girls were

lacking knowledge about menstruation prior to menarche. The study concluded that there is lack of awareness in the society regarding menstruation.

Shreef and Shreef (2009) conducted “An experimental study was conducted to assess the impact and suitability of menstrual education program(MEP) for 1stand 2ndgraders at a girls' secondary school in Riyadh city”. The MEP was conducted on 5classes, through one session and one assessment. The results revealed that the mean scores of knowledge, attitude and practice of the intervention classes for (1stand 2ndgraders) were significantly higher than that of the control classes. The study recommended the replication of the same program among elementary, preparatory, and other secondary schools for improvement of students' menstrual knowledge, attitudes and practice.

Ekpenyong CE, Davis KJ, Akpan UP, Daniel NE (2009) conducted a study on “Academic stress and menstrual disorders among female undergraduates in Uyo, South Eastern Nigeria - the need for health education”. 393 female students of the University of Uyo, ages between 16 and 35 years were randomly selected from different departments in the University, and studied during the 2009/2010 academic session. Menstrual history and Student's Stress Assessment Questionnaire (SSAQ) were used for this assessment. They were distributed for participants to fill out. Prevalence of menstrual disorder among participants was 34.6%. A direct association between menstrual disorder and academic stress was observed. Commonest menstrual disorder was menorrhagia (37.5%). Others were: Pre-menstrual Syndrome (PMS 33.1%), Oligomenorrhea 19.9%, and amenorrhea 5.9%. Those who experienced academic stress had about 2 times chances of having menstrual disorders. This study demonstrated a significant association between



academic stress and menstrual disorder among females undergraduate in Uyo, South Eastern Nigeria.

Karout. N, Hawai SM, (2009), conducted a study on Prevalance and pattern of menstrual disorders among Lebanese college students, menstrual disorders frequently affect the quality of life of young adult women and can be indicators of serious underlying problems. The objective of this study was to determine the prevalence and pattern of menstrual symptoms among college students in Beirut, Lebanon. Of 352 students completing a written questionnaire, the most common menstrual disorders were irregular frequency of menstruation (80.7%), premenstrual syndrome (54.0%), irregular duration of menstruation (43.8%), dysmenorrhoea (38.1%), polymenorrhoea (37.5%) and oligomenorrhoea (19.3%).

Wodarska M, Hartman M, Plinta R. (2008) conducted a study “To assess the relationship between increased physical activity and menstrual disorders in adolescent female volleyball players” among 210 Polish female volleyball players, aged 13-17 years, using a questionnaire. The results of the study showed that irregular menstruation occurred in 19% of girls, spotting between menstrual periods in 27% and heavy menstruation was reported in 33% of girls. 94 girls (45%) declared absence of menstrual periods after regular cycles. It was concluded that the number of hours of volleyball training per week affected the regularity of menstrual cycles in female volleyball players. The absence of menstruation might be caused by the duration of training per week or years of training.

Abraham S, (2008) conducted a study on knowledge, attitudes and practices of young Australian women regarding Menstruation, menstrual protection and menstrual cycle problems. The results of a survey of 1377 young Australian

women aged 14 to 19 years, conducted to determine their attitudes, state of knowledge and practices with regard to menstruation, are presented. The young women, as a group, lacked sufficient information about menstruation, about the time of ovulation, about menstrual problems. A high proportion (80%) considered menstruation to be inconvenient or embarrassing.

Esimai O.A (2008) conducted a study on” Awareness of Menstrual Abnormality Among College Students in Urban Area of Ile-Ife, Osun State, Nigeria”, A cross-sectional survey was undertaken, 400 students were selected using stratified sampling technique and interviewed using semi-structured self-administered questionnaire. The awareness of students on menstrual abnormalities was significantly influenced by their age (OR = 2.33,  $P = 0.03$ ); however, age at menarche and level of study did not influence their awareness (OR = 0.45,  $P = 0.24$  and OR = 1.42,  $P = 0.12$ ).

Shinha (2007) conducted a study on common gynaecological problems among 124 girls between the age group of 13-19 years revealed that, menstrual disorders are found to be the commonest gynecological problem 72(58.06%). They varied from amenorrhea 21(29.16%) to dysmenorrhagia. Dysfunctional uterine bleeding was the commonest etiology of menstrual dysfunction.

Sarkar Hussain (2007) a quasi-experimental study was conducted to identify the level of knowledge of adolescent girls with a view to develop and evaluate a planned teaching programme on menstrual disorders among 49 adolescent girls in New Delhi. The results revealed that the total mean percentage scores secured by adolescent girls on menstrual disorders was 27.36%, the mean percentage scores of different areas ranged from 23.13% to 31.20%. Knowledge level of

adolescent girls regarding menstrual disorders is independent of the socio-economic status, education status of the mother and exposure to mass media. The study concluded that, there is a need to create awareness among adolescent girls regarding menstrual hygiene & planned teaching programme was found to be an effective teaching strategy.

Premji Bretwan (2007) conducted a cross sectional study to determine the prevalence of menstrual abnormalities and the pattern of use of medical treatments for these abnormalities among 62 secondary schools and junior colleges in Singapore from January to December 2004. 5561 adolescent girls between the ages of 12 - 19 years were selected for study. The study revealed that, 23.1% had irregular cycles. Oligomenorrhea was the most frequent problem i.e, 15.3% and polymenorrhea was much less prevalent i.e., 2.0%. Dysmenorrhea was a significant problem with 83.2% respondents reporting in it various degrees and 24% girls reporting school absenteeism owing to it. The study concluded that, menstrual problems among female are common and a significant source of morbidity in this population. However, adolescent girls are reluctant to seek medical treatment, leading to delay in diagnosis and treatment.

Kumaresan (2006) conducted a study to identify the menstrual problems and pattern of consultation among adolescent school girls in Pondicherry. 371 adolescent girls who attained menarche were selected from four schools and interviewed using predesigned pretested questionnaire. The result revealed that 181(48.79%) and 190 (51.21%) were from urban and rural schools. 193 (52.02%) had experienced dysmenorrhea and 150 (40.43%) reported passing of clots during menstruation out of 272 girls who had ever experienced menstrual problems,

73(26.84%) had sought consultation, among them majority 43(58.09%) consulted doctors and 3(4.12%) girls consulted health workers, while 25(34.25) discussed problems with their mother. The study concluded that, there is an urgent need for strong health educational activities among the adolescent girls, their parents and teachers for effective management of menstrual problems among all adolescent girls.

Kublinky (2005) conducted a study on menstrual disorders in adolescent girls in Singapore revealed that; among 556 participants 23% reported having irregular cycles. Oligomenorrhea 15.3% and dysmenorrhea was a significant problem with 83.2%. Respondents reported in various degrees and 24% girls reporting school absenteeism owing to it. Hence it concluded that, the menstrual problems among females are common and significant source of morbidity in this population. However, adolescent girls are reluctant to seek medical treatment, leading to delay in diagnosis and treatment. Appropriate health education measures need to be put into place to prevent complications in later.

Ginekol Pol. (2003) conducted a study on Casual analysis of menstrual disorder in adolescent girl. 117 girls 14-18 years old without evidence of androgen excess (hirsutism,acne): the study group consisted of 87 adolescents with menstrual disorders and the control group of 30 girls with regular menstrual cycles. All the patients underwent gynecological and ultrasound examination and an analysis of the hormonal status. The data from investigation showed that 43.7% of adolescents with menstrual dysfunction have eating disorders, 16.1%--immaturity of hypothalamic-pituitary-ovarian axis, 13.8%--polycystic ovary syndrome, 9.2%--hyperprolactinemia, 4.6%--delayed puberty, 3.4%--genetic defect and 9.2% other reasons.

## **CHAPTER-III**

### **METHODOLOGY**

#### **RESEARCH APPROACH**

Research approach used in this study was evaluative in nature.

#### **RESEARCH DESIGN**

Research design used in this study was Quasi-experimental design.

#### **VARIABLES**

##### **DEPENDENT VARIABLE**

The dependent variable in this study is the knowledge regarding menstrual disorders and its effect on conception.

##### **INDEPENDENT VARIABLE**

The independent variable in this study is the video assisted teaching on menstrual disorders and its effect on conception.

##### **SETTINGS OF THE STUDY**

Study was conducted in women's colleges in Chennai, Dr.M.G.R.Janaki College of Arts and Science for Women, Raja Annamalai Puram, Chennai and at Chellammal Women's College of Arts and Science, Guindy, Chennai.

## **POPULATION OF THE STUDY**

The population of the study was the students studying in the selected Arts and Science Colleges.

## **SAMPLE**

Students who fulfilled the inclusion criteria were the samples for the study.

## **CRITERIA FOR THE SELECTION OF SAMPLE**

### **INCLUSION CRITERIA**

1. Female students in the age group of 18-21 years.
2. Undergraduates and unmarried students studying in the selected Colleges.
3. Students those who know to read and write English or Tamil.
4. Students studying in either Arts or Science course in the selected Colleges.

### **EXCLUSION CRITERIA**

1. Samples who were not willing to participate.

## **SAMPLE SIZE**

Sample size is 100, 50 samples (Arts) from Chellammal Women's Arts and Science College, and 50 samples (Science) from Dr.M.G.R. Janaki College of Arts and Science.

## SAMPLING TECHNIQUE

Proportionate sampling technique was used to select the samples. 50 samples from the arts and 50 samples from science group were selected by lottery method.

Arts			Science		
Year	Number of Students	Sample for the Study	Year	Number of Students	Sample for the Study
FIRST	90	20	FIRST	50	20
SECOND	90	15	SECOND	50	15
THIRD	90	15	THIRD	50	15

## DISCRIPTION OF THE TOOL

It consists of two parts,

- PART-A:** It consists of a structured questionnaire to collect the demographic data of the samples such as age, religion, year of study, course, mother's educational status, type of family and family income.
- PART-B:** It consists of a structured questionnaire to collect the menstrual history such as the age at menarche, frequency and duration of menstrual cycle and history of any menstrual disorders.
- PART-C:** It consists of a structured questionnaire to collect the source of information regarding menstrual disorders.
- PART-D:** It consists of structured questionnaire to assess the knowledge regarding menstrual disorders and its effect on conception. This section consists of three parts

Section A: It consists of 12 questions on the general information regarding menstruation, ovulation and conception.

Section B: It consists of 14 questions on information regarding menstrual disorders.

Section C: It consists of 9 questions on information regarding the effect of menstrual disorders on conception

TOTAL NUMBER OF QUESTIONS – 35

### **SCORING**

Each right response is scored as one and the wrong response as zero. The overall scores are categorized as,

<b>S.No</b>	<b>Category</b>	<b>Score</b>
1	Below average	$\leq 50\%$
2	Average	51-75%
3	Above average	$> 75\%$

### **VALIDITY OF THE TOOL**

Content validity was obtained from the medical and nursing experts in the field of obstetrics and gynaecology from various colleges/Hospital.

### **RELIABILITY OF THE TOOL**

Reliability of the tool was checked by using Cronbach Alpha score and it is 0.8921.



## **PROTECTION OF HUMAN RIGHTS AND ETHICAL CONSIDERATION**

The topic was approved by the ethical committee constituted by the college. Permission was obtained from the head of the institutions to conduct the study. Informed consent was obtained from the samples who participated in the study.

## **PILOT STUDY**

Pilot study was conducted at Kumararani Meena Muthaiah Arts and Science College from 05-08-13 to 08-08-13. After obtaining permission from the Principal, total 12 samples (6 samples from Arts group and 6 samples from Science group) were selected by lottery method. After establishing good rapport with the samples the purpose of the research study was explained and the consent for participation in the study was obtained from the samples. The pre-test was conducted on 05.08.12. The demographic data, menstrual history and the source of information regarding menstrual disorders and conception was collected using structured questionnaire. The pre-test knowledge on menstrual disorders and its effect on conception was assessed using the structured questionnaire. The samples took on an average 20-30 minute to answer the questionnaire. Followed by it, the video assisted teaching for 30 minutes was given. Doubts were clarified. The post-test was conducted on 08-08-13 using the same questionnaire.

