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"A Study To Assess The Effectiveness Of Structured Teaching Programme On Knowledge Regarding Healthy Practices Of Sanitary Pads Usage Among High School Girls In Selected Schools At Bangalore".

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ABSTRACT

STATEMENT OF THE PROBLEM:

"A study to assess the effectiveness of structured teaching programme on knowledge regarding healthy practices of sanitary pads usage among high school girls in selected schools at Bangalore".

BACKGROUND OF THE STUDY

Reproductive health is a crucial part of general health and a central feature of human development. Reproductive health deals with the reproductive processes, functions and system at all stages of life. It is a reflection of health during childhood, and crucial during adolescence and adulthood, sets the stage for health beyond the reproductive years for both women and men, and affects the health of the next generation. Reproductive health is a universal concern, but is of special importance for women particularly during the reproductive years. A Quantitative research approach was adopted to assess the effectiveness of structured teaching programme on knowledge regarding healthy practices of sanitary pads usage among high school girls in selected schools at Bangalore.

OBJECTIVES OF THE STUDY:

- To assess the level of knowledge regarding healthy practices of sanitary pad usage among high school girls before & after the structured teaching programme.

- To evaluate the effectiveness of the structured teaching programme on knowledge regarding healthy practices of sanitary pads usage among high school girls.
- To determine the association between the level of pre test knowledge on healthy practices of sanitary pads usage & selected demographic variables

HYPOTHESIS: -

H1- There is statistically significant difference between pretest and posttest knowledge scores among high school girls regarding healthy practices of sanitary pads

H2- There is significant association between the levels of knowledge of high school girls regarding healthy practices of sanitary pads usage with selected demographic variables.

METHODOLOGY

The researcher has followed Quasi- experimental design, one group pre- test& post -test design with Evaluative approach to assess the effectiveness of structured teaching programme on knowledge regarding healthy practices of sanitary pads usage among high school girls in selected schools at Bangalore. Convenient sampling technique was used to assess the knowledge regarding healthy practices of sanitary pads usage among high school girl to select the subjects. The sample included 80 high school girls. Data was collected through structured knowledge questionnaire by administering the questionnaire to the samples. After the pre-test, structured teaching programme on knowledge regarding healthy practices of sanitary pads usage was administered on the same day to the participants. On seventh day post-test was given using the same questionnaire to evaluate the effectiveness of structured teaching programme Collected data was analysed by using description and inferential statistics.

RESULTS

The study found that in the overall pre-test knowledge score among high school girls majority 56(70.0%) of the high school girls had inadequate knowledge regarding healthy practices of sanitary pads usage, 24(30.0%) had moderate knowledge and none had adequate knowledge. After administration of structured teaching programme whereas in the overall post- test knowledge score, none of the high school girls had inadequate knowledge, 22(27.5%) had moderate knowledge and 58(72.5%) of the high school girls had adequate knowledge.

The overall mean knowledge level obtained by the high school girls following administration of structured teaching programme was 24.24in post-test which was found to be higher than the overall mean knowledge level 13.56 in the pre-test. The statistical test indicated that structured teaching programme was effective in improving knowledge regarding healthy practices of sanitary pads usage.

The mean enhancement between pre-test and post-test was 10.68 and the obtained paired‘t’ value was 37.03. It was found to be statistically significant at the level of $P<0.05$. There is a statistically significant association between post-test knowledge and selected variables with Age group. Educational level Type of family Occupation of Mother Number of Siblings Hence H_2 was accepted. However, there was no significant association between post-test knowledge and religion family income, education of father education of mother and source of information .Hence, stated hypothesis H2 is rejected above selected variables.

INTERPRETATION AND CONCLUSION:

The study findings revealed that the majority of the high school girls gained knowledge after structured teaching programme. Hypothesis H_1 is accepted and hypothesis H_2 is accepted Age group Educational level Type of family Occupation of Mother Number of Siblings but religion, family income , education of father education of mother and source of information was rejected. Thus, the study showed that the structured teaching programme on knowledge regarding healthy practices of sanitary pads usage was effective in improving the knowledge of high school girls. The findings of the study recommended the further interventional approaches regarding the healthy practice of sanitary pads usage among high school girls. Self learning and mass education regarding healthy practices of sanitary pads usage creates awareness. The present study proved that Structured Teaching Programme was effective among high school girls on healthy practices of sanitary pads

Key words:

Effectiveness, Structured Teaching Programme, Knowledge, sanitary pads, healthy practices high school girls

LIST OF ABBREVIATIONS USED

1. DF : DEGREE OF FREEDOM
2. X^2 : CHI SQUARE
3. ≤ : LESS THAN OR EQUAL TO
4. > : GREATER THAN
5. SD : STANDARD DEVIATION
6. ∑ : SUMMATION
7. % : PERCENT
8. NS : NON SIGNIFICANT
9. S : SIGNIFICANT
10. N : NUMBER OF SUBJECT
11. P VALUE : PROBABILITY VALUE
12. STP : STRUCTURED TEACHING PROGRAMME
13. RTI : REPRODUCTIVE TRACT INFECTION
14. UNICEF : UNITED NATIONS INTERNATIONAL CHILDREN EMERGENCY FUND
15. WHO : WORLD HEALTH ORGANIZATION

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INTRODUCTION

"Hygiene is two thirds of Health"- Lebanese Proverb

Health is a common theme in most culture. In fact all the communities have their concept of health as part of their culture. Among definitions still used, probably the oldest is that health is the "absence of disease". In some cultures health and harmony are considered equivalent, harmony being defined as "being at peace with the self, the community, god and cosmos". The ancient Indians and Greeks shared this concept and attributed disease to disturbance in bodily equilibrium and what they called "humors". WHO has defined "Health is a state of complete physical and mental and social well being and not merely an absence of disease or infirmity". In recent years .we have acquired a new philosophy of health and it includes health as a fundamental human right of each individual which includes the children, the adolescent, the adults and the elderly of the society.[1]

Reproductive health is a crucial part of general health and a central feature of human development. Reproductive health deals with the reproductive processes, functions and system at all stages of life. It is a reflection of health during childhood, and crucial during adolescence and adulthood, sets the stage for health beyond the reproductive years for both women and men, and affects the health of the next generation. Reproductive health is a universal concern, but is of special importance for women particularly during the reproductive years.[2]

Personal hygiene during menstruation explored including bathing and showering, and buying and using sanitary protection products .WHO has defined Adolescence as the period between 10-19 years of life. Adolescent girls constitute about 1/5th total female population in the world. Adolescence in girls has been recognized as a special period in their life cycle that requires specific and special attention. This period is marked with onset of menarche.[3] The continuum of an individual's life can be divided into several life stages, each characterized by certain features. Accompanied by considerable hormonal changes, the life stages of women are generally divided into infancy, puberty, reproductive age, climacteric period, and elderly years, in addition to pregnancy & delivery that are generally included as life events unique to women. It is important to pay attention to the psychosocial aspect of

women's health & reflect such understanding in clinical practice. For this reason, it is necessary to understand the role of women in the context of socio cultural factors as well as the physical features characteristic of each age stage.[4]

Adolescent period is recognized as a special period in a girls' life cycle which requires special attention. Menarche is an important biological milestone in a woman's life as it marks the onset of the reproductive phase of her life. The average age at menarche is mostly consistent across the populations, that is between 12 & 13 years of age.[5]

Menstrual cycle is an important indicator of women's reproductive health. Menarche is one of the markers of puberty and therefore it is considered as an important event in life of adolescent girls. Studies suggested that menarche tends to appear to earlier in life as the sanitary, nutritional, and economic conditions of a society improve. However, menstruation has a different pattern within a few years after menarche, which might not well understood by many adolescent girls. Unfortunately due to shyness & embarrassment the situation becomes worse for girls.[6]

Surveys by the Ministry of Health in 2012 found out that most problems related to menstrual hygiene in India are preventable, but are not due to low awareness & poor menstrual hygiene management. This resulted in development of some serious aliments for adolescent girls. Roughly 120 million menstruating adolescents in India experience menstrual dysfunctions, affecting their normal daily chores. Nearly 60,000 cases of cervical cancer deaths are reported every year from India, 2/3rd of which are due to poor menstrual hygiene.[7]

Menstruation is a phenomenon unique to all females. It is still considered as something unclean or dirty in Indian society. This concept is responsible for related taboos. The first menstruation is often horrifying and traumatic to an adolescent girl because it usually occurs without her knowing about it. Although menstruation is a natural process, it is linked with several perceptions and practices. Women having a better knowledge regarding menstrual hygiene and safe menstrual practices are less vulnerable to reproductive tract infections and its consequences. [8]

The menstrual cycle, under the control of the endocrine system, is necessary for reproduction. It is commonly divided into three phases: the follicular phase, ovulation, and the luteal phase; although some sources use a different set of phases: menstruation, proliferative phase, and secretory phase. Menstrual cycles are counted from the first day of menstrual bleeding. Stimulated by gradually increasing amounts of estrogen in the follicular phase, discharges of blood slow then stop, and the lining of the uterus thickens. Follicles in the ovary begin developing under the influence of a complex interplay of hormones, and after several days one or occasionally two become dominant. Approximately mid-cycle, 24–36 hours after the Luteinizing Hormone surges, the dominant follicle releases an ovum, or egg in an event called ovulation. After ovulation, the egg only lives for 24 hours or less without fertilization while the remains of the dominant follicle in the ovary become a corpus luteum; this body has a primary function of producing large amounts of progesterone. Under the influence of progesterone, the endometrium changes to prepare for potential implantation of an embryo to establish a pregnancy. If implantation does not occur within approximately two weeks, the corpus luteum will involutes, causing sharp drops in levels of both progesterone and estrogen. These hormone drops cause the uterus to shed its lining and egg in a process termed menstruation.[9]

Hygiene-related practices of women during menstruation are of considerable importance, as it has a health impact in terms of increased vulnerability to reproductive tract infections (RTI). The interplay of socioeconomic status, menstrual hygiene practices and RTI are noticeable. Today millions of women are sufferers of RTI and its complications and often the infection is transmitted to the offspring of the pregnant mother.[10]

The WHO study showed that in developing countries 52% of pregnant women and about 35% to 40% of nonpregnant women suffer from iron deficiency anaemia. India has the world's highest prevalence of iron deficiency anaemia among women, with 60 to 70 percent of the adolescent girls being anaemic. The prevalence of anaemia among pregnant women in Karnataka remains 47.6 %. Adolescence is considered as a nutritionally critical period of life. The pre-pregnancy nutritional status of young girls is important as it impacts on the course and the outcome of their pregnancy, hence, the health of adolescent girls demands special attention.[11]

In the menstrual cycle, changes occur in the female reproductive system as well as other systems. A woman's first menstruation is termed menarche, and occurs typically around age 12-13. The average age of menarche is about 12.5 years. But is normal anywhere between ages 8 and 16. Factors such as heredity, diet and overall health can accelerate or delay menarche. The end of a woman's reproductive phase is called the menopause, which commonly occurs somewhere between the ages of 45 and 55 .[12]

In World Health Organization report is, poor menstrual hygiene in developing countries has been an insufficiently acknowledged problem. In several cultures there are taboos1concerning blood, menstruating girls and women and menstrual hygiene. Worldwide there is also structural gender inequality2, which continues to exist through the widespread preservation of preconceptions, stereotypes and cultural patriarchal attitudes, because of which the position of women as independent actors is being undermined daily. The lack of attention to this issue is striking.

Approximately 50% of the world's population knows from their own experience how important good menstrual hygiene is to be able to function optimally during the menstruation period. Yet this is hardly realized by in particular politicians, programmers and policy makers. This is also surprising in view of the explicit relation of this issue to water and sanitation and the distribution of all kinds of diseases, which can be reduced considerably by good hygiene. [13]

The problem concerning menstruation and participation in the higher forms of primary (grade 4 & 5) and secondary education has several aspects. Sanitary facilities and waste management at schools, including the hygienic disposal of sanitary napkins and other protection alternatives, are so poor and unsafe that girls and female teachers prefer not to use these during their menstruation period. Moreover, safe and effective protection alternatives, such as sanitary napkins, tampons, etc., are not available, because they have to be imported or because of the high taxes being levied on these products. These problems are reinforced by local customs and cultural and/ or religious traditions and taboos concerning menstruation, especially in rural areas.[14]

If proper hygiene management will be follow, one can be relaxed and continuing with her routine work during menstruation. Therefore, Menstruation Hygiene Management essentially promotes to keeping a good standard of hygiene which helps to prevent the development and spread of infections, illnesses and bad odurs during menstruation. An unhealthy lifestyle among young people is a serious and often unnoticed problem. It seems that there are differences in the life of the young people from rural to urban areas. The overall status of menstrual hygienic practice in rural adolescents were poor than that of the urban areas. Hence more stress should be laid on planning and implementing menstrual hygienic programmes for adolescent girls in rural setting.[15]

There is a great need perceived, in teaching these issues in the schools and communities for adolescent girls with enough teaching material. Adolescent girls are very important section of our society as they are our potential mother and future house makers. Heath care providers are responsible to promote adolescent health through various approaches. Parents, family members, teachers and community leaders should be involved and encouraged to participate in maintenance of adolescents' health.

NEED FOR STUDY

"Irony is the hygiene of the Mind".

-Elizabeth Asquith Bibesco

Menstrual hygiene, a very important risk factor for reproductive tract infections, is a vital aspect of health education for adolescent girls. Educational television programmes, trained school nurses/health personnel, motivated school teachers and knowledgeable parents can play a very important role in transmitting the vital message of correct menstrual hygiene to the adolescent girl of today. [16]

Menstruation is a monthly occurrence process normally begins at the age of 10 to 16. Many girls feel uncomfortable, unclean and shameful during their menstrual period. Girls and women wish to bathe more often. Menstruation has often been dealt with secrecy in many cultures. And this custom leads poor and inadequate sanitary facilities. Girls not wish to attain the school during menstruation due to poor sanitation facilities and using of homemade cloth. As a result, they grow up with low self-esteem and disempowerment from poor educational attainment .[17]

Adolescents play a significant role in the reproductive health status of a given population. The World Health Organization (WHO) defines the 10-19-year-old age group as adolescents. Adolescence is a period of transition from childhood to adulthood that is characterized by rapid physical, psychological, biochemical and social development and maturation. With respect to hygiene in girls, among the most interesting aspects of this period are menstruation and genital hygiene. In adolescents, the risk of bacterial vaginosis may be higher due to irregular menstrual cycle after menarche, lower estrogen levels and high vaginal pH Additionally, the vaginal pH becomes less acidic during menstruation due to the decreased number of lactobacilli and the presence of menstruation fluid. As a result, microorganisms can settle more quickly. In some studies, were found that students are often not aware of basic hygienic practices, such as washing hands before and after toilet use, drying the genital area, bathing position, preferred color and type of underwear and healthy practices of sanitary pads. [18]

Menstruation and related problems are not much discussed by adolescents and their parents. If they have a thorough knowledge about menstruation and menstrual hygiene most of the adolescent problems will be solved. The silence and secrecy of menstruation does not allow an open discussion on the subject. Very few mothers even today, talk to their daughters openly about the process of menstruation because of the taboos and cultural practices associated with it. Some health problems, conditions and behaviors are more prevalent among older children and

adolescents and may influence their future health. Reproductive tract infections due to lack of menstrual hygiene and unsafe sex or common health problems and health related behaviors among adolescents, in developing countries. In India, there are many myths, misconceptions as well as poor traditional practices, which compel them to practice certain menstrual practices, which are not hygienic as recommended. Thus, imparting knowledge about the menstrual hygiene practice may improve the usual practice by eliminating the obstacles to healthy practices. A Planned Teaching Program on the felt need will be more suitable as it gives importance to the area where they lack knowledge. Adolescent girls constitute a vulnerable group, particularly in India where female child is neglected one. Menstruation is still regarded as something unclean or dirty in Indian society. The reaction to menstruation depends upon awareness and knowledge about the subject. Although menstruation is a natural process, it is linked with several misconceptions and practices, which sometimes result into adverse health outcomes.[19]