## **PILOT STUDY RECOMMENDATION**

The study was found to be feasible. The tool was able to elicit the required information. Since there were no suggestions, the same tool was used for the main study.

## **DATA COLLECTION PROCEDURE FOR THE MAIN STUDY**

Permission was obtained from the selected study settings. After a brief introduction of the investigator, 100 samples who fulfilled the inclusion criteria were selected by proportionate sampling technique using lottery method. A total of 100 samples, 50 samples from Arts group (Chellammal Women's College of Arts and Science) and 50 samples from Science group (Dr.M.G.R.Janaki Women's College of Arts and Science) were selected. The tool was given to the students and was asked to tick the appropriate response. The demographic data such as age, religion, year of study, mother's educational status, family income, type of family, information on the menstrual history such as age at menarche, frequency and duration of menstrual cycle, history of menstrual disorders and the source of information and knowledge regarding menstrual disorders and its effect on menstrual were collected using the structured questionnaire. The Video assisted teaching including information regarding menstrual disorders and its effect on conception for 30 minutes was given and their doubts were clarified. 7 days after the pre-test the post test was conducted and data was collected using the same questionnaire.

## **PLAN FOR DATA ANALYSIS**

### **DESCRIPTIVE STATISTICS**

- Frequency and percentage distribution was used to describe the demographic data of the samples.
- Frequency and percentage distribution was used to describe the menstrual history of the samples.

- Frequency and percentage distribution was used to describe the source of information regarding menstrual disorder and its effect on conception of the samples.
- Frequency and percentage distribution of overall knowledge regarding menstrual disorders and its effect on conception before and after video assisted teaching of arts students
- Frequency and percentage distribution of overall knowledge regarding menstrual disorders and its effect on conception before and after video assisted teaching of science students
- Frequency and percentage distribution of overall knowledge regarding menstrual disorders and its effect on conception before and after video assisted teaching among students studying in selected colleges

### **INFERENCEAL STATISTICS**

- Paired-t test was used to compare the pre-test and post-test knowledge regarding menstrual disorders and its effect on conception.
- Independent-t test was used to compare the post-test knowledge regarding menstrual disorders and its effect on conception of the Arts and Science students.
- Chi-square was used to associate the post-test knowledge score with the demographic variables.

## **CHAPTER-IV**

### **DATA ANALYSIS AND INTERPRETATION**

This chapter describes about the analysis of collected data on effectiveness of video assisted teaching on menstrual disorders and its effect on conception among students of selected colleges, Chennai.

The collected data was tabulated and analyzed under 4 sections.

**SECTION A** Frequency and percentage distribution was used to describe the demographic data of the samples.

**SECTION B** Frequency and percentage distribution was used to describe the menstrual history of the samples.

**SECTION C** Frequency and percentage distribution was used to describe the source of information regarding menstrual disorder and its effect on conception of the samples.

**SECTION D** Frequency and percentage distribution of overall knowledge of menstrual disorders and its effect on conception before and after video assisted teaching of Arts and Science students.

**SECTION E** Compare the pre-test and post-test knowledge of menstrual disorders and its effect on conception.

SECTION F Compare the post-test knowledge of menstrual disorders and its effect on conception of the Arts and Science students.

SECTION G Associate the post-test knowledge score with the demographic variables.

SECTION H Associate the post-test knowledge score with the menstrual history.

SECTION I Associate the post-test knowledge score with the source of information.

## SECTION-A

**TABLE 1: FREQUENCY AND PERCENTAGE DISTRIBUTION OF THE SAMPLES BASED ON THE DEMOGRAPHIC VARIABLES****Table 1a: Frequency and percentage distribution of samples based on the age, religion, course and year of study**

N=100

S.No	Content	Arts		Science		Total	
		F	%	F	%	F	%
1.	<b>Age</b>						
	a) 18 years	12	24.0	10	20.0	22	22
	b) 19 years	23	46.0	22	44.0	45	45
	c) 20 years	15	30.0	18	36.0	33	33
2.	<b>Religion</b>						
	a) Hindu	24	48.0	32	64.0	56	56
	b) Christian	18	36.0	14	28.0	32	32
	c) Muslim	8	16.0	4	8.0	12	12
3.	<b>Course</b>						
	a) Arts	50	100	-	-	100	100
	b) Science	-	-	50	100	100	100
4.	<b>Year of study</b>						
	a) First year	20	40	20	40	40	40
	b) Second year	15	30	15	30	30	30
	c) Third year	15	30	15	30	30	30

Table 1a shows that majority 45% of the samples were in the age group of 19years. 56% of the samples were Hindus. 50% were from arts group and 50% were from science group. 40% of the samples were from first year, 30% from second year and, 30% from third year, from arts and science group.

**Table 1b Frequency and percentage distribution of samples based on the type of family, family income and the educational status of the mother**

N=100

S.No	Content	Arts		Science		Total	
		F	%	F	%	F	%
5.	<b>Type of family</b>						
	a) Nuclear family	29	58.0	19	38.0	48	48
	b) Joint family	17	34.0	24	48.0	41	41
	c) Extended family	4	8.0	7	14.0	11	11
6.	<b>Family income per month</b>						
	a) Up to Rs.5000/-	7	14.0	10	20.0	17	17
	b) Rs.5000-to 10,000/-	21	42.0	20	40.0	41	41
	c) Rs.10,000-to-15,000/-	18	36.0	13	26.0	31	31
	d) More thanRs.15, 000/-	4	8.0	7	14.0	11	11
7.	<b>Educational status of the mother</b>						
	a) Illiterate	3	6.0	5	10.0	8	8.0
	b) Primary school	15	30.0	18	36.0	33	33.0
	c) Middle school	17	34.0	20	40.0	37	37.0
	d) High school	11	22.0	4	8.0	15	15.0
	e) Higher secondary	3	6.0	2	4.0	5	5.0
	f) Graduates	1	2.0	1	2.0	2	2.0

Table 1b shows that majority 48% of the samples were from nuclear family. 41% of the samples were having family income of Rs.5,000- 10,000/- per month.37% of the samples mother's had completed middle school.

## SECTION B

**TABLE 2: FREQUENCY AND PERCENTAGE DISTRIBUTION OF THE SAMPLES BASED ON THE MENSTRUAL HISTORY**

N=100

S.No	Content	Arts		Science		Total	
		F	%	F	%	F	%
8.	<b>Age at menarche</b>						
	a) Less than 10 years	7	14.0	5	10.0	12	12.0
	b) 11-12 years	25	50.0	20	40.0	45	45.0
	c) 13 -14 years	16	32.0	24	48.0	40	40.0
	d) Above 15 years	2	4.0	1	2.0	3	3.0
9.	<b>Menstrual cycle history</b>						
	a)Frequency						
	1) Less than 21 days	18	36.0	15	30.0	23	23.0
	2) 21-28 days	23	48.0	30	40.0	53	53.0
	3) More than 28 days	9	16.0	15	30.0	24	24.0
	b) Duration						
	1) Less than 3 days	39	78.0	25	50.0	64	64.0
	2) 4-5 days	10	20.0	22	44.0	32	32.0
	3) More than 5 days	1	2.0	3	6.0	4	4.0
10.	<b>History of menstrual disorders</b>						
	a) Absence of menstruation	16	34.8	8	20.5	24	28.2
	b) Scanty or less bleeding	20	43.5	14	35.9	34	40.0
	c) Menstruation with heavy bleeding at regular intervals	6	13.0	13	33.3	19	22.4
	d) Menstruation with prolonged bleeding at irregular intervals	4	8.7	4	10.3	8	9.4
	e) None	4	8.0	11	22.0	15	15.0

Table 2 shows that majority 45% of the samples age at menarche is 11-12 years. 53% of the samples had menstrual cycles with frequency of 21-28 days. 64% of the samples had menstrual cycle with frequency less than 3 days. 40.0% of the samples had scanty or less bleeding. 28.2% of the samples had absence of menstruation.



## SECTION C

**TABLE 3: FREQUENCY AND PERCENTAGE DISTRIBUTION OF THE SAMPLES BASED ON THE SOURCE OF INFORMATION ON MENSTRUAL DISORDERS**

N=100

S.No	Content	Arts		Science		Total	
		F	%	F	%	F	%
11.	<b>Source of information on menstrual disorders</b>						
	a) Elders in the family	1	4.3	2	8.7	3	6.5
	b) Mother	8	34.8	10	43.5	18	39.1
	c) Sister	9	39.1	6	26.1	15	32.6
	d) Friends	-	-	-	-	-	-
	e) Teachers	5	21.7	4	17.4	9	19.6
	f) News paper, Health magazine	-	-	1	4.3	1	2.2
	g) Television/Internet	-	-	-	-	-	-
	h) None	27	50.0	27	50.0	54	54.0

Table 3 shows the majority 54% of the samples had not received any information on menstrual disorders. 39.1% of the samples had received information on menstrual disorder from their mother.

## SECTION-D

**TABLE 4 : FREQUENCY AND PERCENTAGE DISTRIBUTION OF THE SAMPLES BASED ON THE KNOWLEDGE OF MENSTRUAL DISORDERS AND ITS EFFECT ON CONCEPTION**

**Table 4a: Frequency and percentage distribution of Pre-test knowledge of Arts and Science students regarding menstrual disorders and its effect on conception**

**N=100**

S. No	Knowledge on Menstrual Disorders	Level of Knowledge											
		Below Average				Average				Above Average			
		Arts		Science		Arts		Science		Arts		Science	
		F	%	F	%	F	%	F	%	F	%	F	%
1	General information regarding menstruation, ovulation, conception	46	92	32	64	4	8	17	34	-	-	1	2
2	Information regarding menstrual disorders	48	96	30	60	2	11.8	15	30	-	-	5	10
3	Information regarding effect of menstrual disorders on conception	50	100	31	62	-	-	8	8	-	-	11	22

In pre-test with regards to the information regarding menstruation, ovulation and conception, 92% of the arts students and 64% of the science students had below average knowledge. 8% of the arts students and 34% of the science students had average knowledge. 2% of the science student had above average knowledge.

In pre-test with regards to the information regarding menstrual disorders, 96% of the arts students and 60% of the science students had below average knowledge. 11.8% of the arts students and 30% of the science students had average knowledge. 10% of the science student had above average knowledge.

In pre-test with regards to the information regarding effect of menstrual disorders on conception, 100% of the arts students and 62% of the science students had below average knowledge. 8% of the science students had average knowledge. 22% of the science student had above average knowledge.

**Table 4b: Frequency and percentage distribution of Post-test knowledge of Arts and Science students regarding menstrual disorders and its effect on conception**

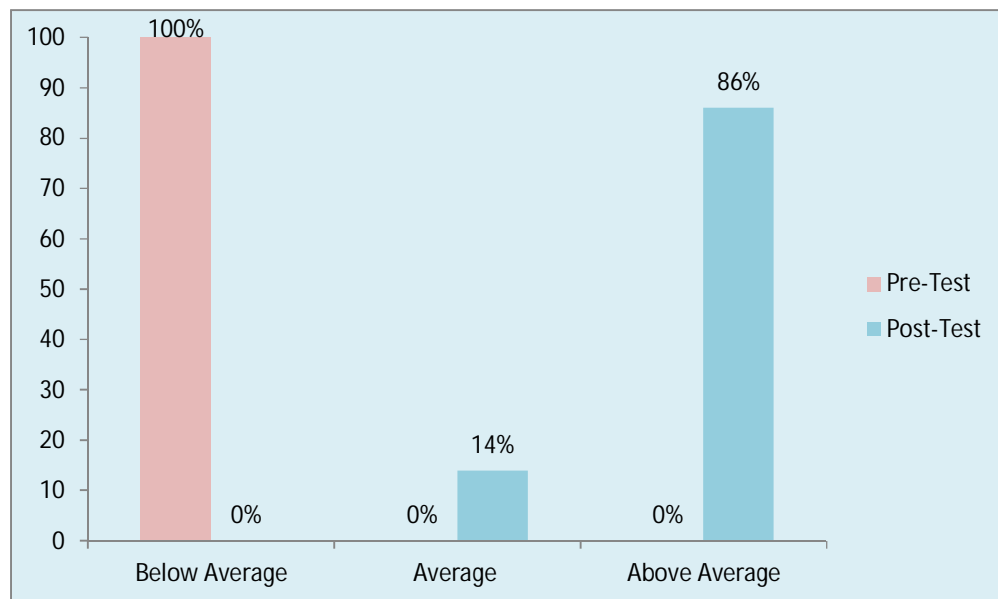
**N=100**

S No	Knowledge on Menstrual Disorders	Level of Knowledge											
		Below Average				Average				Above Average			
		Arts		Science		Arts		Science		Arts		Science	
		F	%	F	%	F	%	F	%	F	%	F	%
1	General information regarding menstruation, ovulation, conception	1	2	-	-	1	2	-	-	48	96	50	100
2	Information regarding menstrual disorders	3	6	-	-	5	10	-	-	42	84	50	100
3	Information regarding effect of menstrual disorders on conception	4	8	-	-	11	22	1	2	35	70	49	98

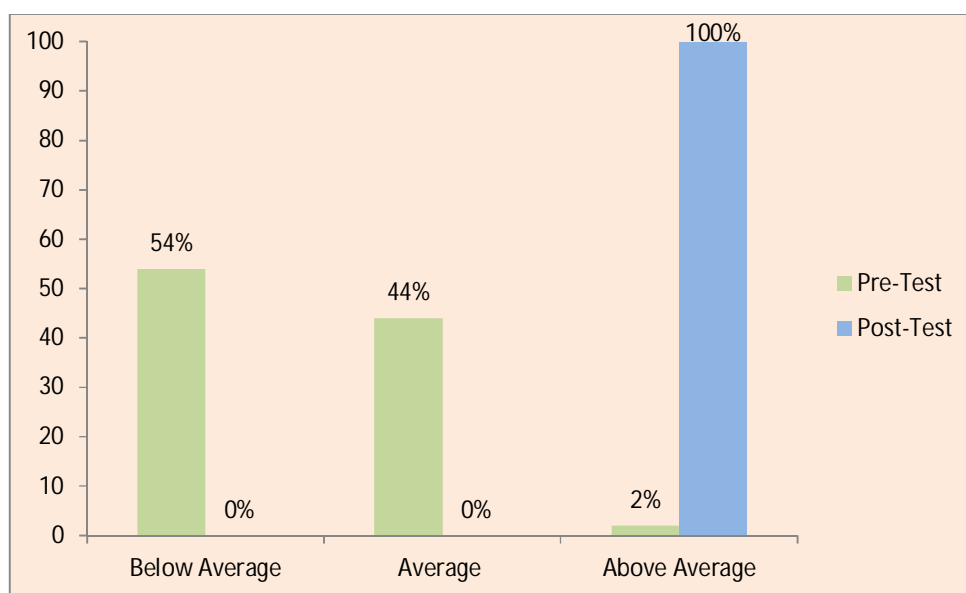
In post test with regards to the information regarding menstruation, ovulation and conception, 2% of the arts students had below average knowledge. 2% of the arts students had average knowledge. 96% of the Arts students and 100% of the science students had above average knowledge.

In post test with regards to the information regarding menstrual disorders, 6% of the arts students had below average knowledge. 10% of the arts students had average knowledge. 84% of the arts students and 100% of the science student had above average knowledge.

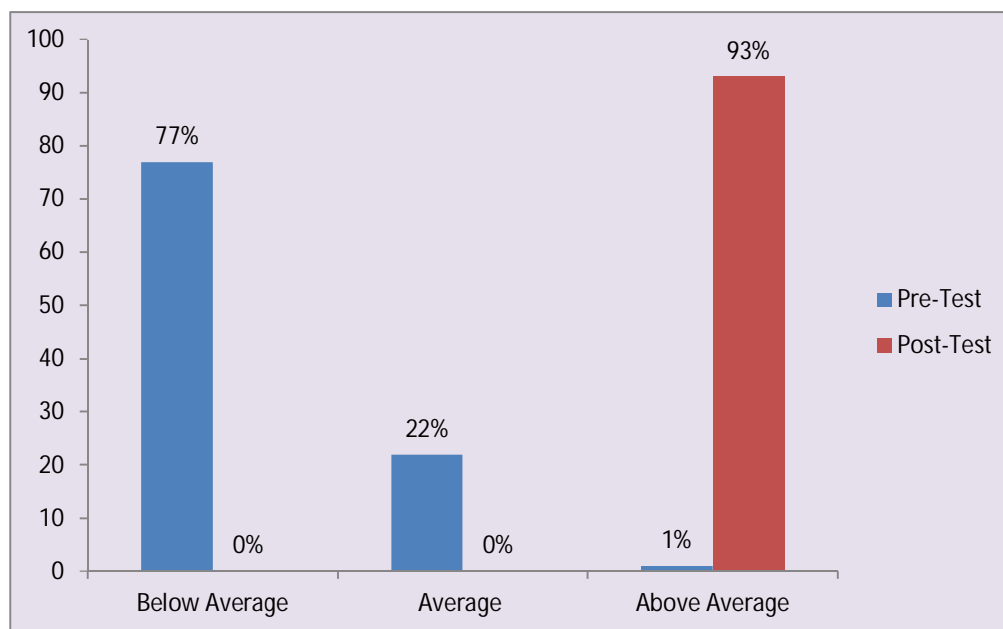
In post test with regards to the information regarding effect of menstrual disorders on conception, 8% of the arts students had below average knowledge. 22% of the arts students and 2% of the science students had average knowledge. 70% of the arts students and 98% of the science student had above average knowledge.



**Fig.2: Frequency and percentage distribution of the overall knowledge regarding menstrual disorders and its effect on conception before and after video assisted teaching of arts students**



**Fig. 3** Frequency and percentage distribution of the overall knowledge regarding menstrual disorders and its effect on conception before and after video assisted teaching of science students



**Fig. 4:** Frequency and percentage distribution of overall knowledge regarding menstrual disorders and its effect on conception before and after video assisted teaching among students studying in selected colleges

## SECTION-E

**TABLE 5: COMPARE THE PRE-TEST AND POST-TEST KNOWLEDGE OF MENSTRUAL DISORDERS AND ITS EFFECT ON CONCEPTION**

**N=100**

<b>Level of knowledge</b>	<b>Frequency</b>	<b>Mean</b>	<b>Standard deviation</b>	<b>Paired t-test value</b>	<b>P-value</b>
Pre-test	100	37.428	14.171	38.052	.000*
Post-test	100	95.171	9.844		

P<0.001\*\* - Denotes significant at 0.1%, P<0.05\*- Denotes significant at 5%

Table 5 shows that on comparing the overall knowledge score on menstrual disorders and its effect on conception of the pre-test and the post test, there is an increase in the mean value from 37.428 in the pre-test to 95.171 in the post test and the standard deviation decreased from 14,171 to 9.844 which showed that there is a statistically significant difference between the knowledge in the pre-test and the post test at  $p < .001$ .

## SECTION-F

**TABLE: 6 COMPARE THE POST-TEST KNOWLEDGE OF MENSTRUAL DISORDERS AND ITE EFFECT ON CONCEPTION AMONG ARTS AND SCIENCE STUDENTS**

**N=100**

<b>Discipline of the students</b>	<b>Frequency</b>	<b>Mean</b>	<b>Standard deviation</b>	<b>paired t-test value</b>	<b>p-value</b>
Arts	50	91.314	12.672	4.241	.000**
Science	50	99.028	2.2063		

P<0.001\*\* - Denotes significant at 0.1%, P<0.05\*- Denotes significant at 5%

Table 6 shows that comparing the post test knowledge score of arts and science students shows that there was an increase in the mean value and a decrease in the standard deviation of the science students compared to the arts student. There was statistically significant difference in the knowledge between the arts and science students at p<.001 level.



## SECTION-G

**TABLE 7: ASSOCIATION BETWEEN POST-TEST KNOWLEDGE AND WITH THE DEMOGRAPHIC VARIABLES****Table 7a: Association between post-test knowledge and with age, religion and course of study**

N=100

Content	Overall knowledge				Chi-Square Value	P-Value
	Average		Above Average			
	F	%	F	%		
<b>1. Age</b>						
a) 18 years	2	28.6	20	21.5	.200	.905
b) 19 years	3	42.9	42	45.2		
c) 20 years	2	28.6	31	33.3		
d) 21 years	-	-	-	-		
<b>2. Religion</b>						
a) Hindu	2	28.6	54	58.1	7.011	.030*
b) Christian	2	28.6	30	32.2		
c) Muslim	3	42.9	9	9.7		
<b>3. Course</b>						
a) Arts, specify	7	100.0	43	46.2	.012	.006*
b) Science,	-	-	50	53.8		

P<0.01\*\* - Denotes significant at 1%, P<0.05\*- Denotes significant at 5%

Table 7(a) shows that there was a statistically significant association found between the overall knowledge score with religion at  $p < .05$ , and course of study at  $p < .01$

**Table 7b: Association between post-test knowledge and with the year of study, type of family, family income and educational status of the mother**

**N=100**

Content	Overall Knowledge				Chi-Square Value	P-Value
	Average		Above Average			
	F	%	F	%		
<b>4. Year of study</b>						
a. First year	3	42.9	35	37.6	.079	.961
b. Second year	2	28.6	28	30.1		
c. Third year	2	28.6	30	32.3		
<b>5. Type of family</b>						
a. Nuclear family	3	42.9	45	48.4	1.348	.510
b. Joint family	4	57.1	37	39.8		
c. Extended family	-	-	11	11.8		
<b>6. Family income per month</b>						
a) Up to Rs.5000/-	-	-	17	18.3	3.773	.287
b) Rs.5000- to – Rs. 10,000/-	3	42.9	38	40.9		
c) Rs.10,000 –to-Rs.15,000/-	4	57.1	27	29.1		
d) More than Rs.15, 000/-	-	-	11	11.8		
<b>7. Educational status of the mother</b>						
a) Illiterate	1	14.3	7	7.5	2.525	.773
b) Primary school	1	14.3	32	34.4		
c) Middle school	4	57.1	33	35.5		
d) High school	1	14.3	14	15.1		
e) Higher secondary	-	-	5	5.4		
f) Graduates	-	-	2	2.2		

P<0.01\*\* - Denotes significant at 1%, P<0.05\*- Denotes significant at 5%

Table 7(b) shows that there is no statistically significant association of overall knowledge of samples with regard to other demographic variables.

## SECTION - H

TABLE 8: ASSOCIATION BETWEEN POST-TEST KNOWLEDGE AND WITH MENSTRUAL HISTORY

N=100

Content	Overall Knowledge				Chi-Square Value	P-Value
	Average		Above Average			
	F	%	F	%		
<b>8. Age at menarche</b>						
a) Less than 10 years	1	14.3	11	11.8	2.671	.445
b) 11-12 years	5	71.4	40	43.0		
c) 13 -14 years	1	14.3	39	41.9		
d) Above 15 years	-	-	3	3.2		
<b>9. Menstrual cycle history</b>						
a) Frequency					.425	.935
1) Less than 21 days	2	28.6	21	22.6		
2) 21-28 days	3	42.9	50	53.8		
3) More than 28 days	2	28.6	22	22.6		
b) Duration					.394	.821
1) Less than 3 days	5	71.4	59	63.4		
2) 4-5 days	2	28.6	30	32.3		
3) More than 5 days	-	-	4	4.3		
<b>10. History of menstrual disorders</b>						
a) Absence of menstruation	1	14.3	23	29.5	1.501	.682
b) Scanty or less bleeding	4	57.1	30	38.5		
c) Menstruation with heavy bleeding at regular intervals	1	14.3	18	23.1		
d) Menstruation with prolonged bleeding at irregular intervals	1	14.3	7	9.0		
e) None	-	-	15	16.1		

P<0.01\*\* - Denotes significant at 1%, P<0.05\* - Denotes significant at 5%

Table 8 shows that there was no statistically significant association found between the overall knowledge of samples with regard to menstrual history.