Hygiene-related practices of women during menstruation are of considerable importance, as it has a health impact in terms of increased vulnerability to reproductive tract infections (RTI). The interplay of socio-economic status, menstrual hygiene practices and RTI are noticeable. Today millions of women are sufferers of RTI and its complications. [20]

Inappropriate menstrual hygiene experience and adverse effect of menstruation on schooling and social life, use of unhygienic material as menstrual absorbent and unacceptable methods of disposal for menstrual absorbents were more common in girls. More girls who had no training disposed of their menstrual absorbents in farms and road side or by recycled them by washing than those who were trained. [21]

Menstrual hygiene and management is an issue that is insufficiently acknowledged and has not received adequate attention in the reproductive health and water, sanitation and hygiene (WASH) sectors in developing countries and its relationship with impact on achieving many Millennium Development Goals (MDGS) is rarely acknowledged. Abdominal pain is the most common medical problem experienced by the survey respondents (85%). Menstrual stress is also common, about 89% of the survey respondents practice some form of restriction or exclusion, the commonest one being abstaining from religious activities (68%). Lack of privacy for cleaning and washing (41%) was the major reason identified by survey respondents for being adolescent during menstruation. This is usually because of lack of water or due to minor issues, such as missing door locks, even when infrastructure of toilet is present. [22]

The study was conducted on Feminine hygiene care in India, and rampant unhygienic sanitary practices, India in 2011 May 11. In comparison, 100% adolescence in Singapore and Japan, Indonesia (88%) and China (64%) use sanitary napkins. In the survey conducted in Delhi, Chennai, Kolkata, Lucknow, Hyderabad, Gorakhpur, Aurangabad, Bangalore and Vijayawada, around 31% adolescence reported a drop in productivity levels when they menstruate, to miss around five days of school in a month. Menstrual hygiene is lowest in eastern India, with 83% saying their families cannot afford sanitary napkins.[23]

A descriptive, cross-sectional study was conducted on "Menstrual Hygiene: How Hygienic is the Adolescent Girl?" in All India Institute of Hygiene & Public Health, West Bengal in 2007 December 8. 160 adolescent girls were selected with the help of a pre-designed and pre-tested questionnaire. This study shows that majority of the girls preferred cloth pieces rather than sanitary pads as menstrual absorbent. Only 11.25% girls used sanitary pads during menstruation. Apparently, poverty, high cost of disposable sanitary pads and to some extent ignorance dissuaded the study population from using the menstrual absorbents available in the market. [24]

A Study was conducted on "Knowledge and practice regarding menstrual hygiene in rural adolescent girls" in TU Teaching Hospital, Kathmandu, Nepal in 5 July 2007. 150 adolescent girls were interviewed using a pre-tested structured questionnaire; they found that they were not properly maintaining the menstrual hygiene. Only 6.0% of girls knew that menstruation is a physiologic process, 36.7% knew that it is caused by hormones. Ninety-four percentages of them use the pads during the period but only 11.3% dispose it. Overall knowledge and practice were 40.6% and 12.9% respectively. [25]

The Study was conducted on knowledge and practices related to menstruation among tribal adolescent girls in P.G. Department of Home Science, University of Jammu, India in 2009 March 1. The sample for the study comprised of 200 girls. The most common source of information about menstruation for the majority (83%) of the sample girls were friends. The level of personal hygiene and management of menstruation was found to be quite unsatisfactory. 98% of the girls believed that there should be no regular bath during menstrual cycle. [26]

A descriptive cross-sectional study was conducted to assess the knowledge and practice regarding menstruation among school going adolescents of Sunsari, Nepal on 2017. Data was collected from 61 female adolescents using a pre-designed, pretested structured self administered questionnaire. Convenient sampling method was used. The

findings of the study revealed that 36.1% correctly reported about menstruation, 78.7% of adolescent fall dysmenorrhoea. About 54.1% used sanitary pads and frequency of changing a day was highest that is 50.8%. Initial reaction was of fear or apprehension at menarche by 36.1% of girls, where as 44.3% perceived it as an expectant process. Girls still faced different types of restrictions like not being allowed to visit holy places, not being allowed to cook and touch male family members etc. The study concluded that adolescent girls are lacking the proper knowledge regarding menstrual care.[27]

A Descriptive, cross-sectional community based study was conducted on March 2018 to assess the menstrual hygiene among adolescent girls of a secondary school situated in the urban field, Kolkata. The pre-designed and pre-tested questionnaire was used to collect the data.147 samples were selected using purposive sampling. 62 (42%) girls were aware about menstruation prior to attainment of menarche. Hand-washing was regular among 91.8% but 16.3% washed only with water. Similarly washing of private parts were regular among 76.9% but 74.1% used only water but no soap, there is significant relationship between hygienic practices followed and presence of continuous supply of water and presence of exclusive toilet to their family. Except for 2(1.3%) everybody followed some taboo or unnecessary restriction. Menstrual hygiene, a very important risk factor for reproductive tract infections (RTI), is a vital aspect of health education. This problem, unfortunately, has not yet been addressed seriously in terms of its mental, social and health impact on the country. Hence adolescent girls should be educated about importance of hygiene during menstruation through focused group discussion, with demonstrations.[28]

A descriptive cross sectional study was conducted to assess the knowledge and the practice of menstrual hygiene among school going adolescent girls at Chidambaram, Tamil Nadu on 2017. 435 school going adolescent girls of 8th - 12th standards. Data was obtained by using predesigned; pretested structured questionnaire. Results of the study revealed that only 28.2% girls were aware of menstruation before menarche. Only 49.5% girls knew that practicing good hygiene during menstruation would prevent reproductive tract infections. Sanitary pads were used by 90.5% of the study population. Nine percent girls used old clothes as the absorbents. Satisfactory cleaning of the external genitalia with soap was practiced by only 14.5% girls. The study concluded that personal hygiene practices were found to be unsatisfactory among adolescent girls. There is need to educate adolescents about the issues related to menstruation, so that they could safeguard themselves against various infections and diseases.[29]

A cross sectional study was conducted to explore the knowledge, practices and sources of information regarding menstruation and hygiene among adolescent girls at Bangaluru on 2016. 550 school going adolescent girls between the age group of 13-16 years were included in the study. Data was collected using a pre-tested questionnaire. Results of the study revealed that 34% participants were aware about menstruation prior to menarche and mothers were the main source of information both in rural and urban adolescent girls. Overall 69% of adolescent girls were using sanitary napkins as menstrual absorbent. The study concluded that there is a need to provide education and equip the adolescent girls with skills regarding safe and hygienic practices to make appropriate choices so as to enable them to lead a healthy reproductive life and prevent the risk for reproductive tract infection.[30]

With above facts and reviews, investigator felt that menstruation and its practices are still clouded by taboos and socio-cultural restrictions resulting in adolescent girls remaining ignorant of the scientific facts and hygienic health practices, which sometimes result in adverse health outcomes. Our traditional society discourages open discussion on these issues. Such type of study will help to plan and implement necessary educational program or interventions to create awareness and prioritize problems. There are differences in menstrual problems and hygienic practice between urban and rural adolescents because of the dietary habits, lifestyle, awareness, social stigma and availability of health services. There is a need to identify the problems associated with the menstruation and practices among urban and rural group in order to diagnose the healthy and unhealthy practices and encourage them to adopt various measures to prevent further complications.

2. OBJECTIVES

STATEMENT OF THE PROBLEM:

"A study to assess the effectiveness of structured teaching programme on knowledge regarding healthy practices of sanitary pads usage among high school girls in selected schools at Bangalore."

OBJECTIVES OF THE STUDY:

- To assess the level of knowledge regarding healthy practices of sanitary pad usage among high school girls before & after the structured teaching programme.
- To evaluate the effectiveness of the structured teaching programme on knowledge regarding healthy practices of sanitary pads usage among high school girls.

- To determine the association between the level of pre test knowledge on healthy practices of sanitary pads usage & selected demographic variables.

OPERATIONAL DEFINITION:

Assess: In this study it refers to organised collection of information on knowledge regarding healthy practices of sanitary pads among high school girls.

Structured teaching programme: In this study it refers to systematically planned group of instructions designed to provide informations & increase the knowledge regarding healthy practices of sanitary pads usage of high school girls.

Effectiveness: In this study it refers to finding the extent to which the structured teaching programme improve the knowledge of high school girls regarding healthy practices of sanitary pad usage.

Knowledge: It refers to the level of understanding and healthy practices of sanitary pads usage among the high school girls.

Usage of sanitary pad: In this study it refers practicing of cleaning of external genitalia, use of sanitary pad and frequent changing of sanitary pad to prevent odor, proper washing, drying of inner wears under sunlight and disposal of pads.

Sanitary pad: In this study sanitary pad is an absorbent product. It comprises of multilayered structure in which each layer have specific function to perform. It consists of three layers; top sheet, absorbent core & barrier sheet.

High school girl: In this study high school girls are referred who are in class ix standard in the selected schools at Bangalore.

ASSUMPTIONS

- High school girls may have some knowledge on menstrual hygiene.
- High school girls will have interest to know more about menstrual hygiene.
- Structured teaching programme may enhance the knowledge of among high school regarding the importance of healthy practice of sanitary pads.

HYPOTHESIS

H1- There is statistically significant difference between pretest and posttest knowledge scores with high school girls regarding menstrual hygiene.

H2- There is significant association between the levels of knowledge of high school girls regarding menstrual hygiene with selected demographic variables.

SAMPLING CRITERIA

Inclusion criteria: high school girls, who are,

- High school girls those who were and studying in IX,
- attained menarche
- Able to understand English or Hindi.
- Willing to participate in the study.
- Present at the time of data collection.

Exclusion criteria: high school girls, who are,

- Undergone any kind of teaching or awareness programme regarding healthy practices of sanitary pads usage.
- Absent on the day of data collection.

LIMITATION:

- This study is delimited to class IX girls in selected schools at Bangalore.

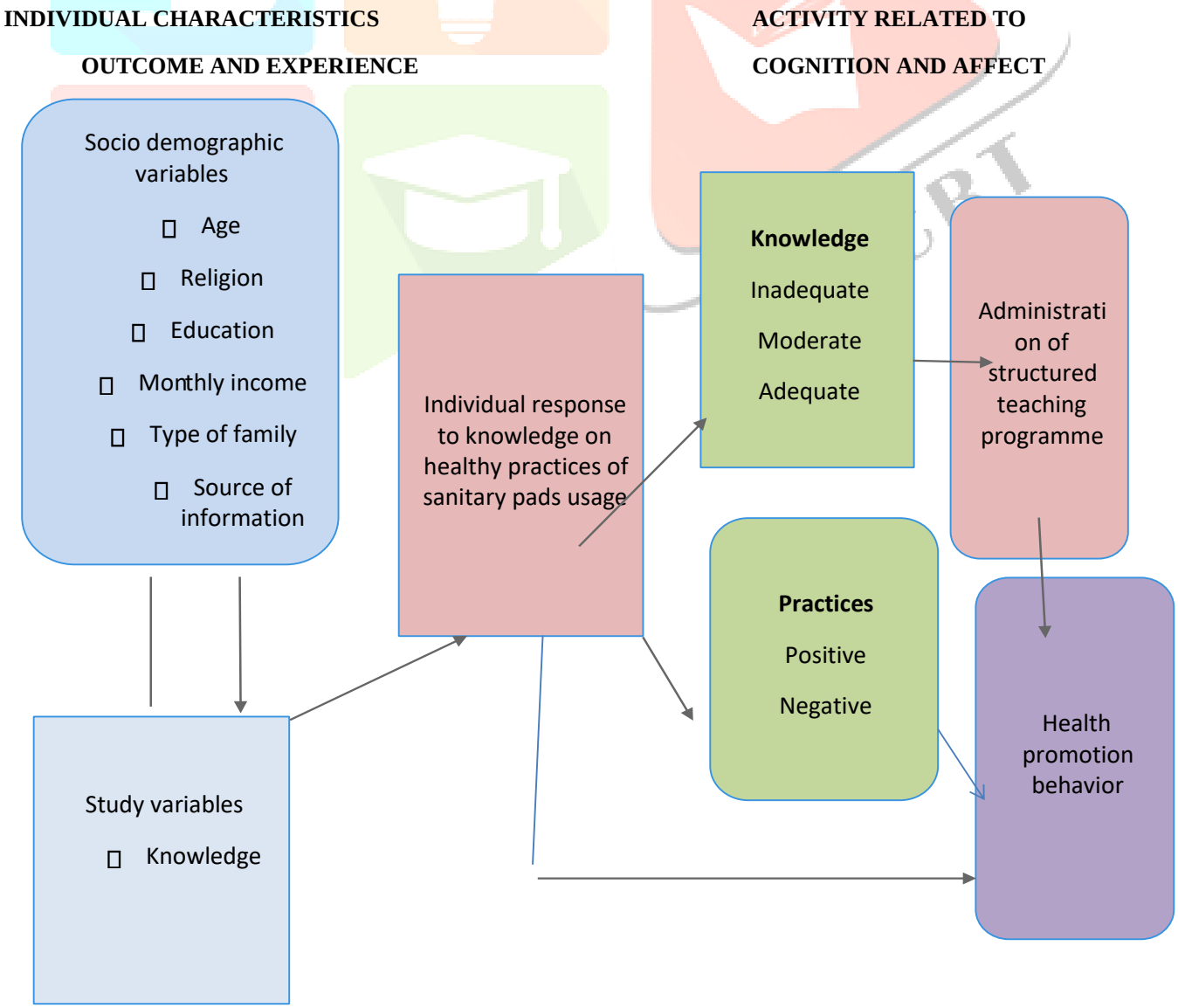
- Data collection period is 4 weeks only.

CONCEPTUAL FRAMEWORK BASED ON HEALTH PROMOTION MODEL

Theories are linked to the real world through definition that specifies how concepts will be known, experienced, observed and measured. Theories guide decision making by providing the supporting conceptualization for the study such as significance of the problem, background and problem definition or statement of the problem. Thus theory is an abstract generalization that presents a systematic explanation about the relationships among phenomena.[18] Concept is defined as a complex mental formulation of an object properly event that is derived from individual perception and experience.Conceptual frame work is interrelated concepts or abstractions that are assembled together in some rational scheme by virtue of their relevance to common and sometimes referred to as conceptual scheme. [18]

The conceptual framework selected for this study is modified conceptual framework based on revised Pender's (2002) and otava charter (1986) health promotion model.

The health promotion model proposed by Pender defines health as a positive, dynamics state not merely the absence of disease. The health promotion model was designed to be a "complimentary counterpart to models of health protection" health promotion is directed at increasing a client's level of well being. The health promotion model describes the multi dimensional nature of persons as they interact within their environment to peruse health. The model focuses on the three functions of a client's cognitive perceptual factors (individual perceptions), individual characteristics and experience and behavioural outcome.According to this model, activity related to cognition and affect is individual's response to knowledge and practices questionnaire.The individual characteristics are age, religion, education, occupation, monthly income, type of family, total family members and food habits. According to modern people move back and forth in a reciprocal fashion between knowledge and practices regarding diet during lactation.The outcome shows the knowledge and practices whether it is inadequate, moderate or adequate and positive or negative respectively. Health promotion model is to bring out the awareness on adequate knowledge and practices of postnatal mothers regarding diet during lactation through the administration of structured teaching programme.



(FIG-1: MODIFIED CONCEPTUAL FRAMWORK BASED ON REVISED PENDER'S(2002) HEALTH PROMOTION MODEL)

3.REVIEW OF LITERATURES

Review of literature refers to the activities involved in identifying and searching for information on a topic and developing an understanding of the state of knowledge on that topic. (Polit. F, 1999)

This chapter deals with literatures related to selected menstrual hygiene. Review of literature for the present study has been organized under the following headings

- Studies related to menstrual cycle.
- Studies related to knowledge regarding healthy practices of sanitary pads usages.
- Studies related to risk factors for reproductive tract infection due to unhealthy practices of sanitary pads usages.
- Studies related to effectiveness of health education programme on Healthy practices of sanitary pad usages.