## SECTION - I

**TABLE 9: ASSOCIATION BETWEEN POST-TEST KNOWLEDGE WITH SOURCE OF INFORMATION OF MENSTRUAL DISORDERS**

N=100

Content	Overall Knowledge				Chi-Square Value	P-Value
	Average		Above Average			
	F	%	F	%		
<b>11. Source of information on menstrual disorders</b>						
a) Elders in the family	-	-	3	7.0	.618	.961
b) Mother	1	33.3	17	39.5		
c) Sister	1	33.3	14	32.6		
d) Friends	-	-	-	-		
e) Teachers	1	33.3	8	18.6		
f) News paper, Health magazine	1	33.3	1	2.2		
g) Television/Internet.	-	-	-	-		
h) None	4	57.1	50	53.8		

P<0.01\*\* - Denotes significant at 1%, P<0.05\*- Denotes significant at 5%

Table 9 show that there was no statistical significant association found between the overall knowledge of samples the source of information on menstrual disorders.

## **CHAPTER-V**

### **DISCUSSION**

The aim of the study was to assess the effectiveness of video assisted teaching on knowledge regarding menstrual disorders and its effect on conception among students of selected colleges, Chennai.

A total of 100 samples who fulfilled the inclusion criteria were selected by proportionate sampling technique using lottery method, 50 samples from Arts group (Chellammal Women's College of Arts and Science) and 50 samples from Science group (Dr.M.G.R. Janaki Women's College of Arts and Science). The demographic data such as age, religion, year of study, mother's educational status, family income, type of family, menstrual history such as age at menarche, frequency and duration of menstrual cycle and history of menstrual disorders, source of information on menstrual disorders and information on menstrual disorders and its effect on conception were collected using structured questionnaire.

#### **Description of Sample Characteristics**

Majority 45% of the samples were in the age group of 19 years. 56% of the samples were from Hindus. 50% of the samples were from arts group and 50% of the samples were from science group.40% of the samples were from first year, 30% from second year and 30% were from third year from arts and science group.48% of the samples were from nuclear family.41% of the samples were having family

income of Rs.5,000- 10,000/- per month.37% of the sample's mothers had completed middle school.

Majority 45% of the samples had attained menarche at the age of 11-12 years. 53% of the samples had normal menstrual cycle with frequency of 21-28 days were as 23% had abnormal frequency of less than 21 days and 24% had a frequency of more than 28 days. 32% of the samples had normal duration of cycle, were as 64% of the samples had menstrual cycle with frequency less than 3 days and 4% had frequency more than 5 days.85% of the samples had history of menstrual disorder. Out of which 24% had history of absence of menstruation, 34% had history of scanty bleeding, 19% had history of heavy bleeding with regular duration and 8% had history of prolonged bleeding at irregular intervals. 15% of the samples had no history of menstrual disorders.

Here is a study conducted by Wodarska M, Hartman M, Plinta R. (2008) "To assess the relationship between increased physical activity and menstrual disorders in adolescent female volleyball players" among 210 Polish female volleyball players, aged 13-17 years, using a questionnaire. The results of the study showed that irregular menstruation occurred in 19% of girls, spotting between menstrual periods in 27% and heavy menstruation was reported in 33% of girls. 94 girls (45%) declared absence of menstrual periods after regular cycles. It was concluded that the number of hours of volleyball training per week affected the regularity of menstrual cycles in female volleyball players. The absence of menstruation might be caused by the duration of training per week or years of training.

Majority 54% of the samples had not received any prior source of information on menstrual disorders. 46% of the samples had received prior source of information on menstrual disorders.

The results of the study as per the objectives were,

1. To assess the pre-test knowledge score on menstrual disorders and its effect on conception.

In pre-test with regards to the information regarding menstruation, ovulation and conception, 92% of the arts students and 64% of the science students had below average knowledge. 8% of the arts students and 34% of the science students had average knowledge. 2% of the science student had above average knowledge.

In pre-test with regards to the information regarding menstrual disorders, 96% of the arts students and 60% of the science students had below average knowledge. 11.8% of the arts students and 30% of the science students had average knowledge. 10% of the science student had above average knowledge.

In pre-test with regards to the information regarding effect of menstrual disorders on conception, 100% of the arts students and 62% of the science students had below average knowledge. 8% of the science students had average knowledge. 22% of the science student had above average knowledge.

The above findings showed that the majority of the students had below average knowledge. The above findings is supported by the study

conducted by Jeyaseelan L (2010) to evaluate the effectiveness of planned teaching programme (PTP) on knowledge and attitude on menstrual disorders among rural high school students in Bangalore. The pre-test showed that majority 87.5% of the students had inadequate knowledge. The result showed that planned teaching programme was an effective strategy to improve the knowledge and attitude on menstrual disorders.

2. To assess the post-test knowledge score on menstrual disorders and its effect on conception.

In post test with regards to the information regarding menstruation, ovulation and conception, 2% of the arts students had below average knowledge. 2% of the arts students had average knowledge. 96% of the Arts students and 100% of the science students had above average knowledge.

In post test with regards to the information regarding menstrual disorders, 6% of the arts students had below average knowledge. 10% of the arts students had average knowledge. 84% of the arts students and 100% of the science student had above average knowledge.

In post test with regards to the information regarding effect of menstrual disorders on conception, 8% of the arts students had below average knowledge. 22% of the arts students and 2% of the science students had average knowledge. 70% of the arts students and 98% of the science student had above average knowledge.

The above findings showed that there majority of the samples were having above average knowledge after the video assisted teaching. The



above findings of the study is supported by the study conducted by Shreef and Shreef (2009) conducted “An experimental study was conducted to assess the impact and suitability of menstrual education program(MEP) for 1stand 2ndgraders at a girls' secondary school in Riyadh city”. The MEP was conducted on 5 classes, through one session and one assessment. The results revealed that the mean scores of knowledge, attitude and practice of the intervention classes for (1<sup>st</sup> and 2<sup>nd</sup> graders) were significantly higher than that of the control classes. The study recommended the replication of the same program among elementary, preparatory, and other secondary schools for improvement of students' menstrual knowledge, attitudes and practice.

3. To assess the overall knowledge regarding menstrual disorders and its effect on conception before and after video assisted teaching among students

In pre-test 77% of the samples had below average knowledge, 22% of the samples had average knowledge, and 1% of the sample had above average knowledge.

In post-test 93% of the samples had above average knowledge and 7% of the samples from had above average knowledge.

From the above findings we can infer that before video assisted teaching majority of the samples had below average knowledge and after video assisted teaching majority of the samples had above average knowledge.

4. To compare the pre -test and post test level of knowledge on menstrual disorders and its effect on conception of art students.

In the pre-test 100% of the arts students had below average knowledge and after video assisted teaching in the post test 14% had average knowledge and 86% had above average knowledge.

We can infer from the above findings that video assisted teaching was effective.

5. To compare the pre -test and post test level of knowledge on menstrual disorders and its effect on conception of science students.

In the pre-test 54% of the arts students had below average knowledge, 44% of the science students had average knowledge and 2% of the science students had above average knowledge. After the video assisted teaching in the post test 100% had above average knowledge. we infer the above findings that video assisted teaching was effective.

6. To compare the pre -test and post test overall knowledge on menstrual disorders and its effect on conception of the students.

Comparison of the pre-test and the post test knowledge score showed that the majority 77% of the samples had below average knowledge and 22% had average knowledge were as only 1% had above average knowledge. In the post test 93% of the samples had above average knowledge and 7% had average knowledge. The mean score of knowledge on menstrual disorders and its effect on conception in pre-test was 37.42%, and in post-test it had shown a significant increase to 95.17%. the paired-t

test had shown a statistically significant difference in the knowledge level in the post test compared to the pre-test at  $p < .001$

We can infer from the above finding that video assisted teaching as increased the knowledge of the samples. The above findings is supported by the study conducted by Jeyaseelan L (2010) to evaluate the effectiveness of planned teaching programme (PTP) on knowledge and attitude on menstrual disorders among rural high school students in Bangalore. The pre-test showed that majority 87.5% of the students had inadequate knowledge. The planned teaching programme facilitated them to update their knowledge and attitude related to menstrual disorders to 98.6%. The results showed that planned teaching programme was an effective strategy to improve the knowledge and attitude on menstrual disorders.

So, the first hypothesis  $H_1$  stated that there will be a significant difference between pre-test and post test knowledge of menstrual disorders and its effect on conception among students studying in the selected colleges in Chennai is accepted.

7. To compare the post-test level of knowledge on menstrual disorders and its effect on conception of Arts and Science students.

Comparison of the knowledge score on menstrual disorders and its effect on conception between Arts and science students showed that there was a statistically significant difference in the overall knowledge between the arts and science students at  $p < .001$ .

The overall mean knowledge score of menstrual disorders and its effect on conception of the science students was 99.028 (Standard deviation 2.2063) and the Arts students was 91.314 (Standard deviation 12.672). From this finding, we can infer that the science students had more knowledge on menstrual disorders and its effect on conception compared to the arts students in the post test.

The above findings are supported by an study conducted by Sarkar Hussain (2007) a quasi-experimental study was conducted to identify the level of knowledge of adolescent girls with a view to develop and evaluate a planned teaching programme on menstrual disorders among 49 adolescent girls in New Delhi. The results revealed that the total mean percentage scores secured by adolescent girls on menstrual disorders was 27.36%, the mean percentage scores of different areas ranged from 23.13% to 31.20%. Knowledge level of adolescent girls regarding menstrual disorders is independent of the socio-economic status, education status of the mother and exposure to mass media. The study concluded that, there is a need to create awareness among adolescent girls regarding menstrual hygiene & planned teaching programme was found to be an effective teaching strategy.

So, the first hypothesis  $H_2$  stated that there will be a significant difference between the knowledge regarding menstrual disorders and its effect on conception of arts and science students studying in the selected colleges in Chennai is accepted.

8. To associate the post-test level of knowledge score of menstrual disorders and its effect on conception with demographic variables.

There was statistically significant association found between the overall knowledge score with the demographic variables like religion at  $p < .05$  and course of study at  $p < .01$  level of significance. There was no statistically significant association found between the level of knowledge with age, year of study, type of family, family income per month, educational status of the mother, age at menarche, menstrual cycle history, history of menstrual disorders, previous knowledge on menstrual disorders.

Hence, the third hypothesis  $H_3$  stated that there will be a significant association between the post test knowledge regarding menstrual disorders and its effect on conception with the demographic variables of the samples was accepted.

9. To associate the post test knowledge score of menstrual disorders and its effect on conception with the menstrual history.

There was no statistically significant association found between the overall knowledge of samples with the menstrual history.

Hence, the fourth hypothesis  $H_4$  stated that there will be a significant association between the post test knowledge regarding menstrual disorders and its effect on conception with the menstrual history was rejected.

10. To associate the post test knowledge score of menstrual disorders and its effect on conception with the demographic variables.

There was no statistically significant association found between the overall knowledge of samples with the source of information

Hence, the fifth hypothesis  $H_5$  stated that there will be a significant association between the post test knowledge regarding menstrual disorders and its effect on conception with the source of information was rejected.

## **CHAPTER - VI**

### **SUMMARY, CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS**

#### **SUMMARY**

The objective of the study was to assess the effectiveness of video assisted teaching on knowledge of menstrual disorders and its effect on conception among students studying in selected colleges, Chennai. A Quasi-experimental research design, evaluative in nature was chosen to assess the effectiveness of video assisted teaching on knowledge of menstrual disorders and its effect on conception among college students. The review of literature provided the base and in depth knowledge for the development of the tool. The content validity of the tool was obtained from experts and the reliability was determined through pilot study.

The study was conducted in selected Arts and Science colleges in Chennai with prior permission. A total of 100 students were selected by proportionate sampling technique among Arts and Science colleges. The knowledge was assessed by using a structured questionnaire. The data was collected, analysed, tabulated and interpreted. The findings revealed that there was significant increase of knowledge of menstrual disorders and its effect on conception among students studying in selected colleges.

The findings of the study,

Majority 45% of the samples were in the age group of 19years. 56% of the samples were Hindus. 50% of the samples were from arts group and 50% of the samples were from science group. 40% of the samples were from first year, 30% from second year and 30% from third year of arts and science group. 48% of the samples were from nuclear family. 41% of the samples were having family income of Rs.5,000- 10,000/- per month.37% of the sample's mothers had completed middle school.