SECTION-I

STUDIES RELATED TO MENSTRUAL CYCLE:

A survey was conducted on "Serum sex hormone-binding globulin during puberty in girls and in different types of adolescent menstrual cycles" in America. Serum sex hormone binding globulin (SHBG) concentrations were measured by an immune radiometric assay, as part of a longitudinal study of puberty in girls, and were related to age, pubertal stage, age at menarche, weight, nature of the menstrual cycle and serum concentrations of sex steroids. A slow but very significant decrease was seen in SHBG from77 nmol/l at 8-10 years of age to about 50n mol/l after 15 years of age. Girls who experienced early menarche (before 13.0 years) had lower SHBG but higher oestradiol serum concentrations at 10.0-15.9 years of age compared to girls with later menarche. In ovulatory menstrual cycles, a significant increase in SHBG was found from the early to the late part of the cycle, whereas no changes took place in anovulatory cycles. Serum concentrations of SHBG showed positive correlations with those of oestradiol and progesterone in specimens taken inthe late part of the cycle. In view of the weak relationships between serum SHBG and sex steroid concentrations, and the strong relationships between SHBG, weight and body fat percentage, factors other than steroids have to be considered in the regulation of SHBG levels during puberty .[31]

A Survey was conducted on "Hormonal pattern of adolescent menstrual cycles"in India . Samples were taken every day or every second day during one menstrual cycle. The cycles recorded could be divided into three groups. The first and oldest group consisted of 10 girls with a mean gynecological age of 2.9 yr. The luteal phase was at least 11 days and the progesterone concentration was at least 5 ng/ml. The testosterone rise 55% on the day of LH surge correlated well with the simultaneous progesterone rise 270% and the following luteal progesterone secretion. A negative correlation was seen between the FSH concentration on days 3-4 of the cycle and the length of the follicular phase. The second group consisted of 4 girls who had a mean gynecological age of 1.5 yr. The luteal phase was of 4- to 8-day duration and the progesterone secretion was lower than in group I. The follicular phase testosterone concentration was lower in group II as compared to group I. The third group consisted of 6 girls with a mean gynecological age of 1.1 yr. These cycles were anovulatory, as the serum progesterone concentration never exceeded 1.0 ng/ml. In two cycles, signs of follicular maturation were seen. In the four others, the androgen levels tended to be elevated. In two cases, the testosterone and androstenedione concentrations were 2-4 times elevated from the beginning of these two cycles. Thus, the hormonal patterns of adolescent menstrual cycles are far from uniform. It is very likely that in addition to gonadotropins, estradiol and progesterone, androgens may also have a role in the development and maintenance of normal menstrual function in the female.[32]

A descriptive study was conducted by Singh SP and Arora M among 504 intermediate college going adolescent girls studying in 7th and 12th standard in Varanasi U.P to assess their knowledge regarding menstruation. Only 45.6% of the study subjects obtained more than 50% score. Age at menarche, duration of menstrual cycle, girls reach puberty before boys and menstruation makes women capable of childbearing was correctly known to more than two-fields of the study subjects. More

than half of the girls did not know that during menstruation blood come from uterus/vagina, 84.9% stated that it is dangerous to swim and run during periods. Study was concluded that more attention is needed to develop the knowledge regarding menstruation phase among adolescent girls.[33]

A community based cross-sectional observational study was conducted in hoogly district, West Bengal among 160 adolescents girls with the help of pre designed and pre tested questionnaire. Data were analyzed statistically by simple proportions. Out of 160 respondents, 108(67.5%) girls were aware about menstruation prior to attainment of menchre. Mother was the first informant regarding menstruation in case of 60 (37.5%) girls. One hundred and thirty eight (86.25%) girls believed it as a physiological process. Seventy eight (48.75%) girls knew the use of sanitary pads during menstruation. Thus it should be taken into account to solve menstrual problems that affect female health and improve the menstrual hygiene practices.[34]

A descriptive cross-sectional study with the help of pre designed and pre tested questionnaire was done inTeheran district on 250 students regarding menstruation& it's cycle. Study reveals that 70% had knowledge about dysmennorhoea, 75% received information from their relatives, mother &sister, 32% practiced personal health taking behavior such as taking bath and using hygienic materials. 23% avoided physical activity (or) even mild exercises. 32% takes bath on the 1st days and 51.5% takes bath even after 8 days. The researcher concluded the study by suggesting that, there was still need to modify the perception and usages of napkin product during menstruation.[35]

SECTION – II

STUDIES RELATED TO KNOWLEDGE REGARDING HEALTHY PRACTICES OF SANITARY PADS USAGES:

A community based surveywas conducted in rural Thiruvananthapuram, Kerala, to assess the Menstrual Hygiene Practices among the rural women. Multi stage cluster sampling method of 'thirty cluster of twelve' was used to identify the sample population. The sample comprised 360 married or unmarried, non-pregnant, non-lactating women in the reproductive age group (12 – 45). A house-to-house survey was conducted using a structured pre-test questionnaire. Menstrual hygiene practices were assessed in terms of the type of protection used, frequency of changing, disposal or recycling (if reusable) methods. Symptoms suggestive of reproductive morbidity condition RTI, UTI, Skin problems associated with sanitary production and menstrual disorders were collected. The result of the study reveals that the majority of the sample (60.8 %) dealt with Menstruation unhygienically. A statistically significant association was seen between menstrual hygiene maintenance and education, SES, knowledge prior to menarche, type of protection, and accessibility to water, bathroom facilities and menstrual disorders There are several minor health problems related to menstruation such as backache, constipation, tension that may be associated with the premenstruation period or menstruation. The infections caused due to poor menstrual hygiene are vaginitis, vulvitis, and urinary tract infections.[36]

A survey was conducted on 130 girl students aged 13-17 years in Haryana to assess their awareness and health seeking behavior regarding menstrual and reproductive health. In this study mean age at menarche of the girls was 13.6-P0.83 years. Study revealed that they have poor knowledgeregarding menstruation& reproductive health . This study highlights the need for educating school girls about adolescent health, pregnancy and reproductive health problems through schools and parents by the health professionals and teachers .[37]

A cross sectional ,communitybased survey was conducted in menstrual hygiene practices and reproductive morbidity in rural Thiruvananthapuram, Kerala . Multi stage cluster sampling method of 'thirty cluster of twelve' was used to identify the sample population. The sample comprised 360 adolescents. Majority 60.8 % dealt with menstruation unhygienically. A statistically significant association was seen between menstrual hygiene maintenance and education, knowledge prior to menarche, type of protection, and accessibility to water, bathroom facilities and menstrual disorders. Symptoms suggestive of RTI were reported by 36.1 percent (95%CI: 33.6-38.6) of the adolescence.

Skin problems related to sanitary protection were reported by 45.8 percent (95%CI: 43.2-48.4) of the women. Unhygienic management of menstruation was significantly associated with RTI and Skin problems associated with sanitary protection.[38]

A cross sectional study was conducted on menstrual hygiene among adolescent schoolgirls in Mansoura, Egypt . In Egypt, in poor areas, there is a problem of overcrowding and poor infrastructure both in schools and homes. Toilets may be totally absent or few in number, with broken doors or defective water supply and sewerage. No privacy for taking care of menstrual hygiene at home and at school was reported by 24.6% and 97% of gifts, respectively. Although students spend a short time in school, as many schools have two and even three shifts per day, only 6.7% of girls changed pads at school. Lack of space and privacy were also reported in the recent Indian study mentioned above and in an Iranian study among adolescents in Tehran suburbs, where 27% of the girls did not practice menstrual hygiene at all. In the present study almost all the girls (92.2%) reported the mass media as their source of knowledge about menstrual hygiene, followed by mothers (45%). The study also clearly pointed out the impact of health education in improving knowledge and practices regarding menstrual hygiene . [39]

The quasi experimental study was undertaken to assess the knowledge and practices related to menstruation among tribal (Gujjar) adolescent girls. The sample for the study comprised of 200 girls in the age group 13-15 years. Both nomadic and semi-nomadic Gujjars were included. A combination of snowball and random sampling technique was used for selection of the sample group from various areas of Jammu district of Jammu and Kashmir State. Interview guide was developed and used to study the knowledge and practices related to menstruation among adolescent girls. The results revealed that sample girls lacked conceptual clarity about the process of menstruation before they started menstruating due to which they faced several gynaecological problems. The most common source of information about menstruation for the majority (83%) of the sample girls were friends. There were several socio-cultural taboos related to menstruation. The level of personal hygiene and management of menstruation was found to be quite unsatisfactory. 98% of the girls believed that there should be no regular bath during menstrual cycle. The results hold implications for professionals involved in improvement of adolescent reproductive health in particular.[40]

A descriptive study was conducted in Andhrapradesh and interview were conducted within 65 families 14 t0 15 years old attending a rural High schools in Guntur district in Andhrapradesh to learn their knowledge and practices about menstruation. 43% know that menstruation is a physiological process, 50% knows that hormones are responsible for menstruation. 51% know that menstrual bleeding originated from the uterus. Regarding the practices 10% used old cloth during menstruation, 25% reused the cloth. 16% disposed of the used cloth through dhobi.16% put in canal. 52% took special bath during menstruation.27% student's cleaned external genital area with water. Only 3% used water and soap. More than 50% were restricted from house hold work. 13% were restricted from attending school during menstruation. The researcher suggested the need of health educational activities among the adolescent girls, their parents and teachers for improving menstrual hygiene and removing the myths and misconception regarding menstruation.[41]

A descriptive study was conducted on menstrual hygiene among adolescent school girls in Mansoura, Egypt. This study among 664 schoolgirls aged 14-18, asked about type of sanitary protection used, frequency of changing pads or cloths, means of disposal and bathing during menstruation. Girls were selected by cluster sampling technique in public secondary schools in urban and rural areas. Data were collected through an anonymous, selfadministered, open-ended questionnaire during class time. The significant predictors of use of sanitary pads were availability of mass media at home, high and middle social class and urban residence. Use of sanitary pads may be increasing, but not among girls from rural and poor families and other aspects of personal hygiene were generally found to be poor, such as not changing pads regularly or at night, and not bathing during menstruation. Lack of privacy was an important problem. Mass media were the main source of information about menstrual hygiene, followed by mothers, but a large majority of girls said they needed more information. Study

revealed that instruction in menstrual hygiene should be linked to an expanded programme of health education in schools. A supportive environment for menstrual hygiene has to be provided both at home and in school and sanitary pads made more affordable.[42]

A descriptive, cross-sectional study was conducted among 160 adolescent girls of a secondary school situated in the field practice area of Rural Health Unit and Training Center, Singur, West Bengal, with the help of a pre-designed and pre-tested questionnaire. Data was analyzed statistically by simple proportions. Results shows Out of 160 respondents, 108 (67.5%) girls were aware about menstruation prior to attainment of menarche. Mother was the first informant regarding menstruation in case of 60 (37.5%) girls. One hundred and thirty-eight (86.25%) girls believed it as a physiological process. Seventy-eight (48.75%) girls knew the use of sanitary pad during menstruation. Regarding practices, only 18 (11.25%) girls used sanitary pads during menstruation. For cleaning purpose, 156 (97.5%) girls used both soap and water. Regarding restrictions practiced, 136 (85%) girls practiced different restrictions during menstruation. Study was concluded by telling that menstrual hygiene is a very important risk factor for reproductive tract infections and a vital aspect of health education for adolescent girls. Educational television programmes, trained school nurses/health personnel, motivated school teachers and knowledgeable parents can play a very important role in transmitting the vital message of correct menstrual hygiene to the adolescent girl .[43]

A cross sectional study was conducted on "Knowledge, attitude and practices regarding menstruation of students in Taiwan". The purpose of the study was to explore gender differences in knowledge and attitudes towards menstruation among Taiwanese adolescents. This study was a secondary data analysis of a cross-sectional comparison study where a total of 287 female and 269 male students at a junior high school participated in the study. The results showed that almost all the students had heard about menstruation and most of them had received menstrual information at school. However, their knowledge about 27menstruation was not accurate. Moreover, the male students expressed more negative attitudes towards menstruation than the female students. Study concluded that there is need to educate female and male both gender on the aspect of menstruation and create a positive attitude towards menstruation in the society .[44]

A descriptive study was conducted on knowledge and practice of menstruation and menstrual hygiene among high school girls"in Gurdaspur, Punjab . The findings of the study showed that 61.66%of the girls had an average knowledge regarding menstruation on menstrual hygiene and 87.66% of the girls followed correct practices. Study revealed that still there is a need to improve knowledge on healthy practices during menstruation among adolescent. [45]

SECTION-III

STUDIES RELATED TO RISK FACTORS FOR REPRODUCTIVE TRACT INFECTION DUE TO POOR MENSTRUAL HYGIENE:

A cross sectional study was carried out on 350 students from a major city in South India in Mysore . The study highlights the pattern of use of sanitary napkins by girls according to age. It can be perused that two-thirds of the selected girls (68.9%) regardless of age used disposable pads and a small proportion (7.4% and 19.1%) used cotton or cloth material, respectively. However use of both the disposable and non disposable materials by girls was also common. With respect to storage of the sanitary napkins and the pattern of use, it was found that 56.6% girls stored the clean (unused) pads in the cupboards or drawers, and 15. 1 and 21.1% girls used dress cabinet and bathroom respectively. The practice of changing pads during night was mentioned by 79.1% while changing in school or college was less common (20.6%). Majority (78.3%) of the girls changed napkins 2-3 times a day and 16.6% mentioned to change once a day. Study concluded as, hygiene related practices of women during menstruation are of considerable importance as it affects health by increasing vulnerability to infection especially the infections of urinary tract and perineum. [46]

"Menstrual hygiene" scheme to be launched in Ministry is planning India in New Delhi . An expert said, a recent community based survey by AC Nielsen had found that 70% of women in India cannot afford sanitary napkins. Only 12% of 355 million menstruating women use sanitary napkins. Over 88% of women resort to unhygienic alternatives like unsanitized cloth, ashes and husk sand, which often leads to Reproductive Tract Infection (RTI). Studies reveal that RTI is 70% more common among women who use these unhygienic alternatives during menstruation. Inadequate menstrual protection compels adolescent girls in the 12-18 age groups to miss around five days of school in a month, or 50 days in a year. Around 23% of these girls drop out of school once they start menstruating. And it is necessary to impact knowledge about menstrual hygiene to adolescent girls which was gathered from the study.[47]

A Survey was conducted on 'Menstrual hygiene in South Asia. A sample of 4,300 primary schools by UNICEF and the Government of Bangladesh found that 47% had no functioning water source, 53 % did not have separate latrines for girls, and on average the schools had one latrine serving 152 pupils. Only 42 per cent of the girls had access to a toilet with adequate privacy at school, and some of the girls highlighted the problems they faced atschool due to the lack of facilities. There is a need for transforming the existing infrastructure into menstrual hygiene friendly, which needs to be priority area for all the school.[48]

An article in Maternal and Child Health Journal states that the onset of menstruation is one of the most important physiological changes occurring among girls during the adolescent years. Menstruation heralds the onset of physiological maturity in girls. It becomes the part and parcel of their lives until menopause. Apart from personal importance, this phenomenon also has social significance. In India, menstruation is surrounded by myths and misconceptions with a long list of "do's" and "don'ts" for women. Hygiene-related practices of women during menstruation are of considerable importance, as it may increase vulnerability to Reproductive Tract Infections (RTI's). Poor menstrual hygiene is one of the major reasons for the high prevalence of RTIs in the country and contributes significantly to female morbidity. Most of the adolescent girls in villages use rags and old clothes during menstruation, increasing susceptibility to RTI's. Adolescents constitute onefifths of India's population and yet their sexual health needs remain largely unaddressed in the national welfare programs. The study statedthat Poor menstrual hygiene in developing countries has been an insufficiently acknowledged problem.[49]