Majority 45% of the samples age at menarche was 11-12 years. 53% of the samples had menstrual cycles with frequency of 21-28 days. 64% of the samples had menstrual cycle with frequency less than 3 days. 85% of the samples had history of menstrual disorders. 15% of the samples had no history of menstrual disorders.

Majority 54% of the sample had no source of information on menstrual disorders. 46% of the samples had source of information on menstrual disorder.

In pre-test 77% of the samples had below average knowledge, 22% of the samples had average knowledge, and 1 sample from science group had above average knowledge. In post-test there were no samples in arts and science group had below average knowledge, 7% of the samples from arts group had average knowledge, 93% of the samples had above average knowledge.

Comparison of the pre-test and the post test knowledge score showed that the majority 77% of the samples had below average knowledge and 22% had average knowledge were as only 1% had above average knowledge. In the post test 93% of the samples had above average knowledge and 7% had average knowledge.



The mean score of knowledge on menstrual disorders and its effect on conception in pre-test was 37.42%, and in post-test it had shown a significant increase to 95.17%. The paired-t test had shown a statistically significant difference in the knowledge level in the post test compared to the pre-test at  $p < .001$

Comparison of the knowledge score on menstrual disorders and its effect on conception between Arts and science students showed that there was a statistically significant difference in the overall knowledge between the arts and science students at  $p < .001$ .

The overall mean knowledge score of menstrual disorders and its effect on conception of the science students was 99.028 (Standard deviation 2.2063) and the Arts students was 91.314 (Standard deviation 12.672). From this finding, we can infer that the science students had more knowledge on menstrual disorders and its effect on conception compared to the arts students in the post test.

There was statistically significant association between the overall knowledge score with the demographic variables like religion at  $p < .05$  and course of study at  $p < .01$  level of significance. There was no statistically significant association between the level of knowledge with age, year of study, type of family, family income per month, educational status of the mother, age at menarche, menstrual cycle history, history of menstrual disorders, previous knowledge on menstrual disorders.

## **CONCLUSION**

The study was conducted to assess the effectiveness of video assisted teaching on knowledge of menstrual disorders and its effect on conception among students studying in selected colleges. There was a statistically significant ( $p > 0.01$ ) increase in post test knowledge score of menstrual disorders and its effect on conception among students studying in selected colleges. Therefore it is concluded that providing video assisted teaching is an effective teaching strategy in increasing the knowledge of menstrual disorders and its effect on conception among students studying in selected colleges.

## **NURSING IMPLICATIONS**

The findings of the study have several implications in the following fields such as nursing practice, nursing education, nursing administration and nursing research.

### **NURSING PRACTICE**

- Video assisted teaching on menstrual disorders and its effect on conception can be utilized to create awareness for women.
- Video assisted teaching can be used as an effective tool to impart knowledge by the nurses in the hospitals.
- Awareness regarding menstrual disorders and its effect on conception can be done to the other health care professionals in the hospital.

## **NURSING EDUCATION**

- Video Assisted Teaching can be used as a class room teaching device to impart knowledge menstrual disorders and its effect on conception among nursing students.
- The nurse educator can incorporate the study findings to educate the students to plan various health education programs to create awareness regarding problems of menstrual disorders.

## **NURSING ADMINISTRATION**

- The Nurse administrator can conduct ongoing reinforcement programs for women about the preventive measures of menstrual disorders as well as educating the women to practice preventive measures in daily life
- The nurse administer can frame a policy for the health care professionals in gynaecology ward to provide information regarding menstrual disorders and its effect on conception.

## **NURSING RESEARCH**

- The study can be conducted as a structured teaching program among adolescent and early adult women as this will be helpful them in the future to detect the problem early and to consult the doctors.
- Video Assisted Teaching was an effective tool, the same tool can be included for similar studies.
- Disseminate the findings of the research through conferences, seminars and publishing in nursing journals.

## **RECOMMENDATIONS**

According to the findings of the present study, the following recommendations are made

1. Awareness programmes can be conducted to the students in the colleges and schools regarding menstrual disorders and its effect on conception
2. The study can be conducted on a larger sample to validate and to generalize the findings.
3. A true experimental study can be conducted to assess the effectiveness of video assisted teaching on knowledge regarding menstrual disorders and its effect on conception.
4. A comparative study can be conducted to assess the effectiveness of video assisted teaching vs. student to student programme on menstrual disorders and its effect conception.
5. Studies can be conducted on knowledge regarding treatment of menstrual disorders through video assisted teaching.

## **LIMITATIONS**

There was no limitation faced by the investigator during the course of the study.

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# **APPENDICES**

**LETTER SEEKING PERMISSION FOR CONDUCTING THE STUDY**

From,

Ms. Annet Merin Abraham,  
II Year M.Sc. Nursing,  
M.A.Chidambaram College of Nursing,  
VHS Hospital Campus,  
TTTI Post, Adyar,  
Chennai – 600 113.

To,

The Principal,  
Kumararani Meena Muthaiah Arts and Science College,  
No.4, Crescent Avenue Road,  
Gandhi Nagar, Adyar,  
Chennai – 600 020.

Through,

The Principal I/C,  
M.A.Chidambaram College of Nursing,  
VHS Hospital Campus, TTTI Post,  
Adyar, Chennai – 600 113.

Respected Madam,

I am Ms. Annet Merin Abraham, II Year M.Sc. Nursing student of M.A.Chidambaram College of Nursing, Adyar, Chennai – 600 113.

As a part of the requirement in M.Sc. Nursing Programme as per The Tamilnadu Dr.M.G.R. Medical University specification, I have to complete a dissertation. The topic I have selected is “A study to assess the effectiveness of video assisted teaching on knowledge of menstrual disorders and its effect on conception among students of selected colleges, Chennai”. I am interested in conducting the study in your esteemed institution.

The period of data collection for pilot study is from 05-08-13 to 08-08-13.

I assure you madam that my study will not interfere with the routine functioning of the institution. Kindly grant me permission to conduct the study.

Thanking you madam in anticipation for a favorable response.

Date: 03.08.13

Place: Chennai.

*R. Sudha*

**PRINCIPAL I/C**  
**M.A. CHIDAMBARAM COLLEGE OF NURSING**  
**V.H.S. TTTI. Post, Chennai-113.**

**PRINCIPAL**  
**KUMARARANI MEENA MUTHIAH COLLEGE**  
**OF ARTS & SCIENCE (Co-Ed.)**  
**4, CRESCENT AVENUE ROAD**  
**GANDHI NAGAR, ADYAR**  
**CHENNAI - 600 020**

yours faithfully,  
*Annet Merin Abraham*  
(ANNET MERIN ABRAHAM)

*Permission granted*  
*P. Trivedi*  
*8/8/13*

**LETTER SEEKING PERMISSION FOR CONDUCTING THE STUDY**

From,

Ms. Annet Merin Abraham,  
II Year M.Sc. Nursing,  
M.A.Chidambaram College of Nursing,  
VHS Hospital Campus, TTTI Post,  
Adyar, Chennai – 600 113.

To,

The Principal,  
Dr.M.G.R.Janaki Arts and Science College for women,  
Sathyabama MGR Malligai,  
11&13, Durgabai Deshmuk Road,  
Raja Annamalai Puram, Chennai 600028.

Through

The Principal I/C,  
M.A.Chidambaram College of Nursing,  
VHS Hospital Campus, TTTI Post,  
Adyar, Chennai – 600 113.

Respected Madam,

I am Ms. Annet Merin Abraham, II Year M.Sc. Nursing student of M.A.Chidambaram College of Nursing, Adyar, Chennai – 600 113.

As a part of the requirement in M.Sc. Nursing Programme as per The Tamilnadu Dr.M.G.R. Medical University specification, I have to complete a dissertation. The topic I have selected is “A study to assess the effectiveness of video assisted teaching on knowledge of menstrual disorders and its effect on conception among students of selected colleges, Chennai”. I am interested in conducting the study in your esteemed institution.


The period of data collection for main study is from 12-08-13 to 12-09-13.

I assure you madam that my study will not interfere with the routine functioning of the institution. Kindly grant me permission to conduct the study.

Thanking you madam in anticipation for a favorable response.

Date: 08.08.13

Place: Chennai

  
PRINCIPAL I/C  
M.A. CHIDAMBARAM COLLEGE OF NURSING  
V.H.S. TTTI Post, Chennai-113.

yours faithfully,

  
(ANNET MERIN ABRAHAM)

Permission granted  
  
PRINCIPAL

DR. M. G. R. JANAKI COLLEGE FOR WOMEN  
Sathyabama MGR Malligai  
11 & 13, Durgabai Deshmukh  
Chennai - 600 028

**LETTER SEEKING PERMISSION FOR CONDUCTING THE STUDY**

From,

Ms. Annet Merin Abraham,  
II Year M.Sc. Nursing,  
M.A.Chidambaram College of Nursing,  
VHS Hospital Campus,  
TTTI Post, Adyar,  
Chennai – 600 113.

To,

The Principal,  
Chellammal Arts and Science College for Women's,  
No.112, Anna Salai,  
Guindy,  
Chennai – 600 003.

Through,

The Principal I/C,  
M.A.Chidambaram College of Nursing,  
VHS Hospital Campus, TTTI Post,  
Adyar, Chennai – 600 113.

Respected Madam,

I am Ms. Annet Merin Abraham, II Year M.Sc. Nursing student of M.A.Chidambaram College of Nursing, Adyar, Chennai – 600 113.

As a part of the requirement in M.Sc. Nursing Programme as per The Tamilnadu Dr.M.G.R. Medical University specification, I have to complete a dissertation. The topic I have selected is "A study to assess the effectiveness of video assisted teaching on knowledge of menstrual disorders and its effect on conception among students of selected colleges, Chennai". I am interested in conducting the study in your esteemed institution.

The period of data collection for main study is from 12-08-13 to 12-09-13.

I assure you madam that my study will not interfere with the routine functioning of the institution. Kindly grant me permission to conduct the study.

Thanking you madam in anticipation for a favorable response.

Date: 08.08.13

Place: Chennai.

yours faithfully,

*Annet*  
(ANNET MERIN ABRAHAM)

*R. Sivalho*  
**PRINCIPAL I/C**  
**M.A. CHIDAMBARAM COLLEGE OF NURSING**  
**V.H.S. TTTI. Post, Chennai-113.**

*Permission granted.*

Checked  
Perme

*[Signature]*  
**PRINCIPAL INCHARGE** 8/8/13'  
**CHELLAMMAL WOMEN'S COLLEGE**  
**OF THE PACHAIAPPA'S TRUST**  
**GUINDY, CHENNAI-600 032.**

## CERTIFICATE OF CONTENT VALIDITY

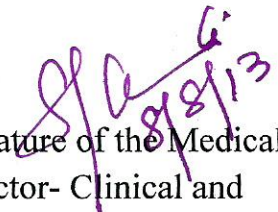
This is to certify that the content developed by Ms.Annet Merin Abraham M.Sc., (Nursing) student of M.A.Chidambaram College of Nursing for the study **“To assess the effectiveness of video assisted teaching on knowledge of menstrual disorders and its effect on conception among students of selected colleges, Chennai”** is read and edited by the undersigned and she can proceed with this content for her study.



Signature of Principal i/c:

**PRINCIPAL I/C**  
**M.A. CHIDAMBARAM COLLEGE OF NURSING**  
**V.H.S. T T T I. Post, Chennai-113.**

Date: 08.08.13.



Signature of the Medical  
Director- Clinical and  
Academic Affairs:

Date:

## CERTIFICATE OF CONTENT VALIDITY

This is to certify that the content developed by Ms. Annet Merin Abraham M.Sc., (Nursing) student of M.A. Chidambaram College of Nursing for the study **“To assess the effectiveness of video assisted teaching on knowledge of menstrual disorders and its effect on conception among students of selected colleges, Chennai”** is read and edited by the undersigned and she can proceed with this content for her study.