A quasi experimental study was conducted in Uttarakhand, India with objective of studying the types and frequency of problems related to menstruation in adolescent girls and the effect of these problems on daily routine.Girls selected in the age group 13–19 years who had menarche for at least one year at the time of study. 198 adolescent girls have been studied. Data was collected by personal interviews on a pre-tested, semi-structured questionnaire. The questions covered menstrual problems, regularity of menses in last three cycles of menstruation and the effect of these problems on the daily routine. Analysis was done using SPSS version 12. Percentages were calculated for drawing inferences. Results includes more than a third (35.9%) of the study subjects were in the age group 13–15 years followed by 17–19 years, 15–17 years respectively. Mean age of study participants was calculated to be 16.2 years. Dysmenorrhea (67.2%) was the commonest problem and (63.1%) had one or the other symptoms of Pre-menstrual syndrome (PMS). Other related problems were present in 55.1% of study subjects. Daily routine of 60% girls was affected due to prolonged bed rest, missed social activities/commitments, disturbed sleep and decreased appetite. 17.24% had to miss a class and 25% had to abstain from work. Mothers and friends were the most common source of information on the issue. So,there is also need to empower mothers and teachers to function as a primary sources of information on menstruation including reproductive health as they are accessible to handle adolescent issues and facilitate referrals as the need arises.[50]

A survey approached by WHO was conducted among various dimensions of reproductive health, gynecological problems and reproductive tract infections occupy a pivotal place in India . Among the gynecological problems, menstrual problems are said to be the major ones especially among adolescent girls in rural settings with objectives of Understanding the magnitude of these

problems and their grave consequences among rural adolescent girls are the major challenges to be addressed under the recent comprehensive reproductive health care approach adopted in India. Further, though there is little evidence about the magnitude of menstrual problems a few studies looked into the differentials in menstrual problems, whereas almost negligible attempts are being made to find out the major determinants with the help of multivariate technique. But such an attempt is more useful to identify the principle factors that determine the menstrual problems, so as to recommend and implement appropriate strategies to prevent the occurrence of such problems among adolescent girls. This paper aimed in this direction with the help of data collected from the unmarried adolescent girls, aged 10-19 years as suggested by the WHO.[51]

A cross-sectional study was conducted to assess the menstrual problems, among female students of junior college students from rural area of Sangli District, Western Maharashtra. Sample size for the study was 121 adolescent girls selected by stratified random sampling. Data was collected by self administered questionnaire. The result of the study revealed that total 119 (64%) students were suffering from menstrual problems.Dysmenorrhoea was the commonest menstrual problem, and was present in 42.5% students. It was followed by weakness & giddiness during menstruation, menorrhagia, irregular menstruation etc. Primary amenorrhoea was present in 33% students. Premenstrual symptom was present in 32 (26.8%) students. Depression was present in 34.4% of students. The study concluded that menstrual problems are present among majority of the adolescent girls, which highlights the need for proper professional counseling.[52]

A cross-sectional descriptive study was conducted amongst 550 secondary school girls in south-eastern Nigeria to determine their perceptions, problems, and practices on menstruation. Majority of the students, (75.6%), were aged 15-17 years. Only 39.3% perceived menstruation to be physiological. Abdominal pain/discomfort, (66.2%), was the commonest medical problem encountered by the respondents, although 45.8% had multiple problems. Medical problems were most commonly discussed with the mother, (47.1%), and least commonly discussed with the teachers, 0.4%. Analgesics, (75.6%), were most commonly used to relieve menstrual pain. Only 10% of respondents used non-pharmacologic remedies. Unsanitary menstrual absorbents were used by 55.7% of the respondents. Menstruation perceptions are poor, and practices often incorrect. A multi-dimensional approach focusing on capacity building of mothers, and teachers on sexuality education skills; using religious organizations as avenues for sexuality education; and effectively using the Mass Media as reproductive health education channels are recommended towards improving adolescents' perceptions and practices on menstruation.[53]

A survey analysis of nationally representative data on 2883 adolscents were studied. Analysis revealed that a large proportion of the adolescents (64.5%) reportedly has been suffering from gynecological morbidity.The most frequent form of morbidity was menstrual disorders (63.9%) followed by lower abdominal pain (58.6%), burning sensation during urination (46.1%) genital itching (15.5%) vaginal discharge(3.4%) etc, .The results also revealed that about one fifth(18.0%) sought health care for their gynecological ailments, still there is a need for increasing knowledge and attitude regarding reproductive health and menstruation among women. [54]

SECTION-IV

STUDIES RELATED TO EFFECTIVENESS OF HEALTH EDUCATION PROGRAMME ON MENSTRUAL HYGIENE:

The descriptive study was conducted on menstrual practices and hygiene of Nigerian school girls in Department of Obstetrics/Gynecology, University of Nigeria Teaching Hospital in Enugu, Nigeria in 2009 June 29. Out of 500 questionnaires, 495 were properly filled yielding a response rate of 99%. The training was received by 55.2% students and the rest 44.8% had no preparation prior to menarche. Girls received tertiary education and their main sources of information were most likely to have had menstrual hygiene The subsequent menses following menstruation were better anticipated

and more often reported as satisfactory; changing menstrual absorbent atleast thrice daily was more common among those who were trained than those who were not but the differences were not significant. So the more educational programmes can produce a significant changes in the knowledge, beliefs & practices of menstrual hygiene among school girls.[55]

A cross sectional study was done regarding perceptions and practices about menstrual hygiene among adolescent girls in a rural area of BG Nagara, Karnataka. Purposive sampling was used to select 199 samples. Pre-designed and pre-tested questionnaire was used to collect the data. Results of the study shown that out of 199 respondents, 63.31% subjects were not aware of the source of bleeding, 12% of girls were not allowed to do house hold work, 72.05% of unmarried adolescents used cloth piece as compared to 27.9% married adolescents. Study concluded that adolescent lacks detailed knowledge about menstruation and its hygienic practices.[56]

The quasi experimental study was undertaken to identify the learning needs of adolescent girls with a view to develop and evaluate a planned teaching programme on menstrual hygiene in National Family Welfare Programmme ,New Delhi , India . It will help them to improve their self-care ability and follow healthy and hygienic menstrual practices. The study was conducted in two phases. The phase first aimed at identifying the learning needs of the pre-adolescent girls, using a survey approach. In 2nd phase teaching programme was planned on "menstrual hygiene". Developed and evaluated the quasi-experimental pretest, post -test control group design was used to evaluate the planned teaching programme. In phase I, the knowledge questionnaire was administered to 49-adolescent girls to determine the learning needs. In phase II,the planned teaching programme on "menstrual hygiene" was developed. The total mean percentage scores secured by pre-adolescent girls on menstrual hygiene was 27.36%, the mean percentage scores of different areas ranged from 23.13 % to31.20%. Knowledge level of pre-adolescent girls regarding menstrual hygiene is independent of the socio-economic status, education status of the mother and exposure to mass media. Studies show that the failure to adequately educate girls about their ownanatomy and physiology has serious implication. These responses support the need for the menstrual education as a long term, continuous process and beginning well before menarche. [57]

A cross-sectional study was conducted to explore the menstrual practices among 1275 female adolescents of urban Karachi, Pakistan from April to October by using interviews. Data was entered and analyzed in Epi Info Version 9 and SPSS Version 10. Descriptive findings showed that 50% of the girls lacked an understanding of the origin of menstrual blood and those with a prior knowledge of menarche had gained it primarily through conversations with their mothers. Many reported having fear at the first experience of bleeding. Nearly 50% of the participants reported that they did not take baths during menstruation. In univariate analysis, factors of using unhygienic material, using washcloths, and not drying under sun were found to be significant in the Chi square test among those going and not going to schools. This study concludes that there are unhygienic practices and misconceptions among girls requiring action by health care professionals.[58]

A descriptive study was conducted in Riyadh in Saudi Arabia with the objective to identify the indigenous menstrual hygiene practice of Saudi girls. A total of 600 girls aged from 11 years to 18 years were selected from outpatient clinics at three different hospitals in Riyadh. Data were collected using a structured interview. The results revealed that nearly two-thirds of the girls avoided certain foods, drinks and activities, including showering and performing perineal care, and practised several indigenous rituals during the period. Mother, religious books and sisters were the main sources of the girls' information. The study suggests that nurses and health care providers should use all available opportunities to educate young girls about menstruation.[59]

A descriptive study on the menstrual knowledge and practices of 352 randomly selected Nigerian schoolgirls were studied. In the study 187 (53.1%) had attained menarche. 40% ofsubjects were deficient in knowledge about menstruation. Although menstrual knowledge was higher in post-menarcheal girls, 10% of these were totally ignorant about menses and 84% were not psychologically

prepared for the first menses. Girls' menstrual knowledge was positively associated with parental education. The major source of menstrual information was the family. Although more than half of the girls menstruated regularly, 66.3% used insanitary materials as menstrual absorbent. The mean duration of menstrual flow was 4.32 +/- 1.15 days (mean +/- SD) with a range of 3-7 days in 95.2% of the study population. There is an acute need for education and psychological preparation of girls for menstruation well ahead of menarche.

A quasiexperimental study was conducted among 40 preadolescent girls of 6th and 7th standard in Udupi to assess the effectiveness of teaching programme on menarche and 36 pubertal changes. Findings showed that maximum students (65%) had average knowledge, no one had good knowledge in pretest, where as in post test maximum (65%) had good knowledge, and 32.5% had average knowledge. They need appropriate information about reproduction and menstruation.[61]

A experimental study to assess the effectiveness of planned teaching programme on menstrual hygiene among 49 preadolescent girls in selected schools of Udupi district showed that the total mean percentage scores secured by pre-adolescent girls in menstrual hygiene was 27.36% the mean percentage score of different areas ranged from 23.13% to 31.20% and they had very poor knowledge about anatomy and physiology of reproduction system. So it is more important for all adolescent girls that they should get a loud and clear message and services regarding menstruation and the hygienic aspects. [62]

A cross-sectional study was conducted to compare the perceptions of different aspects of menstrual hygiene between adolescent girls of rural and urban area at West Bengal. Adolescent school girls of 541 are in the age group of 13–18 years were included in the study. Data were collected by using predesigned and pretested questionnaires. Findings of the study revealed only 37.52% girls were aware of menstruation prior to attainment of menarche. The difference in the awareness regarding menstruation in urban and rural area was highly significant. Only 36% girls in the urban and 54.88% girls in the rural area used homemade sanitary pads and reused the same in the subsequent period. Satisfactory Cleaning of external genitalia was practiced by only 47.63% of the urban and 37.96% of the rural girls. This study found differences in hygienic practices followed by adolescent girls in urban and rural area. Girls should be educated about the facts of menstruation, physiological implications, significance of menstruation, and proper hygienic practices during menstruation.[63]

A descriptive study was conducted regarding practice of menstrual hygiene in Karachi, Pakistan,. Study found that 17% used single use material, 40% used reusable cloths, 35% used both types during last menstruation, 33% used disposable sanitary pad, 40% used new cloth, 26% used old piece of cloth from sari and scarf. The use of sanitary pads is higher among girls inurban school (5%) in composition with rural school (19%). Half of the respondents 51% mentioned having taking bath everyday and about 43% on alternate days during their last menstruation. The researcher concluded the study by suggesting that, there was still need to modify the perception and usage of napkin product during menstruation.[64]

A community-based health education intervention on management of menstrual hygiene among rural Indian adolescent girls was studied in Anji, in the Wardha district of Maharashtra state. A participatory-action study was undertaken in Primary Health Centres in 23 villages. Study subjects were unmarried rural adolescent girls (12-19 years). They conducted a needs assessment for health messages with this target audience, using a triangulated research design ofquantitative (survey) and qualitative (focus group discussions) methods. . The messages were delivered at monthly meetings of village-based groups of adolescent girls, called Kishori Panchayat. After 3 years, the effect of the messages was assessed using a combination of quantitative (survey) and qualitative (trend analysis) methods. The results of the study revealed that after 3 years, significantly more adolescent girls (55%) were aware of menstruation before its initiation compared with baseline (35%). The practice of using ready-made pads increased significantly from 5% to 25% and reuse of cloth declined from 85% to 57%. The trend analysis showed that adolescent girls perceived a positive change in their behaviour and level of awareness. The study concluded that the present community health education intervention strategy could bring significant

changes in the awareness and behaviour of rural adolescent girls regarding management of their healthy practices of sanitary pad usages. [65]

RESEARCH METHODOLOGY

This chapter deals with the methodology adopted in the study and different steps undertaken after gathering and organizing data for investigation. It includes research approach, research design, the setting, population, sampling technique, development and description of the tools, development of the teaching strategy, pilot study, data collection and plan for data analysis.

RESEARCH APPROACH

The selection of research approach is the basic procedure for conducting research. A research approach tells the researcher so as to what data to collect and how to analyze it. It also suggests possible conclusions to be drawn from the data. In view of the nature of problem selected for the study and the objectives to be accomplished, Quasi experimental research design was considered appropriate for the present study. Evaluative approach was used to evaluate effectiveness of Structured Teaching Programme of high school girls.

RESEARCH DESIGN

The research design is the plan structure and strategy of investigation of answering to the research question and strategies that the researcher adopted to develop information i.e. accurate, objective and interpretable. Quasi experimental research design One group pre- test, post -test research design is used that aimed at finding out the knowledge of high school girls on knowledge regarding healthy practices of sanitary pads usage.

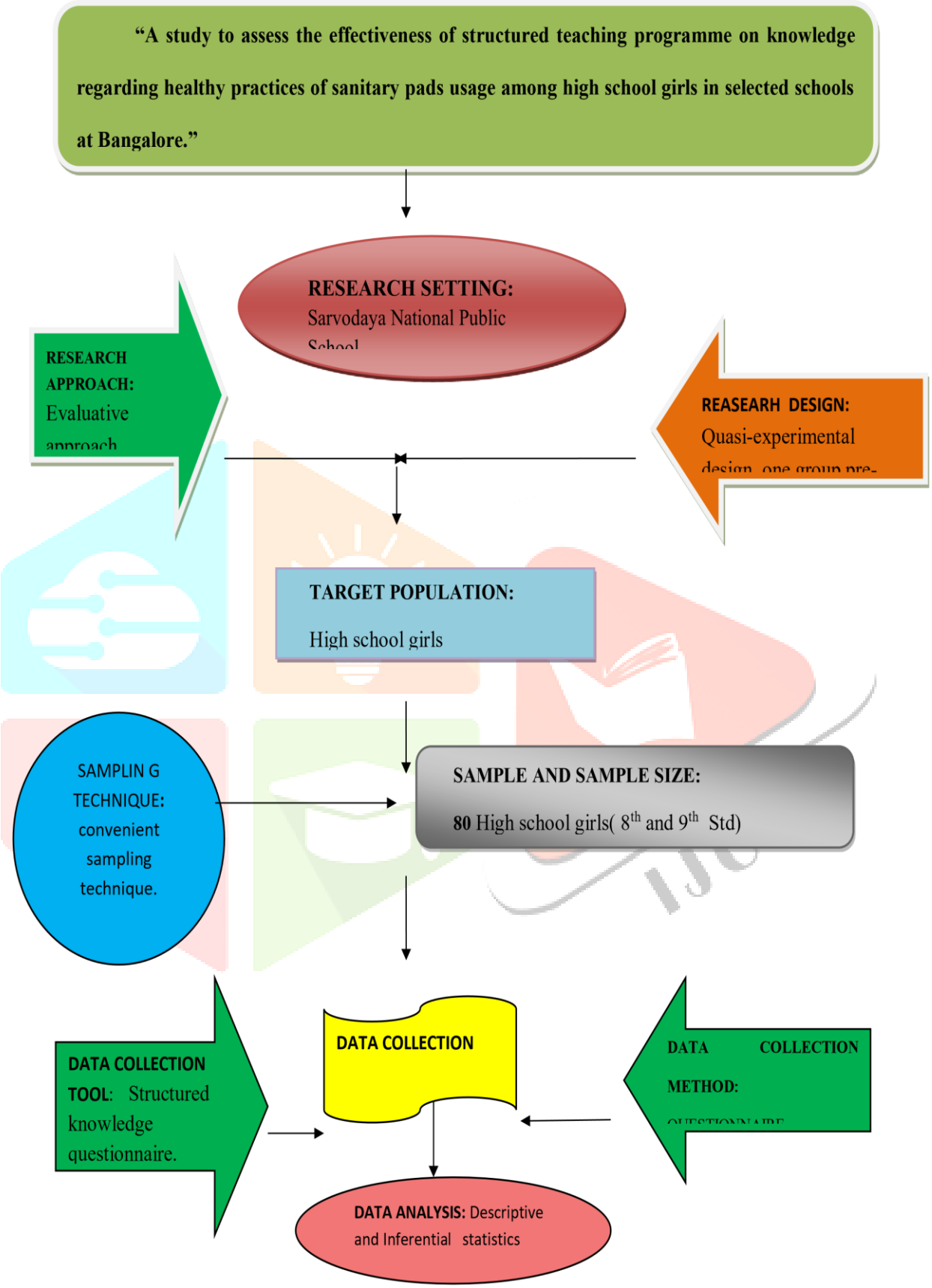


Figure 2. Schematic representation of the research work

VARIABLES

Variable is an attribute of a person that varies that is taken on different values. The following variables were used in this study.

Dependent variables

It is the variable the researchers are instructed in understanding, explaining (or) predicting. In the present study it refers to the knowledge level of high school girls on menstrual hygiene as measured by the structured knowledge questionnaire.

Independent variables

The independent variable is the variable that is believed to cause (or) influence the dependent variable. In this present study it is the administration of structured teaching programme on menstrual hygiene.

Demographic Variables

 A variable that confounds the relationships between the dependent variables and independent variables.

Demographic Variables: Age, religion, education, family income, type of family, sources of information, menstruation and previous knowledge.

SETTING OF THE STUDY

The study was conducted in the Schools, which is situated at Bangalore. On an average 80100 girls in the age group of high school girls. The present study was undertaken in Sarvodaya National Public School, on the basis of - Geographical Proximity, Feasibility of conducting the study, Availability of the samples.

POPULATION

The term population refers to the aggregate or totality of all subjects or number that confirm to a set of specifications.

- The target population for the study was high school girls.
- The accessible population for the study was high school girls in School at, Bangalore.

SAMPLE AND SAMPLING TECHNIQUE

SAMPLE

Sample consists of the subject of the population selected to participate in a research study. The number of units (or) subjects gathered for inclusion in the study is called sample size. In the present study, the sample referred high school girls who had studying in Sarvodaya National Public School, Bangalore.

SAMPLE SIZE

The samples for the study are 80 girls who were studying in School, and who are in high school girls

SAMPLING TECHNIQUE

Sampling refers to the process of selecting the portion of population to represent the entire population. In this study convenient sampling technique used to select the participants based on sampling criteria.

CRITERIA FOR SELECTING THE SAMPLE

Sampling criteria can also be referred as the eligibility criteria, which includes the list of characteristics essential for eligibility or membership in the target population. Sampling criteria for a study consist of inclusion or exclusion sampling criteria or both.

Inclusion criteria: high school girls, who are,

- High school girls those who were and studying in IX &X,
- attained menarche
- Able to understand English or Hindi.
- Willing to participate in the study.
- Present at the time of data collection.

Exclusion criteria: high school girls, who are,

- Undergone any kind of teaching or awareness programme regarding healthy practices of sanitary pads usage.
- Absent on the day of data collection.

SELECTION AND DEVELOPMENT OF THE TOOL

Based on the research problem and objectives of the study, the following steps were undertaken to select and develop the data collection tool.

Selection of the tool

Based on the objectives of the study a structured knowledge questionnaire to assess the knowledge was selected as the tool, as it was considered as an appropriate instrument to elicit response from the participants.

DEVELOPMENT AND DESCRIPTION OF TOOL

Data collection is the gathering of information needed to address research problem. Tools are the instruments used by the researcher to collect the data. In this present study a structured knowledge questionnaire was used for collecting data among high school girls and it is regarded to be an appropriate instrument.

Preparation of the Blue print

A blue print on structured questionnaire schedule on menstrual hygiene was prepared which consisted of sub areas. It depicted the distribution of items according to the three domains namely knowledge, comprehension and problem solving. It includes items for knowledge -6(20%), comprehension -9(30%), application -15(50%). According to the content area in the blue print, adequate numbers of items were prepared in each area. Then the prepared items were subjected to content validation, pre testing and estimation of reliability.

BLUE PRINT OF DISTRIBUTION OF ITEM

The blue print of the structured questionnaire assessing knowledge regarding healthy practices of sanitary pads usage is given below:

Table 1: Blue Print on Knowledge healthy practices of sanitary pads usage

Content	Knowledge			Comprehension			Application			Total	
	Q.No	Total No.	%	Q.No	Total No.	%	Q.No	Tota l No.	%	Q.No	%
Knowledge question regarding anatomy and physiology of reproductive system	1,2,3,4,5, 6	6	20%	_	_	_	_	_	-	6	20%
General information regarding menstruation	7,8,9,1 0,11,12 ,13,14	8	26.7 %	15	1	3.3 %	_	_	_	9	30%
Healthy practices of sanitary pads usage	16,19,2 0,21,22 ,23,29, 30	8	26.7 %	-	_	_	17,18,2 4,25,26, 27,28,	7	23.3 %	15	50%

SELECTION AND DEVELOPMENT OF TOOL

Data collection tools are the procedures or the instruments used by the researcher to observe or measure key variables in the research (Polit and Hungler 1999). The tool acts as the best instruments to assess and collect data from the respondents of the study.Structured knowledge questionnaire was an appropriate and effective method to evaluate the knowledge of the high school girls. The main strengths behind development of the tool are review of research and non- research materials on relevant topics regarding healthy practices of sanitary pads usage consultation with the subject experts, and investigators' experience in clinical settings and books. The following steps were undertaken for the preparation of the final tool:

DESCRIPTION OF TOOL

The questionnaire was constructed in to two parts with a total number of 33 items. The researcher developed a structured knowledge questionnaire which contains items of the following aspects.

Section – I

Socio- demographic data

Consist of Age group (years) Educational level, Religion, Type of family, Family income/month Education of Father, Education of Mother, Occupation of Mother, Number of Siblings, Source of information

Section – II

Questionnaire on knowledge of healthy practices of sanitary pads usage. Consist of 3 items which includes Anatomy & physiology of female reproductive organs, general information regarding

menstruation & healthy practices of sanitary pads usage.Each item has four options with one correct answer with a score of one.

CONTENT VALIDITY

Content validation is concerned with the sampling adequacy of items, for the construct that is being measured. Content validation is relevant for both affective measures and cognitive measures. The structured questionnaire along with objectives, blue print and structured teaching programme was submitted to 10 experts comprising of seven nurse educators in field of Obstetrics & gynecological Nursing and two Doctors and one Statistician for establishing content validity. The tool was modified as per the suggestions of the experts and final tool was constructed.

Preparation of the tool:

Presenting of structured questionnaire was done to check the clarity of the items, their feasibility and practicability. Pre testing was done in Angel high School, Bangalore. It was administered to high school girls. The sample chosen were similar in characteristics to those of the population under study.

PILOT STUDY:-

"Pilot study is small scale version, (or) trial run, done in preparation for a major study". To assess the feasibility in conducting main study and to obtain information for improving the project, pilot study was undertaken.The pilot study was conducted in Angle High School, Bangalore. The pilot study data collected prior to the data collection permission was obtained from the Head Master of the Angel High School. High school girls were selected for the pilot study. The participants were informed about the purposes of the study and written consents taken from the participants Knowledge on menstrual hygiene was assessed by using structured questionnaire on selected aspects. The time taken for the completion of the tool was in between 35 to 40 minutes. The convenient sampling technique was used to collect the data.

Findings of the pilot study:-

Majority of the participants were in the age group of 13 & 15 years age group (50.0%), most of them were Hindus (50.0%), Majority of the participants (62.5%) in 9th standard. Most of the participants (50.0.%) belongs to joint family, the participant's family income (25.0%)is same proportion in each category , majority of participants (62.5%) had information from mother , majority of the participants (50.0%) father have secondary degree in education, majority of participants (62.5%) mother have primary education ,majority of participants (62.5%) mother are house wife, majority of participants(37.5%) have two siblings . In pre test 6(75.0%%) had inadequate knowledge. In post test 6(75.0%) had adequate knowledge. In comparison between pre test level of knowledge, 6(75.0%) had inadequate knowledge and 6(75.0%) had adequate knowledge post test .In aspect wise mean, SD and Mean% of pre test and post test knowledge on menstrual hygiene, the overall enhancement between pre test and post test mean percentage is 40.4%.

Problems faced during pilot study:-

It consumed more time to collect the data from the high school girls as they were busy with their schedule some questions that has been framed were found to be slightly difficult to be understood by the participant and they were modified so that they were easy for them to understand.

DEVELOPMENT OF STRUCTURED TEACHING PROGRAMME

Structured teaching programme was developed on the basis of research findings of the study, review of literature and consulting with experts. The steps followed to develop structured teaching programme was as follows:

The steps adopted in the development of structured teaching programme were:

- Preparation of lesson plan and objective type questions for menstrual hygiene.
- Development of criteria rating scale to evaluate the structured teaching programme.
- Content validity of structured teaching programme.
- Editing of structured teaching programme.
- Preparation of final draft of structured teaching programme

Preparation of criteria rating scale:

- A criterion rating scale was prepared by the investigator for assessing its appropriateness, organization and language of the content.
- A criterion selected were objectives, selection of content, organization of content, language, visual images used, the feasibility and practicability of the structured teaching programme and column for experts opinion and remarks.
- The criteria rating scale for which experts were asked to give their rating were relevant, not relevant, needs modification and remarks of experts.

Preparation of the Structured Teaching Programme:

The structured teaching programme was prepared on the basis of criteria rating scale developed for evaluating the structured teaching programme on selected aspects of menstrual hygiene.

Content validity of the Structured Teaching Programme:

Structured Teaching Programme along with the criteria rating scale and objectives of the study were given to 10 experts comprising of two medical personnel and seven nursing personnel in the field of obstetrics & gynecological nursing and one statistician for establishing the content validity. They asked to put a tick mark in response relevant/not relevant according to their opinion. Expert's opinion kept in to account and as per suggestions content was rearranged.

Pre-testing of Structured Teaching Programme:

Structured Teaching Programme was pre-tested by administering it to 8 girls of high school girls (8^{th} and 9^{th} Std) in Angel High School, Bangalore. The participants found it easy to understand and the information was meaningful, simple and comprehensive. Hence, Structured Teaching Programme was retained like that with no change after the pre-test.

Preparation of the final draft of Structured Teaching Programme:

Based on the suggestion of experts and findings of pre-test final draft of structured teaching programme was prepared.

Description of Structured Teaching Programme:

The Structured Teaching Programme was titled as Structured Teaching Programme on importance of menstrual hygiene for high school girls 8^{th} and 9^{th} Std. It includes anatomy and physiology of female

reproductive system, meaning of menstruation, purpose of menstrual hygiene, risk factors due to poor menstrual hygiene, healthy practices of sanitary pads.

PROCEDURE FOR DATA COLLECTION:-

- A prior permission was obtained from the Head Mistress of Angel high School, Bangalore for the data collection. The study was done.
- A survey was done to identify the high school girls 8th and 9th Std who met the sampling criteria, were selected by convenient samples for study and assessed the knowledge of high school girls (9th and 10th Std) regarding healthy practices of sanitary pads usage
- The investigator gathered high school girls (8th and 9th Std) and introduced them and the written consent from the high school girls (8th and 9th Std) were obtained. The purpose of the interview was explained to the high school girls (8th and 9th Std) and they were reassured about the confidentiality of the interview.
- The investigator administered the Structured Questionnaire for assessing knowledge healthy practices of sanitary pads usage. High school girls 8th and 9th Std were selected by convenient sampling technique .The Structured Teaching Programme (STP) was administered after pre test. After one week among high school girls (8th and 9th Std) , post test was conducted for using structured Questionnaire to evaluate the effectiveness of STP.

PLAN FOR DATA ANALYSIS:-

- The data collected from the participants was planned to be analyzed on the basis of the
- Objectives of the study using descriptive and inferential statistics
- Organize data in master data sheet.
- Demographic variables are to be analyzed in terms of frequency and percentage.
- The knowledge of high school girls (8th and 9th Std) on menstrual hygiene before and after administration of STP was calculated by using range, frequency, mean and standard deviation. Further statistical significance of the effectiveness of the STP was analyzed by the paired‘t’ test.

Chi-square ($\chi 2$) test is used to determine the association between demographic variables such as age, religion, education, income, type of family, place of residence source of information and the knowledge of ix-x standards girls on menstrual hygiene. The association between selected demographic variables and pre test score determined by Chi- square test score data was presented in tables and diagrams. Collected data analyzed using descriptive and inferential statistics and presented in the form of tables and graph.

Protection of human subjects

The proposed study was conducted after the approval of Dissertation committee of the college. Permission was obtained from the Head mistress of Angel high School and Sarvodaya National Public School Bangalore. The written consent of the participant was obtained before the data collection. Assurance was given to the participants regarding the confidentiality of the information collected from them.

SUMMARY

This chapter deals with the description of the methodology and different steps undertaken for gathering and organizing data for the investigation. It includes description of research approach, research design, research settings, sample and sampling technique, development and description of tools, pilot study, data collection and plan for data analysis.

SAMPLE SIZE ESTIMATION

The sample size was calculated based on comparison of means with standard deviation (6.9) of the pilot study findings assuming 80% power, at 0.05 level of significance and 3 clinical differences.

$$n = 2\left\{\frac{(Z_1 - a/2 + Z_1 - \beta)s}{d}\right\}^2$$

$Z_1 - a/2$: value taken from standard normal distribution at a specified confidence level

(For $\alpha = 0.05$, $Z_1 - a/2 = 1.96$)

$Z_1 - \beta$: value at specified power (Z 0.8 = 0.84; Z 0.9 = 1.28) S: Standard deviation d: Clinical significant difference in means

$$n = 2\left\{\frac{(1.96 + 0.84)6.9}{3}\right\}^2$$

n =82.9=83

Though the recommended sample size was 80,As per the expert's suggestion the

researcher has opted to take a round figure, that is 80 samples.

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of the data collected from 80 girls of class IX X standard school students to assess the knowledge on healthy practices of sanitary pads usage among high school girl in selected school, Sarvodaya National Public School Bangalore. Analysis is described is categorized ordering, manipulating and summarizing the data to obtain answer to research questions. The purpose of analysis is to reduce the data to an intelligible and interpretable form so that the relation of research can be studied. The section presents the analysis and interpretation of the data collected from high school girl of class IX -X standard students in order to assess the knowledge. The data collected from girls with the help of structured questionnaire was organized, analyzed and interpreted by using descriptive and inferential statistics. The data collected was done based on the objectives of the study.

THE OBJECTIVES WERE

- To assess the level of knowledge regarding healthy practices of sanitary pad usage among high school girls before & after the structured teaching programme.
- To evaluate the effectiveness of the structured teaching programme on knowledge regarding healthy practices of sanitary pads usage among high school girls.
- To determine the association between the level of pre test knowledge on healthy practices of sanitary pads usage & selected demographic variables.

HYPOTHESIS

H1- There is statistically significant difference between pretest and posttest knowledge scores with high school girls regarding healthy practices of sanitary pads usage at 0.01 and 0.05 levels.

H2- There is significant association between the level of knowledge of high school girls regarding healthy practices of sanitary pads usage with selected demographic variables at 0.01 and 0.05 levels.

ORGANIZATION AND PRESENTATION OF DATA

The data collected was organized and presented under the following sections.

- **SECTION 1:** Frequency and percentage distribution of respondents based on demographic characteristics
- **SECTION– 2a**. Overall and aspect wise pretest knowledge level on healthy practices of sanitary pads among high school girls
- **SECTION 2b.** Overall and aspect wise post test knowledge scores of respondents on healthy practices of sanitary pads among high school girls
- **SECTION - 2c.** Overall and aspect wise pretest and post test knowledge scores on healthy practices of sanitary pads among high school girls
- **SECTION - 3** The association between pretest knowledge level of high school girls with the selected demographic variables.