Signature : *Bathysawathi*  
Date : *2/08/13.*

*Vice Principal,  
Head of the Department of  
Obstetrics & Gynaecological  
Nursing,  
Sree Balaji College of Nursing,  
Chrompet, Chennai.*

## CERTIFICATE OF ENGLISH EDITING

This is to certify that the dissertation work done by Miss. Annet Merin Abraham M.S., (Nursing) student of M.a Chidambaram College of Nursing, for the study **“To assess the effectiveness of video assisted teaching on knowledge of menstrual disorders and its effect on conception among students of selected colleges, Chennai”** is read and edited by the undersigned for the English language appropriateness.

DATE: 06/02/2014

SIGNATURE

*attested -*

**T. DAVID MANOHARAN,  
M.Sc., M.A., B.Ed., M.Phil,  
HEADMASTER,  
DMM School, Block-19,  
NEYVELI-607 803.**



## CERTIFICATE OF CONTENT VALIDITY

This is to certify that the content developed by Ms.Annet Merin Abraham M.Sc., (Nursing) student of M.A.Chidambaram College of Nursing for the study **“To assess the effectiveness of video assisted teaching on knowledge of menstrual disorders and its effect on conception among students of selected colleges, Chennai”** is read and edited by the undersigned and she can proceed with this content for her study.

Date: 02/08/13

  
02/08/13

Signature

Dr. V. KUMARI, M.Sc (N)., Ph.D  
READER IN NURSING  
· COLLEGE OF NURSING  
MADRAS MEDICAL COLLEGE  
CHENNAI - 600 003.

## CERTIFICATE OF STATISTICAL VALIDATION

This is to certify that the data collected by **Ms. Annet Merin Abraham, M.Sc.,** (Nursing) student of M.A.Chidambaram College of Nursing, Chennai for “**A study to assess the effectiveness of video assisted teaching on knowledge of menstrual disorders and its effect on conception among students of selected colleges, Chennai**” was statistically analysed and validated by the undersigned, and she can proceed with this analysed data for her study.

Date: 20 - 08 - 13



Signature

**Dr. R. RAVANAN, M.Sc., M.Phil., Ph.D.,**  
**ASSOCIATE PROFESSOR**  
**DEPARTMENT OF STATISTICS**  
**PRESIDENCY COLLEGE (AUTONOMOUS)**  
**CHENNAI - 600 005**



## **INFORMED CONSENT FORM**

I have been informed that the purpose of the study being conducted by Annet Merin Abraham of M.A. Chidambaram College of Nursing, Adayar, Chennai and I have no objection in participating in this study, I also give my full consent for the use of this data for the purpose of any presentation or publication.

Date :

Signature :

Place :

Name :

## **STRUCTURED QUESTIONNAIRE**

### **TOOL TO ASSESS THE KNOWLEDGE REGARDING MENSTRUAL DISORDERS AND ITS EFFECT ON CONCEPTION AMONG THE STUDENTS STUDYING IN THE SELECTED COLLEGES IN CHENNAI**

SAMPLE NUMBER:

#### **PART-I: DEMOGRAPHIC PROFILE OF THE SAMPLE:**

**(INSTRUCTION: Kindly answer the following questions)**

1. Age
  - a) 18 years
  - b) 19 years
  - c) 20 years
  - d) 21 years
  
2. Religion
  - a) Hindu
  - b) Christian
  - c) Muslim
  
3. Course
  - a) Arts
  - b) Science
  
4. Year of study
  - a) First year
  - b) Second year
  - c) Third year

5. Type of family
  - a) Nuclear family
  - b) Joint family
  - c) Extended family
6. Family income per month
  - a) Up to Rs.5000/-
  - b) Rs.5000- to – Rs. 10,000/-
  - c) Rs.10,000 –to-Rs.15,000/-
  - d) More than Rs.15, 000/-
7. Educational status of the mother
  - a) Illiterate
  - b) Primary school
  - c) Middle school
  - d) High school
  - e) Higher secondary
  - f) Graduates
8. Age at menarche
  - a) Less than 10 years
  - b) 11-12 years
  - c) 13 -14 years
  - d) Above 15 years

9. Menstrual cycle history
  - a) Frequency
    - 1) Less than 21 days
    - 2) 21-28 days
    - 3) More than 28 days
  - b) Duration
    - 1) Less than 3 days
    - 2) 4-5 days
    - 3) More than 5 days
10. History of menstrual disorders
  - a) Absence of menstruation
  - b) Scanty or less bleeding
  - c) Menstruation with heavy bleeding at regular intervals
  - d) Menstruation with prolonged bleeding at irregular intervals
  - e) None
11. Source of information on menstrual disorders
  - a) Elders in the family
  - b) Mother
  - c) Sister
  - d) Friends
  - e) Teachers
  - f) News paper
  - g) Television/Internet.
  - h) None

## **PART-II**

### **STRUCTURED QUESTIONNAIRE TO ASSESS THE KNOWLEDGE REGARDING MENSTRUAL DISORDERS AND ITS EFFECT ON CONCEPTION**

#### **THIS SECTION CONSISTS OF:**

- I. General information regarding menstruation, ovulation, conception.
- II. Information regarding menstrual disorders.
- III. Information regarding effect of menstrual disorders on conception.

**INSTRUCTION : KINDLY TICK(√ ) THE CORRECT OPTION FOR EACH QUESTION.**

#### **I. GENERAL INFORMATION ON MENSTRUATION, MENSTRUAL CYCLE AND OVULATION**

1. What is menstruation?
  - a) Initiation of puberty
  - b) Sign of womanhood
  - c) Beginning of sexual life
  - d) Monthly bleeding from the vagina.
2. Which is the organ responsible for menstruation?
  - a) Uterus
  - b) Ovaries
  - c) Fallopian tubes
  - d) Urethra
3. What is the normal age for menarche?
  - a) Less than 10 years
  - b) 11-15 years
  - c) More than 15 years



4. What is the normal interval between two menstrual cycle?
  - a) 22- 24 days
  - b) 25- 27 days
  - c) 28- 30 days
  - d) 31- 33 days
5. What is the normal duration of menstrual flow?
  - a) 2- 3 days
  - b) 4- 5 days
  - c) 6 -7 days
  - d) 8 -9 days
6. Where is egg produced in the female reproductive system?
  - a) Uterus
  - b) Ovaries
  - c) Fallopian tubes
  - d) Vagina
7. How many ovaries are present in the female reproductive system?
  - a) One
  - b) Two
  - c) Three
  - d) Four
8. How many egg is produced in each cycle?
  - a) One
  - b) Two
  - c) Three
  - d) Four

9. What is the life span of ovum?
- a) 24 hours
  - b) 48 hours
  - c) 72 hours
  - d) 96 hours
10. When is the ovum released during menstrual cycle?
- a) Two weeks prior to menstruation
  - b) One week prior to menstruation
  - c) During menstruation
  - d) One week after menstruation
11. What is meant by conception?
- a) To give birth
  - b) To rear a child
  - c) To care a child
  - d) To bear a child
12. How does conception takes place?
- a) When the Ovum/Egg is released
  - b) When the sperm is released
  - c) When the implantation takes place
  - d) When there is a fusion of Ovum/Egg and sperm

## II—INFORMATION REGARDING MENSTRUAL DISORDERS

13. What is meant by menstrual disorders?
  - a) Regular menstrual cycle
  - b) Irregular menstrual cycle
  - c) Menopause
  - d) Attaining menarche
14. At which age is menstrual disorder more common?
  - a) Childhood and adolescence period
  - b) Adolescence and premenopausal period
  - c) Adolescence and menopause period
  - d) Adolescence and late adulthood period
15. What are the disease conditions that predispose for menstrual disorders?
  - a) Thyroid conditions
  - b) Polycystic ovarian disease
  - c) Hormonal variations
  - d) All the above
16. What are the other causes for menstrual disorders?
  - a) Stress and anxiety
  - b) Environmental changes
  - c) Physical strain
  - d) All the above
17. What are the symptoms of menstrual disorders?
  - a) Increase in the amount of flow
  - b) Decrease in amount of flow

- c) Absence of menstrual flow
  - d) All the above
18. What is polycystic ovarian syndrome?
- a) Fluid filled cyst in ovary
  - b) Decrease in size of ovary
  - c) Increase in size of ovary
  - d) Absence of ovary
19. How polycystic ovarian syndrome affect menstrual cycle?
- a) By decreasing body temperature
  - b) By causing irregular menstrual cycle
  - c) By producing more eggs
  - d) By reducing blood supply
20. How does thyroid disease affect menstrual cycle?
- a) By failure to release ovum
  - b) By causing hormonal imbalances of reproduction
  - c) By causing irregular menstruation
  - d) All the above
21. What are the abnormalities related to duration of the menstrual flow?
- a) Menstrual flow for more than eight days
  - b) Menstrual flow less than two days
  - c) Absence or lack of menstrual flow
  - d) All the above

22. How anaemia affects the menstrual cycle?
- a) By resulting in excessive bleeding
  - b) By decreasing the bleeding
  - c) By increasing blood pressure
  - d) By increasing temperature
23. What are the effects of excessive bleeding?
- a) Looking pale
  - b) Weak and tired
  - c) Fainting and difficulty to breathe
  - d) All the above
24. How does the tumour in the uterus affect the menstrual cycle?
- a) By increase in food intake
  - b) By increasing the body weight
  - c) By decreasing the body weight
  - d) By causing longer and heavier menstrual flow
25. What are the other factors that hinders menstrual cycle?
- a) Poor lining of the uterus
  - b) Cyst or tumour in uterus
  - c) Any infection of the reproductive tract
  - d) All the above
26. How does the nutritional status affect menstrual cycle?
- a) By decrease in releasing egg
  - b) By irregular menstrual cycle
  - c) By no ovum production
  - d) All the above

**III INFORMATION REGARDING EFFECT OF MENSTRUAL  
DISORDERS ON CONCEPTION**

27. How short cycles affect conception?
- a) By regular release of egg
  - b) By early release of egg
  - c) By releasing excessive egg
  - d) By releasing egg less frequently
28. How long cycles affect conception?
- a) Day of ovulation is unpredictable
  - b) By regular release of egg
  - c) By excessive release of egg
  - d) By decrease blood supply
29. How does polycystic ovarian syndrome affect conception?
- a) By maintaining thermal regulation
  - b) By failing to ovulate and forming cyst in ovaries
  - c) By providing optimum nutrition
  - d) By improving blood supply
30. How does thyroid hormone affects conception?
- a) By causing imbalance in reproductive hormones
  - b) By causing irregular menstrual cycle
  - c) By causing delay in ovulation
  - d) All the above

31. What changes will occur because of stress on conception?
- a) Variation in hormonal levels
  - b) Weight gain or loss
  - c) Delay or absence of release of egg
  - d) All the above
32. What are the predisposing factors that delay conception?
- a) Defect in the passage of ovum
  - b) Improper lining of the uterus
  - c) Poor quality of egg and sperm
  - d) All the above
33. What are the measures to maintain normal menstrual cycle?
- a) By maintaining normal weight
  - b) By doing regular exercise
  - c) By reducing stress
  - d) All the above
34. What are the measures to reduce stress?
- a) Time management
  - b) Yoga and meditation
  - c) Laughter therapy
  - d) All the above
35. What are the measures to maintain normal body weight?
- a) Taking food three times in a day
  - b) Drinking plenty of water
  - c) Regular exercise
  - d) All the above

## SCORING KEY

Question No	Answer	Question No	Answer
1	d	19	b
6	a	20	d
3	b	21	d
4	c	22	b
5	b	23	d
6	b	24	d
7	b	25	d
8	a	26	d
9	a	27	d
10	a	28	b
11	d	29	d
12	d	30	d
13	b	31	d
14	b	32	d
15	d	33	d
16	d	34	d
17	d	35	d
18	a		



## **PROFILE:**

**Topic** : Menstrual Disorders and Its Effect on Conception

**Group** : Arts and Science Women Students

**Place** : Chennai

**Researcher Name** : Annet Merin Abraham, M.Sc. Nursing II year

**Duration** : 30 minutes

**Mode of Language** : English

**Method of Teaching** : Video Assisted Teaching

**Audio Visual Aids** : Video

## **GENERAL OBJECTIVES:**

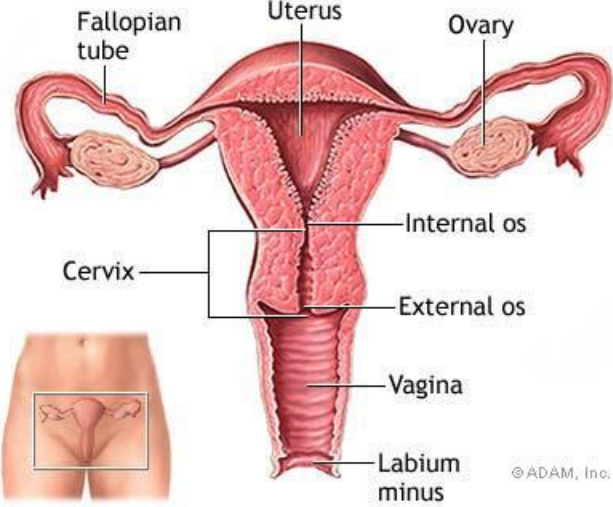
At the end of the session, the samples will be able to acquire in depth knowledge on menstrual disorders and its effect on conception.