Section - 1: Demographic Characteristics of Respondents

Table-1 Frequency and percentage distribution of respondents based on demographic characteristics

N=80

Characteristics	Category	Respondents	
		Number	Percent
Age group	14 years	10	12.5
	15 years	47	58.8
	16 years	23	28.7
Educational level	IX Std	54	67.5
	X Std	26	32.5
Religion	Hindu	54	67.5
	Muslim	9	11.2
	Christian	17	21.3
Type of family	Nuclear	47	58.8
	Joint	25	31.2

	Extended	8	10.0
Family income/month	Rs.10000-15000	17	21.3
	Rs.150001-20000	26	32.5
	Rs.20000 & above	37	46.2
Education of Father	Primary	10	12.5
	Secondary	48	60.0
	Higher secondary	22	27.5
Education of Mother	No formal education	13	16.3
	Primary	40	50.0
	Secondary	23	28.7
	Higher secondary	4	5.0
Occupation of Mother	House wife	48	60.0
	Government	10	12.5
	Private	22	27.5
Source of information	Mother	65	81.3
	Friends/Relatives	11	13.7
	TV/Computer	4	5.0
Number of Siblings	One	9	11.2
	Two	54	67.5
	Three	17	21.3
Total		**80**	**100.0**

Table1: shows that out of 80 respondents with regard to age group 10(12.5%) of the respondents were in age group of 14 years, 47 (58.8%) were belonged to age group of 15 years, 23 (28.7%) belonged to age group of 16 years. In relation to educational level, 54 (67.5%) are class IX student & 26 (32.5%) were class X standard students. With regard to the religion reveals that 54 (67.5%) were Hindus, 9(11.2%) were Muslims and 17 (21.3%) were Christians. With regard to type of family shows that 47 (58.8%) respondents belonged to nuclear family, 25 (31.2%) belonged to joint family and 8 (10.0%) are in extended family. In relation to family income per month 17 (21.3%) respondents ' income belongs to Rs. 10000-15000, 26 (32.5%) belongs to Rs. 15001-20000 and 37 (46.2%) belongs to Rs.20000 & above. 10 (12.5%) respondents fathers ' have primary education, 48 (60.0%) respondents father have completed secondary education and 22 (27.5%) have completed higher secondary education. In relation to education of mother 13 (16.3%) respondents mothers have no formal education, 40 (50.0%) have primary education and 23 (28.7%) have secondary education ,4 (5.0%) were completed higher secondary. Occupation of mother shows that 48 (60.0%)are house wife, 10 (12.5%) are government employee and 22 (27.5%)are private employee.Source of information reveals that 65 (81.3%) of respondents got information from their mother, 11(13.7%) got information from friends or relatives and

4 (5.0%) got information from TV or computer. In relation to Number of siblings ,9 (11.2%) have one sibling, 54 (67.5%) have two siblings and 17 (21.3%) have three siblings.

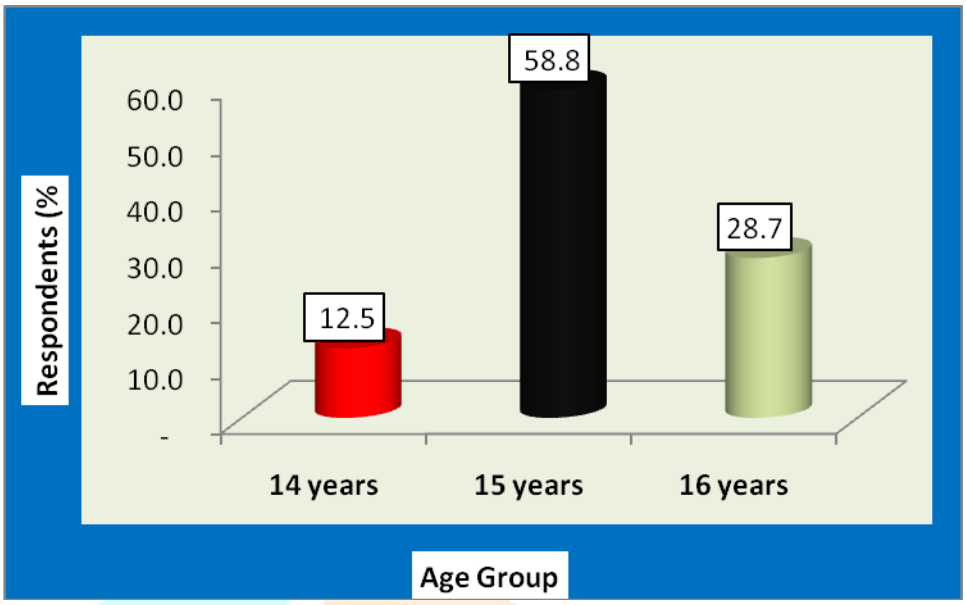


Figure:3 shows that, majority (58.8%) of respondents belong to 15 years , 28.7% of respondents belong to 16 years and 12.5% of respondents belong to 14 years .

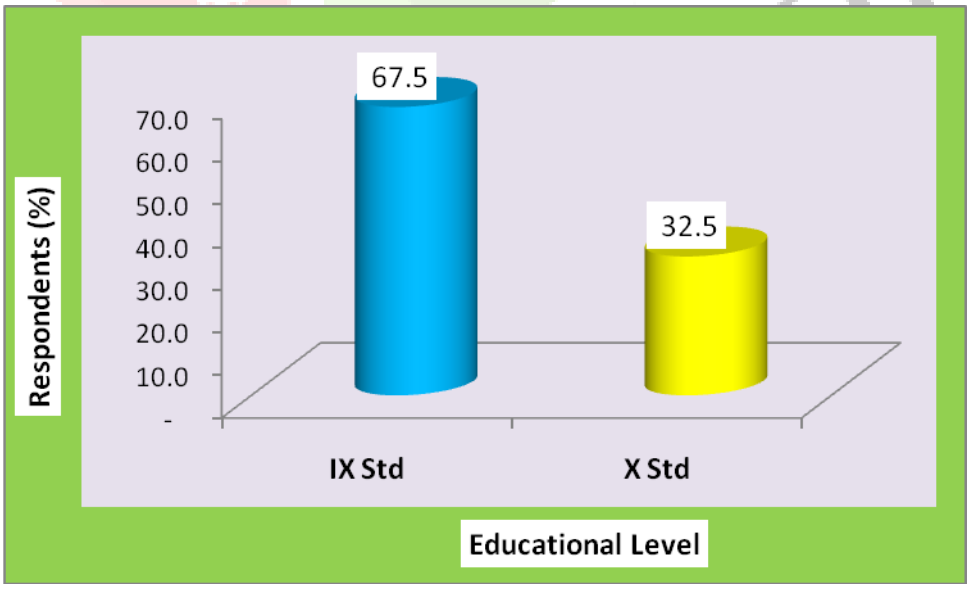


Figure . 4 : depicts that, majority (67.5%) of respondents was studying IX standard, 32.5% of

respondents was studying X standard .

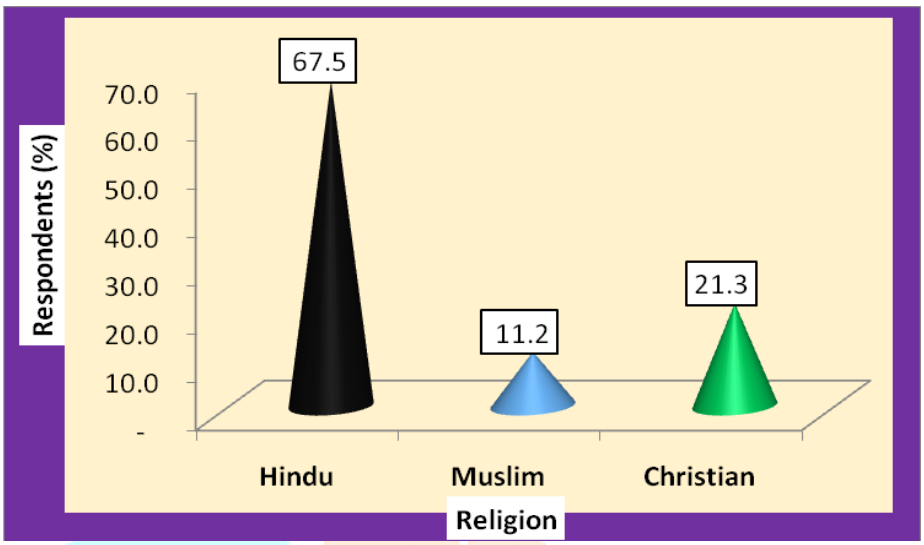


Figure. 5 : With regards to religion, majority (67.5%) of respondents are Hindus, 21.3% are Christian, 11.2% are Muslim .

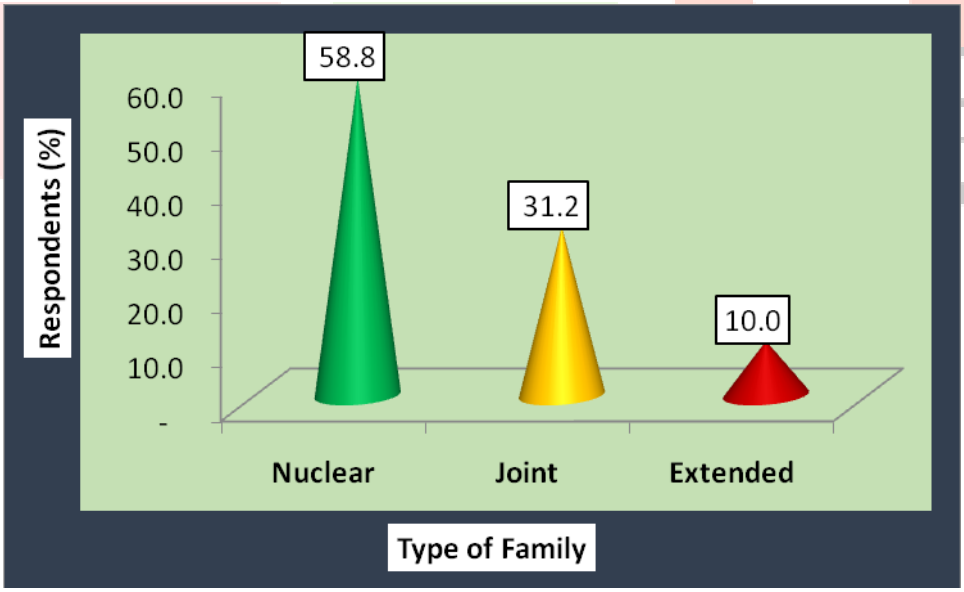


Figure . 6: Classification of Respondents by Type of family majority (58.8%) of respondents belongs to nuclear family and 31.2% belongs to joint family, 10% belongs to extended family .

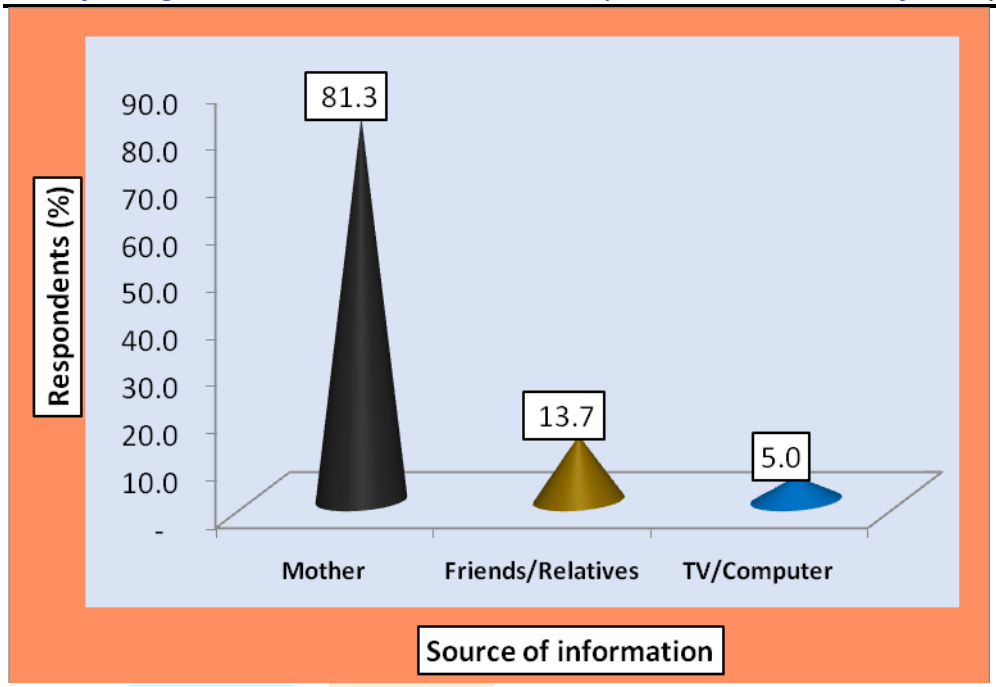


Figure . 5 : Classification of Respondents by Source of information

Above figure depicts that, majority (81.3%) of respondents have got any information from mother, 13.77% of respondents have got any information from friends and relatives , 5% of respondents have got any information from tv /computer .

TABLE – 2a

Classification of Respondent Pre test Knowledge level onHealthy practices of sanitary pads among high school girls

Knowledge Level	Category	Re spondents	
		Number	Percent
Inadequate	≤ 50 % Score	56	70.0
Moderate	51-75 % Score	24	30.0
Adequate	> 75 % Score	0	0.0

Total		80	100.0

Table 2a :- In this table the data shows that the overall aspect wise pre test knowledge scores regarding general concepts it was found that 56 (70.0%) of respondents had inadequate knowledge,30% had moderate knowledge and none of had adequate knowledge .

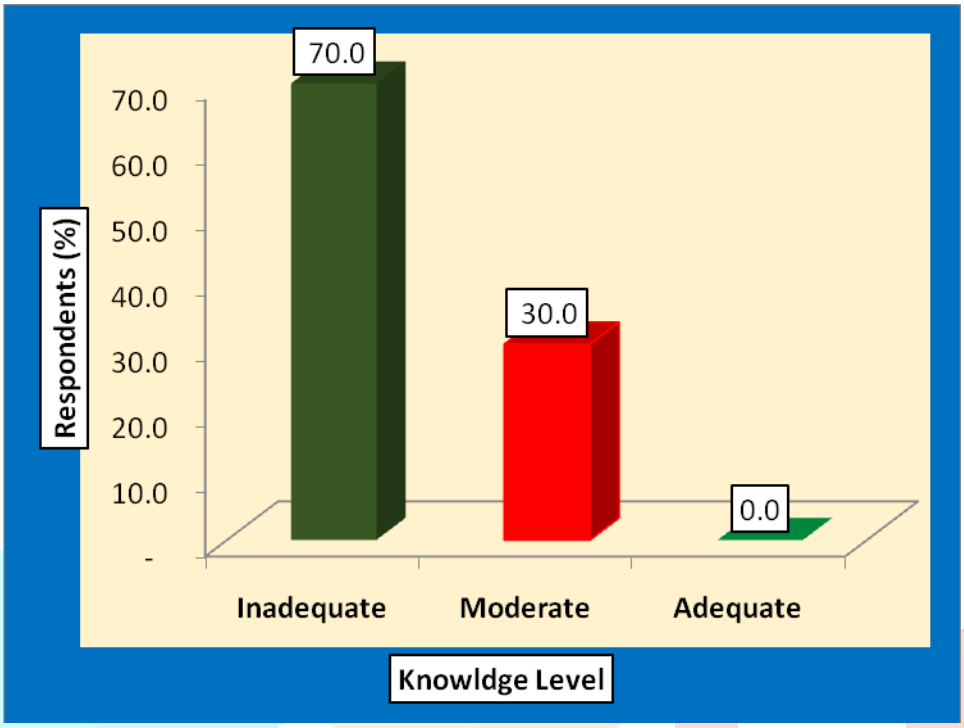


Figure .8 :With regards to Classification of Respondent Pre test Knowledge level on Healthy practices of Sanitary pads among high school girls in that ,70% had inadequate knowledge , 30% had moderate knowledge and none of had adequate knowledge.

TABLE -2b

Aspect wise Pre test Mean Knowledge scores of Respondents on Healthy practices of Sanitary pads

N=80

No.	Knowledge Aspects	Statements	Max. Score	Knowledge Scores			
				Mean	SD	Mean(%)	SD(%)
I	Anatomy & Physiology	6	6	2.54	0.98	42.3	16.3

II	Menstruation	9	9	4.18	1.26	46.4	14.0
III	Menstrual hygiene	15	15	6.85	1.53	45.7	10.2
	Combined	**30**	**30**	**13.56**	**1.97**	**45.2**	**6.6**

Section – 2b : Overall and Aspect wise Post test Knowledge Scores of Respondentson Healthy practices of Sanitary pads

TABLE -5

Classification of Respondents of Post test Knowledge level on Healthy practices of Sanitary pads

Knowledge Level	Category	Re spondents	
		Number	Percent
Inadequate	≤ 50 % Score	0	0.0
Moderate	51-75 % Score	22	27.5
Adequate	> 75 % Score	58	72.5
Total		80	100.0

Above table depicts that in posttest knowledge level,72.5% had adequate knowledge , 27.5% had moderate knowledge and none of had inadequate knowledge.

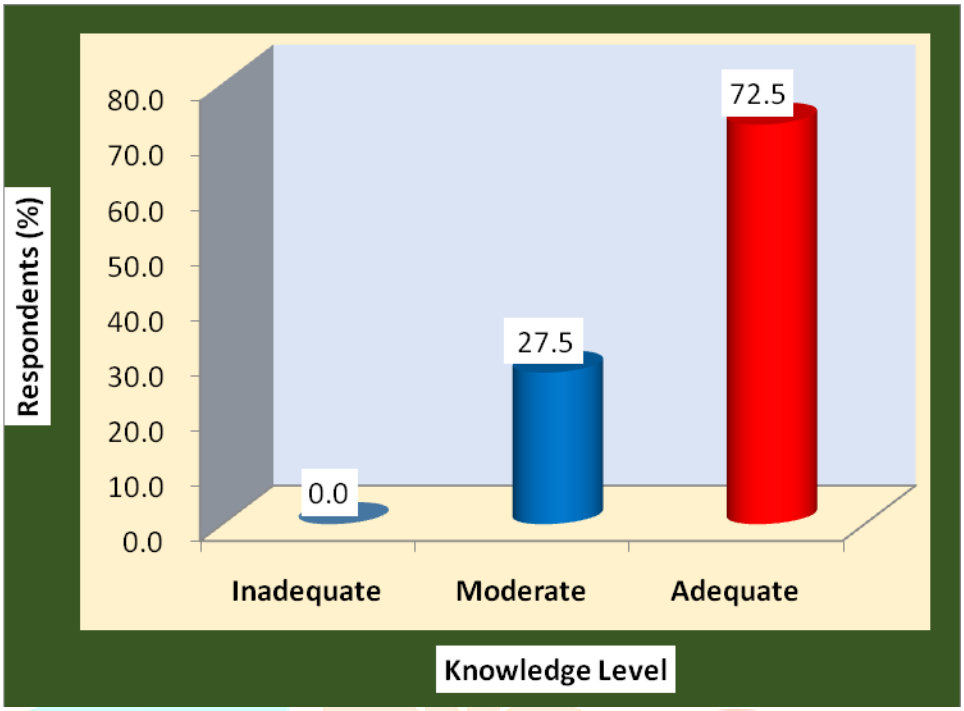


Figure . 9 : Classification of Respondents of Post test Knowledge level on Healthy practices of Sanitary pads

Above figure depicts that in posttest knowledge level, 72.5% had adequate knowledge , 27.5% had moderate knowledge and none of had inadequate knowledge .

TABLE -6

Aspect wise Post test Mean Knowledge scores of Respondents on Healthy practices of Sanitary pads

N=80

No.	Knowledge Aspects	Statements	Max. Score	Knowledge Scores			
				Mean	SD	Mean(%)	SD(%)
I	Anatomy & Physiology	6	6	4.99	0.68	83.1	11.4
II	Menstruation	9	9	6.98	1.08	77.5	12.0
III	Menstrual hygiene	15	15	12.28	1.16	84.8	7.7
	Combined	**30**	**30**	**24.24**	**1.94**	**80.8**	**6.5**

Table no 6 showed that aspect wise post test mean knowledge scores of respondents on healthy practices of sanitary pads usage that mean knowledge of 83.1% found in the aspect of anatomy and physiology with a SD of 0.68 and SD % of 11.4, 77.5 % found in the aspect of menstruation with a SD of 1.08 and SD % of 12.0 , 84.8 % found in the aspect of menstrual hygiene with SD of 1.16 and SD % of 7.7 .

Section – 2c : Overall and Aspect wise Pre test and Post test Knowledge Scores on Healthy

practices of Sanitary pads

TABLE – 7

Over all Pre test and Post test Mean Knowledge scores on Healthy practices of Sanitary pads

N=80

Aspects	Max. Score	Knowledge Scores				Paired 't' Test
		Mean	SD	Mean (%)	SD (%)	
Pre test	30	13.56	1.97	45.2	6.6	37.03*
Post test	30	24.24	1.94	80.8	6.5	
Enhancement	30	10.68	2.58	35.6	8.6	

* Significant at 5% level, t (0.05,79df) = 1.96

Table 7 illustrates that the mean post test knowledge scores on healthy practices of sanitary pads usage (80.8%) was greater than mean pre test knowledge scores on healthy practices of sanitary pads usage (45.2%) ,the mean enhancement between pretest and post test knowledge level was 35.6 . It was evident that a comparison of pre test and post test level of knowledge scores among high school girls using paired "t" test(37.03) to determine the effectiveness of structured teaching programme on healthy practices of sanitary pads usage shows a statistical significance at 5% level for 79 degree of freedom.

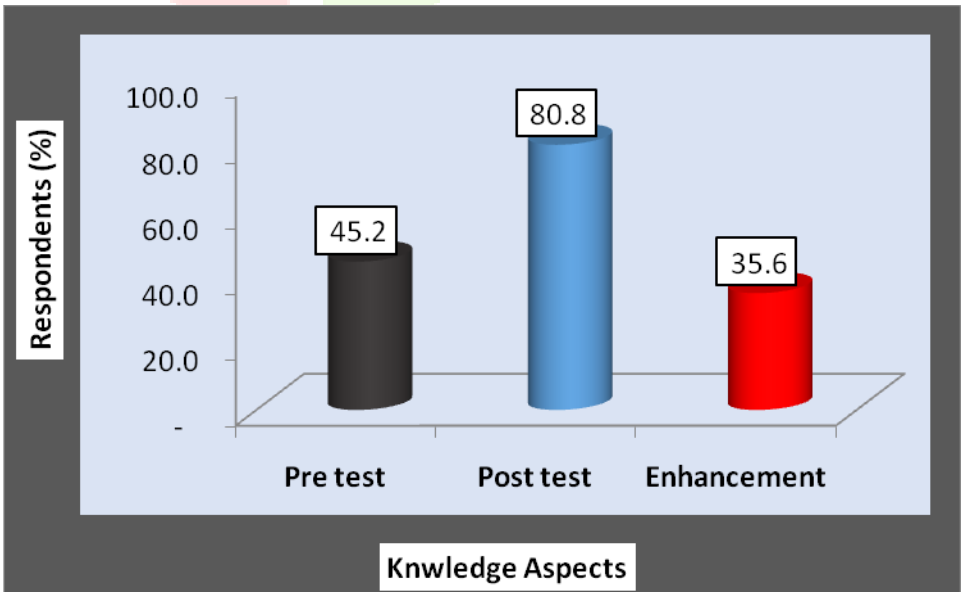


Figure . 10 : Over all Pre test and Post test Mean Knowledge scores on Healthy practices of Sanitary Pads.

The above figure showed that the mean post test knowledge scores on healthy practices of sanitary pads usage (80.8%) was greater than mean pre test knowledge scores on healthy practices of sanitary pads usage (45.2%) ,the mean enhancement between pretest and post test knowledge level was 35.6 .

TABLE – 8

Aspect wise Mean Pre test and Post test Knowledge scores on Healthy practices of Sanitary pads

N = 80

No.	Knowledge Aspects	Respondents Knowledge (%)						Paired 't' Test
		Pre test		Post test		Enhancement		
		Mean	SD	Mean	SD	Mean	SD	
I	Anatomy & Physiology	42.3	16.3	83.1	11.4	40.8	20.7	17.63*
II	Menstruation	46.4	14.0	77.5	12.0	31.1	17.0	16.36*
III	Menstrual hygiene	45.7	10.2	84.8	7.7	36.2	12.1	26.76*
	Combined	**45.2**	**6.6**	**80.8**	**6.5**	**35.6**	**8.6**	37.03*

* Significant at 5% level, t (0.05,79df) = 1.96

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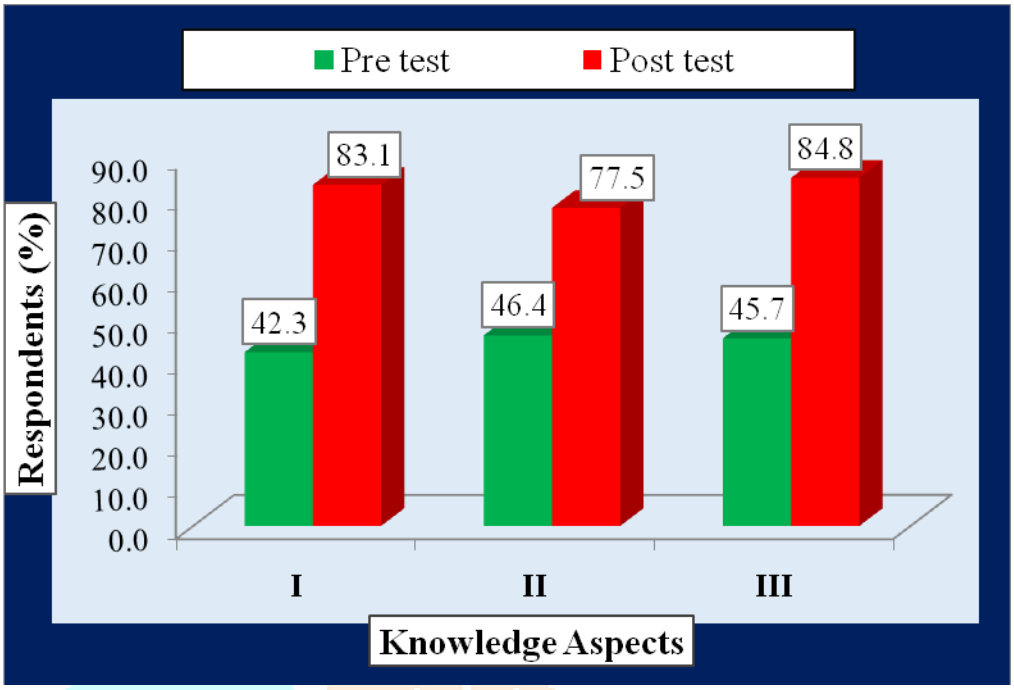

Figure . 11 : Aspect wise Mean Pre test and Post test Knowledge scores on Healthy practices of Sanitary pads

The above figure shows aspect wise mean pre test and post test knowledge scores on healthy practices of sanitary pads usage. In the pretest, knowledge scores were considerably less compared to post test performance in all the aspects of knowledge under study.

TABLE – 9

Classification of Respondents on Pre test and Post test Knowledge level on Healthy practices of Sanitary pads

Knowledge Level	Category	Classification of Respondents				χ^2 Value
		Pre test		Post test		
		N	%	N	%	
Inadequate	≤ 50 % Score	56	70.0	0	0.0	114.09*
Moderate	51-75 % Score	24	30.0	22	27.5	
Adequate	> 75 % Score	0	0.0	58	72.5	
Total		8	100.0	8	100.0	

* Significant at 5% level, χ^2 (0.05,2df) = 5.991

Table 9 shows the classification of respondents on pre test and post test knowledge level on healthy practices of sanitary pads usage .During pre test, out of 80 respondents 56 (70.0%) of had inadequate knowledge, 24 (30.0%) had moderate knowledge, none of had adequate knowledge. But during post

test,22 (27.5%) had moderate knowledge, 58 (72.5%) had adequate knowledge and none of had inadequate knowledge.

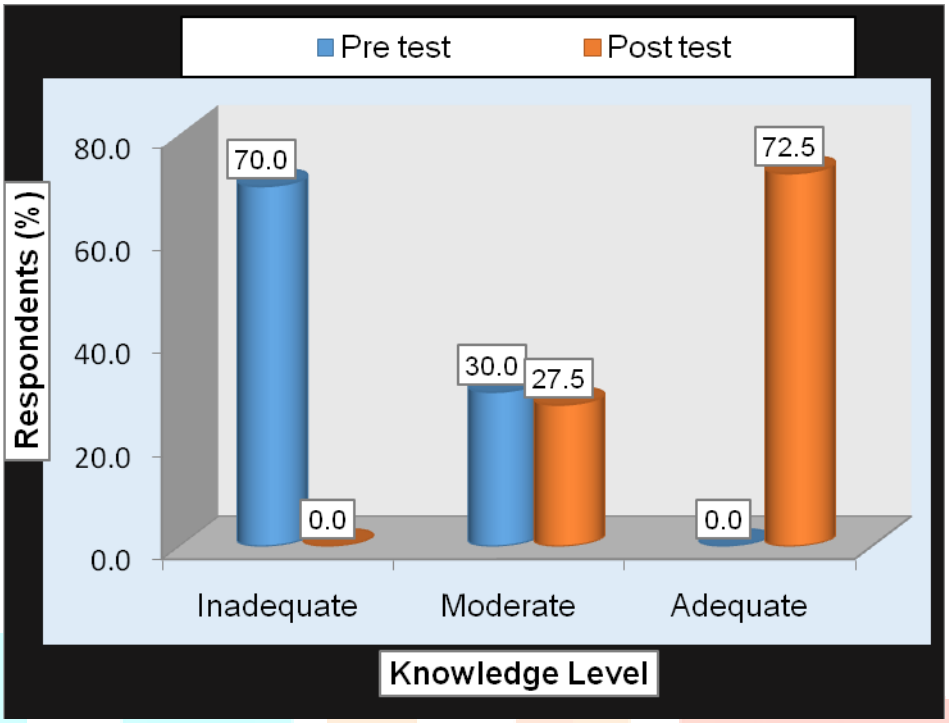

Figure .12 : Classification of Respondents on Pre test and Post test Knowledge level on Healthy practices of Sanitary pads

Above figure shows the classification of respondents on pre test and post test knowledge level on healthy practices of sanitary pads usage .During pre test, out of 80 respondents 56 (70.0%) of had inadequate knowledge, 24 (30.0%) had moderate knowledge, none of had adequate knowledge. But during post test, 22 (27.5%) had moderate knowledge, 58 (72.5%) had adequate knowledge and none of had inadequate knowledge.