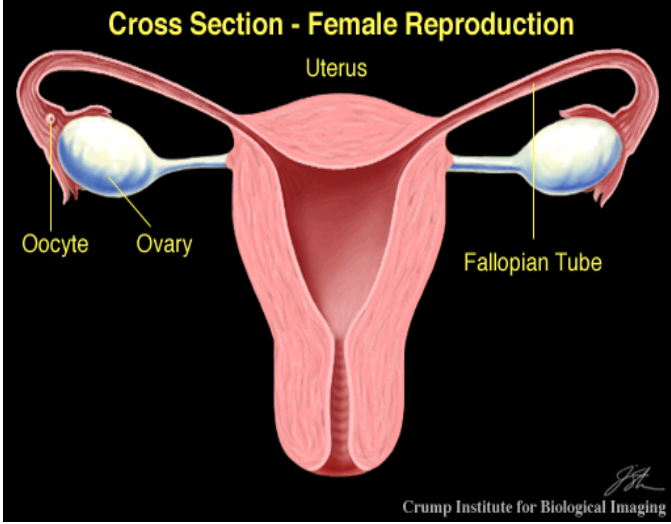
## **SPECIFIC OBJECTIVES:**

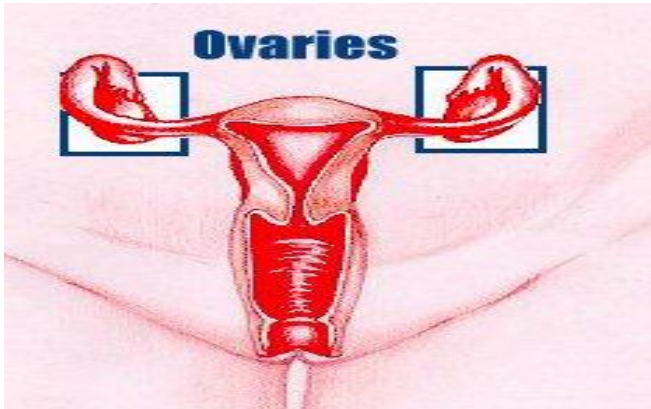
At the end of the session, the samples will be able to;

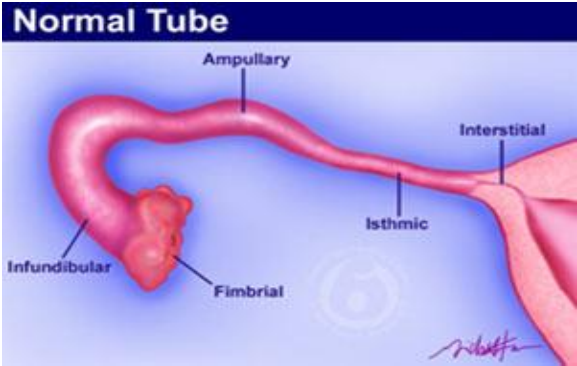
- understand anatomy and physiology of internal genitalia
- state the meaning of menstruation,
- discuss about menstrual cycle,
- state the meaning of menstrual disorders
- state the meaning of conception
- understand menstrual disorder and its effects on conception

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V.AIDS	LEARNER'S ACTIVITY
	1min		<p><b>INTRODUCTION:</b></p> <p>Good morning to everyone today we are going to discuss about menstrual disorders and its effect on conception, menstrual disorders are perceived as a minor health problem among the public health particularly among the developing countries like India, about 30-40% of delay in conception is because of menstrual disorders.</p> <p>Now let us continue this session by discussing about normal menstruation, menstrual disorders, and how it affects conception through video assisted teaching.</p>	Video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V AIDS	LEARNER'S ACTIVITY
1.	2mins	understand review of anatomy and physiology of internal genitalia	<p><b>PARTS OF INTERNAL GENITALIA:</b></p>  <p>Labels in the diagram include: Fallopian tube, Uterus, Ovary, Internal os, Cervix, External os, Vagina, and Labium minus. © ADAM, Inc.</p>	Video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V AIDS	LEARNER'S ACTIVITY
			<p><b>UTERUS:</b></p> <ul style="list-style-type: none"> <li>• Uterus is a hollow, pear-shaped muscular organ,</li> <li>• Endometrium is the layer surrounding uterus which allows the home for developing fetus.</li> </ul> 	Video	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V AIDS	LEARNER'S ACTIVITY
			<p><b>OVARIES:</b></p> <ul style="list-style-type: none"> <li>• Two almond shaped glands on either side of the uterus is called as ovaries.</li> <li>• Ovaries produce one ovum per each cycle and the hormones.</li> </ul> 	Video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V AIDS	LEARNER'S ACTIVITY
			<p><b>FALLOPIAN TUBE:</b></p> <ul style="list-style-type: none"> <li>• Fallopian tube is a narrow tube present on the either side of uterus through which ovum pass from ovary to uterus.</li> <li>• Conception takes place in fallopian tube.</li> </ul>  <p>The diagram, titled 'Normal Tube', illustrates the structure of a fallopian tube. It is divided into four main sections: the <b>Infundibular</b> end, which is the flared, funnel-shaped part containing the <b>Fimbrial</b> fringes; the <b>Ampullary</b> section, which is the wider, middle portion; the <b>Isthmic</b> section, which is the narrowest part; and the <b>Interstitial</b> section, which is the part of the tube that passes through the uterine wall. The diagram is signed 'Nibatta' in the bottom right corner.</p>	Video	Observing


S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V AIDS	LEARNER'S ACTIVITY
2	5mins	state the meaning of menstruation, menstrual cycle,	<p><input type="checkbox"/> MENSTRUATION: It is an monthly bleeding from the vagina</p> <p><input type="checkbox"/> MENSTRUAL CYCLE: Is the monthly shedding of endometrium when there is no fertilization. The average menstrual cycle will repeat itself about every 28 days, and the duration of flow will be 4-5 days.</p> <p><b>HORMONES AND MENSTRUAL CYCLE:</b></p> <p>➤ HORMONES THAT REGULATE MENSTRUAL CYCLE: - Gonadotropin hormone (GhRn)</p>	Video clipping	Observing




S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V AIDS	LEARNER'S ACTIVITY
			<ul style="list-style-type: none"> <li>- Follicle stimulating hormone (FSH)</li> <li>- Luteinizing hormone (LH)</li> <li>- Estrogen</li> <li>- Progesterone</li> </ul> <p>➤ HORMONES THAT INHIBIT MENSTRUAL CYCLE:</p> <ul style="list-style-type: none"> <li>-Thyroid stimulating hormone (TSH)</li> <li>- Prolactin</li> </ul>	Video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
			<p><b>NORMAL MENSTRUATION:</b></p> <ul style="list-style-type: none"> <li>• Age at menarche 11-15years,average-13years</li> <li>• Intervals of 21-35 days between two cycle Average-28days.</li> <li>• Duration of 4-5 days of menstrual flow.</li> <li>• Menstrual blood loss of 20-80ml, per cycle, average—35ml. Excessive blood loss can be identified by no. of sanitary pad usage, changing of 10 sanitary pads per day indicates abnormality.</li> <li>• 70% of blood loss or first 2 days.</li> </ul>	Video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
			<p><b>NORMAL OVULATION:</b></p> <ul style="list-style-type: none"> <li>• Ovum/Egg are the female reproductive cell.</li> <li>• Ovum is released from the ovaries and this process is called as ovulation, there are two ovaries in female reproductive system. In each cycle one egg is released.</li> <li>• Life span of ovum is 24 hours, and ovulation occurs two weeks after menstruation, that is 14days after menses.</li> </ul>	Video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
3	5mins	State the meaning of menstrual disorders	<p><b>MENSTRUAL DISORDERS:</b> Is an irregular menstrual cycle</p> <p><b>TYPES OF IRREGULAR MENSTRUAL CYCLE:</b></p> <ul style="list-style-type: none"> <li>➤ Short cycle</li> <li>➤ Long cycle</li> <li>➤ Heavy bleeding</li> <li>➤ Irregular and heavy bleeding</li> </ul>  <p>Adenomyosis. Note thickened wall of uterus which can be mistaken for fibroids.</p>	Video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
			<p style="text-align: center;"><b>SHORT CYCLE</b></p> <p>Due to over production of egg releasing hormone</p> <p style="text-align: center;">↓</p> <p>Egg is released soon</p> <p style="text-align: center;">↓</p> <p>Hence there is decrease in the amount of other hormones like estrogen and progesterone</p> <p style="text-align: center;">↓</p> <p>And thus causing menstruation</p>	Video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
			<p style="text-align: center;"><b>LONG CYCLE</b></p> <p style="text-align: center;">Ovarian unresponsiveness to hormones</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Prolong in the second phase of menstrual cycle where the lining of the uterus growth increase</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Leads to delay in menstrual cycle</p> <div style="text-align: center;">  <p>The diagram shows a frontal view of the female reproductive system, including the uterus, fallopian tubes, and ovaries. A yellowish, rounded mass labeled 'Fibroid' is shown attached to the inner wall of the uterus. A smaller, finger-like projection labeled 'Polyp' is shown protruding from the endometrial lining of the uterus.</p> </div>	video clipping	Observing

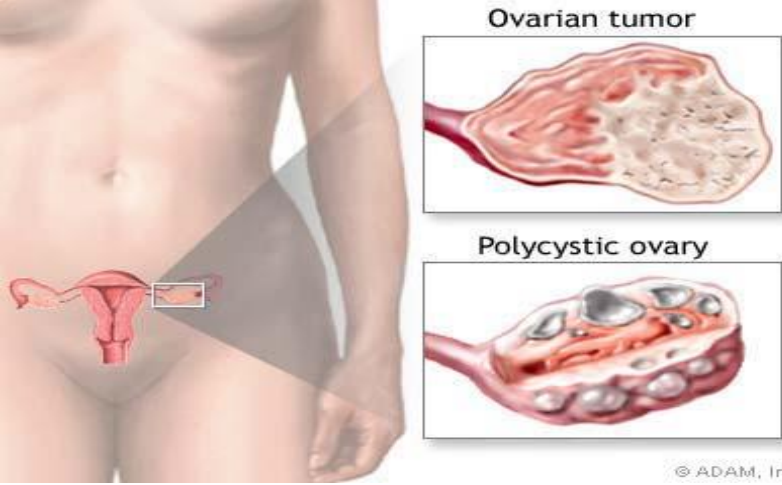
S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
			<p style="text-align: center;"><b>HEAVY BLEEDING</b></p> <p>Usually at the third day of menstruation the regeneration of endometrium takes place</p> <p style="text-align: center;">↓</p> <p>Incomplete degeneration of corpus luteum (from where progesterone produced) and persistent secretion of the progesterone</p> <p style="text-align: center;">↓</p> <p>Leads to excessive bleeding</p>	Video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
			<p><b>IRREGULAR AND HEAVY BLEEDING</b></p> <p>Since there is a slow increase in the secretion of estrogen due to hormonal disturbance from hypothalamus and pituitary gland</p> <p style="text-align: center;">↓</p> <p>There is no ovulation and prolong growth of the endometrium</p> <p style="text-align: center;">↓</p> <p>Estrogen and progesterone level fall after long time result in heavy bleeding.</p>	Video clipping	Observing



S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
	2mins		<p><b>CAUSES FOR MENSTRUAL DISORDERS</b></p> <ul style="list-style-type: none"> <li>➤ Sudden weight gain/loss</li> <li>➤ Eating disorders</li> <li>➤ Being an athlete(who are practicing for marathon)</li> <li>➤ Intense exercising(more than 30 minutes per day)</li> <li>➤ Thyroid diseases –hyperthyroidism and hypothyroidism</li> <li>➤ Polycystic ovarian syndrome (PCOS)</li> <li>➤ Anemia</li> </ul>	Video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
			<ul style="list-style-type: none"> <li>➤ Fibroids of uterus (tumour)</li> <li>➤ Hormonal variations</li> <li>➤ Chronic diseases-Tuberculosis, diabetes mellitus, liver disorders</li> <li>➤ Stress and anxiety</li> <li>➤ Emotional changes- depression, restlessness</li> <li>➤ Change in schedule-shift in rest and sleep pattern</li> <li>➤ Travel</li> <li>➤ Uterine scarring [endometriosis]</li> <li>➤ Physical strain</li> <li>➤ Environmental changes</li> </ul>	video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
			<p data-bbox="617 483 1381 521"><b>POLYCYSTIC OVARIAN SYNDROME (PCOS)</b></p> 	video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
			<p><b>POLYCYSTIC OVARIAN SYNDROME (PCOS) AND MENSTRUATION</b></p> <p>Increase in male reproductive hormones</p> <p style="text-align: center;">↓</p> <p>Imbalance in the female reproductive hormone</p> <p style="text-align: center;">↓</p> <p>Follicles may grow but it is filled with fluids</p> <p style="text-align: center;">↓</p> <p>No ovum production</p> <p style="text-align: center;">↓</p> <p>Follicle will remain as cyst.</p>	video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
			<p>Absence of hormone production from the ovary</p> <p style="text-align: center;">↓</p> <p>Menstrual cycle is irregular or absence.</p> <p><b>HOW THYROID AFFECTS MENSTRUAL CYCLE</b></p> <p>There are two types -</p> <ul style="list-style-type: none"> <li>• HYPERTHYROIDISM: <ul style="list-style-type: none"> <li>Increase in thyroid hormone</li> </ul> </li> <li>• HYPOTHYROIDISM: <ul style="list-style-type: none"> <li>Decrease in thyroid hormones</li> </ul> </li> </ul>	video clipping	Observing


S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
			<ul style="list-style-type: none"> <li>▪ <b>Hyperthyroidism:</b> Increase in thyroid hormone  <div style="text-align: center;">↓</div>           Increase hormone level in pituitary  <div style="text-align: center;">↓</div>           Leads to irregular menstrual flow, short or scanty</li> <li>▪ <b>Hypothyroidism:</b> Decrease in thyroid hormone  <div style="text-align: center;">↓</div>           Decrease in the hormone production  <div style="text-align: center;">↓</div>           Leads to irregular menstrual flow, prolonged or excessive menstrual flow</li> </ul>	video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
			<ul style="list-style-type: none"> <li>• <b>ANAEMIA:</b> leads to decrease bleeding</li> <li>• <b>EATING DISORDERS</b> <ul style="list-style-type: none"> <li>- Poor nutrition</li> <li>- Hormonal variations</li> <li>- Irregular menstruation and egg release</li> </ul> </li> <li>▪ <b>EMOTIONAL FACTORS</b> <ul style="list-style-type: none"> <li>- Delay in release of egg</li> <li>- Irregular menstruation</li> </ul> </li> <li>▪ <b>TUMOUR OF UTERUS (CYST)</b> <ul style="list-style-type: none"> <li>- Excessive bleeding</li> </ul> </li> </ul>	video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
	2mins		<p><b>MENSTRUAL DISORDERS AND IT'S SYMPTOMS</b></p> <ul style="list-style-type: none"> <li>▪ Absence of menstrual cycle</li> <li>▪ Delay in menstrual cycle</li> <li>▪ Early menstrual cycle</li> <li>▪ Heavy bleeding(more than 8 days)</li> <li>▪ Scanty or less bleeding (less than 2 days)</li> <li>• OTHER COMMON SYMPTOMS : <ul style="list-style-type: none"> <li>- Breast tenderness</li> <li>- Headache</li> <li>- Backache</li> <li>- Abdominal pain</li> </ul> </li> </ul>	video clipping	Observing



S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
			<ul style="list-style-type: none"> <li>- Pimples on face</li> <li>- Irritable</li> <li>- Anger, mood swings</li> <li>- Sleeplessness</li> <li>- Weakness, fainting</li> <li>- More interested to eat chocolates and sweets.</li> </ul> <p>EFFECTS OF EXCESSIVE BLEEDING</p> <ul style="list-style-type: none"> <li>- Looking pale</li> <li>- Feeling tired and weak</li> <li>- Fainting</li> <li>- Shortness of breath/difficulty to breathe</li> </ul>	video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
			<p data-bbox="793 488 1241 521" style="text-align: center;"><b>EFFECT ON CONCEPTION</b></p>  A cartoon-style illustration of a pregnant woman with long, wavy brown hair, wearing a light blue short-sleeved top and dark grey pants. She is smiling and gently holding her pregnant belly with both hands.	<p data-bbox="1398 529 1577 561">Video clipping</p>	

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
5	3mins	state the meaning of conception	<p style="text-align: center;"><b>CONCEPTION</b></p> <ul style="list-style-type: none"> <li>• Is an ability of a women to bear a child</li> <li>• Conception takes place by fusion of ovum and sperm</li> <li>• If there is regular menstruation of 28 days then the ovulation will be on 14<sup>th</sup> day, so this is an ideal time for conception</li> <li>• Within 24 hours of ovulation conception should take place because the life span of egg is only 24 hours, during every cycle one egg is released from the ovary.</li> </ul>	video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
6	5mins	understand menstrual disorders and its effect on conception	<p><b>MENSTRUAL DISORDERS AND CONCEPTION</b></p> <ul style="list-style-type: none"> <li>• Menstrual cycle help us to know when a women is ovulating,which is an important factor for conception.</li> <li>• If the cycles are very long then the chance for conception is less when compared to the one who ovulate monthly</li> <li>• Irregular menstruation will make getting pregnant more difficult.</li> </ul>	video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
			<ul style="list-style-type: none"> <li>• Women with regular menses will have 11 to 13 menstrual period per year which means that they will ovulate 13 times and they have up to 13 chances to conceive each year</li> <li>• Where women with irregular menstrual cycle have only 8 times of menstruation so their chance of conception is less</li> <li>• Long and short period of menstruation leads to absence of ovulation, this leads to unpredictable ovulation period</li> <li>• By predicting 14<sup>th</sup> day as ovulation and trying for pregnancy leads to failure when there is irregular menstruation.</li> </ul>	video clipping	Observing


S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
			<ul style="list-style-type: none"> <li>• Polycystic conditions forms cyst in the ovary and fails to ovulate</li> <li>▪ Hormonal imbalance caused by thyroid problems leads to irregular menstruation and failure to ovulate</li> <li>▪ When there is other predisposing (already existing) factor responsible for menstrual disorders it is difficult to become pregnant ,should consult gynecologist.(like poor quality of egg and sperm, improper lining of uterus, problems in passage of ovum)</li> </ul>	video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
			<p><b>WHAT TO DO, TO IMPROVE THE CHANCE OF CONCEPTION:</b></p> <ul style="list-style-type: none"> <li>• <b>FIRST</b> -To restore regular menstrual cycle</li> <li>• <b>SECOND</b> -To increase the chance of ovulation</li> <li>• <b>THIRD</b> -To make some healthy life style changes that can help to balance the hormones and help to improve the chance for menses regular.</li> </ul> <p>-Eat healthy and balanced diet (grains, fruits, vegetables, avoid fat and carbohydrate</p>	video clipping	Observing


S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
			<p>foods like fried, oily foods and rice)</p> <ul style="list-style-type: none"> <li>-Maintain average weight</li> <li>-Exercise regularly and moderately</li> <li>• The next important step is to pinpoint the fertile period during each cycle</li> <li>• Remember in order to conceive, sperm must wait in the fallopian tube at the time the ovum is released from the ovary</li> <li>• Since sperm can only survive up to five days in reproductive tract ,it is important to predict when is the correct date of ovulation, so that one can time intercourse appropriately.</li> </ul>	video clipping	Observing





S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
	2mins		<ul style="list-style-type: none"> <li>• For women with menstrual disorders, it is important to maintain ovulation prediction period/day/date.</li> <li>• Understanding the causes of menstrual disorders and how to restore cycle regularly can help to increase the chance of conception.</li> </ul> <p><b>DIAGNOSIS OF MENSTRUAL DISORDERS</b></p> <ul style="list-style-type: none"> <li>• History collection (On menstrual flow, duration)</li> <li>• Physical examination(in case of thyroid problems)</li> </ul>	video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
			<ul style="list-style-type: none"> <li>• Blood test(for hormonal variations)</li> <li>• Abdominal and pelvic examination</li> <li>• Ultrasonography (scan)</li> </ul> 	video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
	2mins		<p><b>TREATMENT FOR MENSTRUAL DISORDERS</b></p> <p>FOR REGULAR MENSTRUAL CYCLE:</p> <ul style="list-style-type: none"> <li>➤ Rest ,relaxation, adequate sleep,</li> <li>➤ Yoga and meditation</li> <li>➤ Identifying anemia and treating with iron rich foods like dates, honey etc..in case of severe seeking doctor</li> <li>➤ Proper diet</li> <li>➤ Daily exercise.</li> <li>➤ Psychological support</li> </ul> <p>FOR POLYCYSTIC OVARIAN SYNDROME(PCOS):</p> <ul style="list-style-type: none"> <li>➤ Methods to reduce weight</li> </ul>	video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
			<ul style="list-style-type: none"> <li>➤ Medications to regulate menstrual cycle</li> </ul> <p>FOR THYROID PROBLEMS :</p> <ul style="list-style-type: none"> <li>➤ Maintaining normal thyroid levels by taking thyroid tablets</li> <li>➤ High iodine content diet</li> <li>➤ Reducing weight</li> </ul> 	video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
	2mins		<p><b>MEASURES TO MAINTAIN NORMAL MENSTRUAL CYCLE</b></p> <ul style="list-style-type: none"> <li>➤ To reduce weight (Taking more fruits ,vegetables, avoid fast foods ,oily foods)</li> <li>➤ Regular exercise(not more than 30) minutes per day</li> <li>➤ Reducing stress and strain( listening to music, evening walk, time management for daily work, yoga and meditation)</li> </ul> 	video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
	2mins		<p><b>COMPLICATIONS OF MENSTRUAL DISORDERS:</b></p> <ul style="list-style-type: none"> <li>• Excessive and prolong bleeding leads to anemia</li> <li>• No ovum production</li> <li>• Infertility(due to hormonal imbalance, failure to ovulate)</li> <li>• Osteoporosis(bones become soft and easy to break due to imbalance in hormones)</li> </ul> 	video clipping	Observing

S.NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHER'S ACTIVITY, A.V. AIDS	LEARNER'S ACTIVITY
	2mins		<p><b>SUMMARY:</b></p> <p>Menstrual disorders more common among the early menarche period, it is necessary to take steps to correct menstrual cycle, sufficient knowledge about the condition helps to overcome the effects in future.</p>	Teacher summarizes the topic	Active participation
	2mins		<p><b>CONCLUSION:</b></p> <p>Menstrual disorders should be considered as a important condition earlier and prompt treatment should be taken, adequate knowledge regarding menstrual disorders will help to seek the medical aid.</p>	Teacher concludes the topic	Students clarifies their doubts

# INVESTIGATOR CONDUCTING VIDEO ASSISTED TEACHING ON MENSTRUAL DISORDERS AND ITS EFFECT ON CONCEPTION AMONG STUDENTS OF SELECTED COLLEGES, CHENNAI.

## 1. Giving introduction





## 2. Conducting Pre Test



### 3. Participants Observing the Video



#### 4. Conducting Post Test