Section – 3 : Association between Demographic variables andPre test Knowledge level on

Healthy practices of Sanitary pads

TABLE – 10a

Association between Demographic variables and Pre test Knowledge level on Healthy practices of Sanitary pads

n=80

Demographic Variables	Category	Sample	Knowledge Level				χ^2 Value	P Value
			Inadequate		Moderate			
			N	%	N	%		
Age group	14 years	10	3	30.0	7	70.0	9.48*	P<0.05 (5.991)
	15 years	47	34	72.3	13	27.7		

	16 years	23	19	82.6	4	17.4		
Educational level	IX Std	54	34	63.0	20	37.0	3.92*	P<0.05 (3.841)
	X Std	26	22	84.6	4	15.4		
Religion	Hindu	54	38	70.4	16	29.6	0.05 NS	P>0.05 (5.991)
	Muslim	9	6	66.7	3	33.3		
	Christian	17	12	70.6	5	29.4		
Type of family	Nuclear	47	29	61.7	18	38.3	5.40*	P<0.05 (5.991)
	Joint	25	19	76.0	6	24.0		
	Extended	8	8	100.0	0	0.0		
Family income/month	Rs.2001-3000	17	12	70.6	5	29.4	0.22 NS	P>0.05 (5.991)
	Rs.3001-4000	26	19	73.1	7	26.9		
	Rs.4001 & above	37	25	67.6	12	32.4		
Education Father of	Primary	10	8	80.0	2	20.0	0.55 NS	P>0.05 (5.991)
	Secondary	48	33	68.8	15	31.2		
	Higher secondary	22	15	68.2	7	31.8		
Education of Mother	No formal education	13	10	76.9	3	23.1	1.38 NS	P>0.05 (7.815)
	Primary	40	29	72.5	11	27.5		
	Secondary	23	14	60.9	9	39.1		
	Higher secondary	4	3	75.0	1	25.0		
Occupation of Mother	House wife	48	38	79.2	10	20.8	6.11*	P<0.05 (5.991)
	Government	10	7	70.0	3	30.0		
	Private	22	11	50.0	11	50.0		
Source of information	Mother	65	44	67.7	21	32.3	1.92 NS	P>0.05 (5.991)
	Friends/Relatives	11	8	72.7	3	27.3		
	TV/Computer	4	4	100.0	0	0.0		
Number of Siblings	One	9	9	100.0	0	0.0	6.22*	P<0.05 (5.991)
	Two	54	38	70.4	16	29.6		
	Three	17	9	52.9	8	47.1		
Combined		**80**	**56**	**70.0**	**24**	**30.0**		

* Significant at 5% Level, NS : Non-significant

Note : Figures in the parenthesis indicate Table value

Above Table 10a shows that:

Age group : The obtained Chi square value 9.48 is more than table value, so there is an association between knowledge level of high school girls and age of girls 0.05 level of significance. Hence research hypothesis is accepted. Education: The obtained x2 value 3.92 is more than the table value so there is an association between knowledge level of high school girls and education of girls at 0.05 level of significance. Hence, research hypothesis is accepted. Religion: The obtained x2 value 0.05 is less than the table value so there is no association between knowledge level of high school girls and religion of girls at 0.05 level of significance. Hence, research hypothesis is rejected. Family type: The obtained x2 value 5.40 is more than the table value so there is an association between knowledge level of high school girls and type of family of girls at 0.05 level of significance. Hence, research hypothesis is accepted. Monthly Income: The obtained x2 value 0.22 is less than the table value so there is no association between knowledge level of high school girls andfamily income of girls at 0.05 level of significance. Hence, research hypothesis is rejected**.** Education of the fathers: The obtained x2 value 0.55 is less than the table value so there is no association between knowledge level of high school girls and education of mothers at 0.05 level of significance. Hence, research hypothesis is rejected .Education of the Mothers: The obtained x2 value 1.38 is less than the table value so there is no association between knowledge level of high school girls and education of mothers at 0.05 level of significance. Hence, research hypothesis is rejected . Occupation of Mothers: The obtained x2 value 6.11 is more than the table value so there is an association between knowledge level of high school girls and occupation of mothers at 0.05 level of significance. Hence, research hypothesis is accepted. Source of information : The obtained x2 value 1.92 is less than the table value so there is no association between knowledge level of high school girls and source of information of girls at 0.05 level of significance. Hence, research hypothesis is rejected. Number of siblings : The obtained x2 value 6.22 is more than the table value so there is an association between knowledge level of high school girls and number of siblings at 0.05 level of significance. Hence, research hypothesis is accepted.

There is a significant association between knowledge score on healthy practices of sanitary pads usage among high school girls and the selected demographic variable such as Age group ,educational status , Family type, occupation of mothers and number of siblings .Hence, stated hypothesis H2 is accepted.

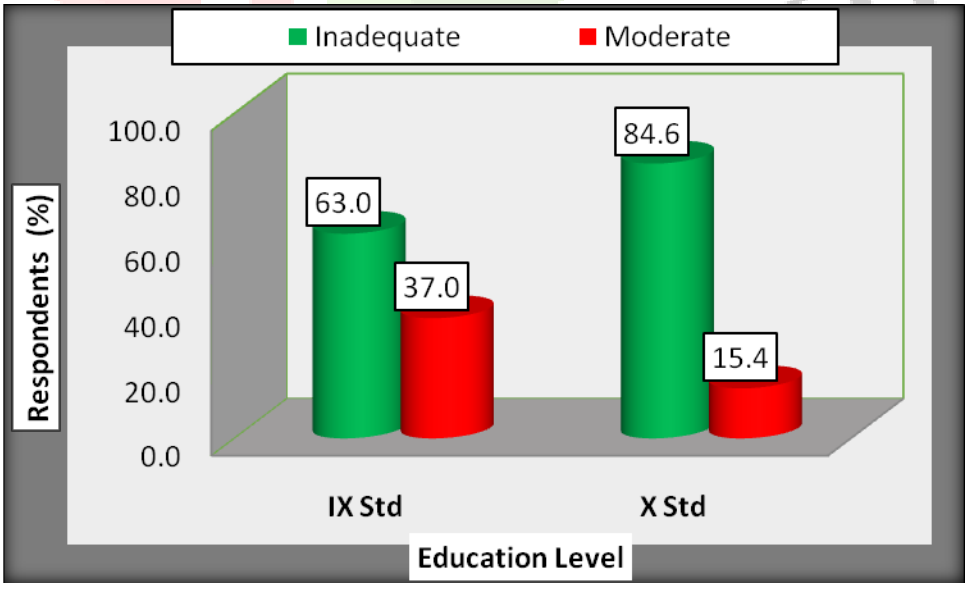

Figure . 13 : Association between Educational level and Pre test Knowledge level on Healthy practices of Sanitary pads

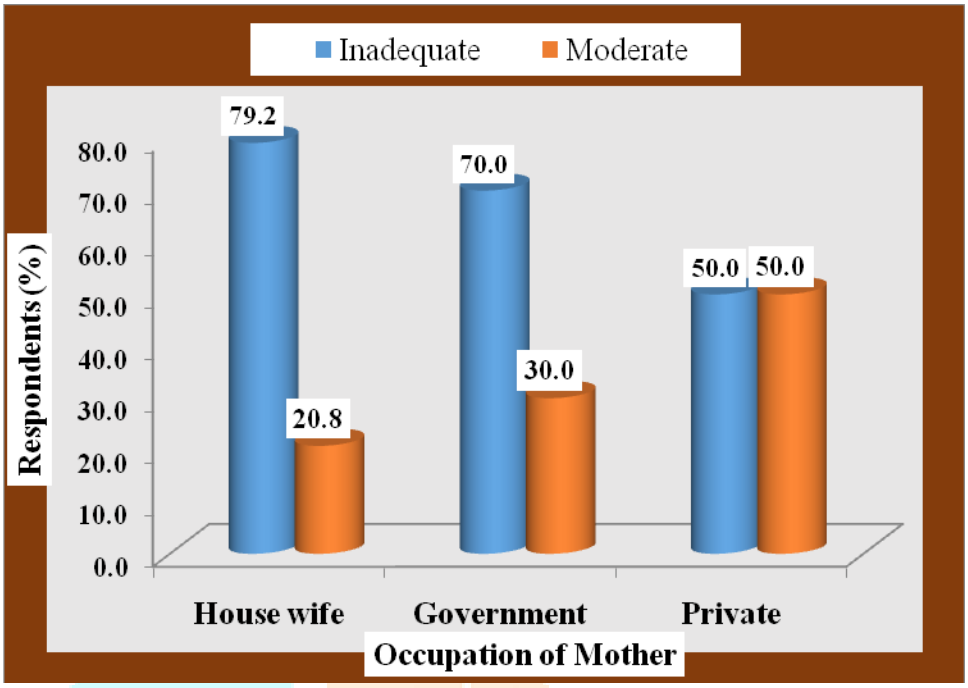

Figure . 14 : Association between Occupation of mother and Pre test Knowledge level on Healthy practices of Sanitary pads

DISCUSSION

This chapter discusses the findings of the study derived from statistical analysis and its pertinence to the objectives set for the study and related literature of the study. The present study was conducted to evaluate the effectiveness of structured teaching programme on healthy practices of sanitary pads usage among high school girls. In order to achieve the objective of the study one group pre test and post test design with evaluative approach was adopted. Non probability, convenient sampling technique was used to select the sample. The data was collected from 80 respondents by using a structured knowledge questionnaire . The finding of the study has been discussed in the following 2 sections :

Section 1: Demographic characteristics

Section 2: Objective of the study

Objectives of the study :

- To assess the level of knowledge regarding healthy practices of sanitary pad usage among high school girls before & after the structured teaching programme.
- To evaluate the effectiveness of the structured teaching programme on knowledge regarding healthy practices of sanitary pads usage among high school girls.
- To determine the association between the level of pre test knowledge on healthy practices of sanitary pads usage & selected demographic variables.

Major findings of the study:

The findings of the study are discussed as follows:

In this section, the demographic characteristics of high school girls are discussed, 80 girls were selected from the 2 high schools (Angel High School & Sarvodaya National Public School) of Bangalore.Findings related to demographic variables were discussed as follows:

In relation to age group , majority (58.8%) of respondents belong to 15 years , 28.7% of respondents belong to 16 years and 12.5% of respondents belong to 14 years. With regards to education, majority (67.5%) of respondents was studying ix standard, 32.5% of respondents was studying x standard . In relation to religion , majority (67.5%) of respondents are Hindus, 21.3% are Christian, 11.2% are Muslim . Family type reveals majority (58.8%) of respondents belongs to nuclear family and 31.2% belongs to joint family, 10% belongs to extended family. Monthly Income reveals majority (46.2%) of respondents belongs to the income group of Rs 4000 & above per month, 32.5% belongs to income group of Rs.3001-4000/month, 21.3% belongs to the income group of Rs.2001-3000/month, . In relation to source of information majority (81.3%) of respondents have got any information from mother, 13.77% of respondents have got any information from friends and relatives , 5% of respondents have got any information from tv /computer. Education of Mother shows majority 40 (50.0%) of respondents are educated upto primary level and 23 (28.7%) are secondary level and 4 (5%) are higher secondary school and 13 (16.3%) have no formal education . Education of father shows 48 (60%) of respondents have secondary education, 22 (27.5%) belongs to higher secondary level, 10 (12.5%) have primary education. In relation to occupation of mother majority 48 (60%) of respondents mothers are house wife, 22 (27.5%) of mothers are private employee, and 10 (12.5%) of mothers are government employee. Number of siblings shows majority 54 (67.5%) have two siblings, 17 (21.3%) have three siblings, 9 (11.2%) have one sibling .

Section II.

In this section, the objectives of the study were discussed. The first objective was to assess the level of knowledge of high school girls on healthy practices of sanitary pads usage before and after structured teaching programme.

 The overall pre test knowledge scores among high school girls majority 56(70.0%)of the high school girls had inadequate knowledge regarding healthy practices of sanitary usages, 24(30%) had moderate knowledge and none had adequate knowledge. After administration of structured teaching programme whereas in the overall post test knowledge score, none of high school girls had inadequate knowledge and 58 (72.5%) of the high school girls had adequate knowledge.

The overall mean knowledge level obtained by the high school girls following administration of structured teaching programme was 24.24 in post test which was found to be higher than the overall mean knowledge level 13.56 in the pre test.

The statistical test indicated that structured teaching programme was effective in improving knowledge regarding healthy practices of sanitary pads usage.

The mean enhancement between pre test and post test was 10.68 and the obtained

paired"t" value was 37.03. It was found to be statistically significant at the level of $P< 0.05$.

Section 3

Third objectives was to find out the association between the pre test level of knowledge regarding healthy practices of sanitary pads usage among high school girls with their selected socio-demographic variables.

There is a statistically significant association between pre test knowledge and selected variables with Age group, Educational level, Type of family, Occupation of mother, Number of siblings. Hence H_2 was accepted.

However , there was no significant association between pre test knowledge and religion ,family income ,education of father , education of mother and source of information. Hence ,stated hypothesis H_2 is rejected above selected variables.

Similar study :

Similar findings have been reported by Dasgupta. Aand Sarkar. M majority 152 (95%) were Hindus, whereas only 8(5%) girls were muslim. Similar finding is found with a study and shows that the most of the samples were belonged to income group of Rs.4000 & above monthly. Similar finding have been reported by Patkar. A that majority (76.1%) of respondent have got any information from mother. Similar findings have reported by Acharya.V.P that majority(30%) of respondent were educated upto primary school & above, 26% were illiterate, 24% are high school and remaining 20% were educated upto secondary school.

Limitations:

- The study was limited to class ix -x standard girls attending class in Sarvodaya National Public
- School, Bangalore.
- Who were willing to participate in the study.
- Who were able to read and write English.
- Assessment of knowledge is based on the responses to objective type test item
- used in structured interview schedule.

Recommendations for further study:

- A similar type of study can be conducted in a large number of students A study may be done to explore the effectiveness of structured teaching programme.
- The same study can be replicated by including attitudes of high school girls. The comparative study can be conducted on high school girls of government and
- Private settings.
- An exploratory study can be conducted on specific aspects of healthy practices of sanitary pads usage by involving high school girls.
- A experimental study can be done to improve the knowledge of high school girls .
- A descriptive study can be conducted regarding the knowledge on complications during menstruation among high school girls.
- A descriptive study can be conducted to assess the knowledge and attitude of high school girls regarding healthy practices of sanitary pads usages.

Projected outcome :

This study will be helpful in improving the knowledge regarding healthy practices of danitary pads usage among high school girls and thereby they can lead a healthy quality of life.

Delimitation :

- The study was delimited to high school girls in selected schools at Bangalore.
- Data collection period is 4 weeks only.

CONCLUSION

The following study was undertaken to assess the pre test and post test knowledge regarding healthy practices of sanitary pads usage , to evaluate the effectiveness of structured teaching programme on knowledge regarding healthy practices of sanitary pads usage and to determine the association between

the pre test level of knowledge and selected demographic variables of high school girls. The following conclusions were based on the findings. The results were described by using descriptive and inferential statistics. The implications are given on the various aspects like nursing education, nursing practice, nursing practice, nursing administration and it also gives insight into the future studies.

The following were the conclusions drawn from the study :

In the demographic characteristics of high school girls are discussed, 80 girls were selected from the 2 high schools (Angel High School & Sarvodaya National Public School) of Bangalore.

Findings related to demographic variables were discussed as follows:

In relation to age group , majority (58.8%) of respondents belong to 15 years , 28.7% of respondents belong to 16 years and 12.5% of respondents belong to 14 years. With regards to education, majority (67.5%) of respondents was studying ix standard, 32.5% of respondents was studying x standard . In relation to religion , majority (67.5%) of respondents are Hindus, 21.3% are Christian, 11.2% are Muslim .Family type reveals majority (58.8%) of respondents belongs to nuclear family and 31.2% belongs to joint family, 10% belongs to extended family.Monthly Income reveals majority (46.2%) of respondents belongs to the income group of Rs 4000 & above per month, 32.5% belongs to income group of Rs.3001-4000/month, 21.3% belongs to the income group of Rs.2001-3000/month, . In relation to source of information majority (81.3%) of respondents have got any information from mother, 13.77% of respondents have got any information from friends and relatives , 5% of respondents have got any information from tv /computer. Education of Mother shows majority 40 (50.0%) of respondents are educated upto primary level and 23 (28.7%) are secondary level and 4 (5%) are higher secondary school and 13 (16.3%) have no formal education . Education of father shows 48 (60%) of respondents have secondary education, 22 (27.5%) belongs to higher secondary level, 10 (12.5%) have primary education. In relation to occupation of mother majority 48 (60%) of respondents mothers are house wife, 22 (27.5%) of mothers are private employee, and 10 (12.5%) of mothers are government employee. Number of siblings shows majority 54 (67.5%) have two siblings, 17 (21.3%) have three siblings, 9 (11.2%) have one sibling .

- The knowledge regarding healthy practices of sanitary pads usage among high school girls was inadequate when assessed in pre-test. And the knowledge level was improved in the post test.
- The overall pre test knowledge scores among high school girls majority 56(70.0%)of the high school girls had inadequate knowledge regarding healthy practices of sanitary usages, 24(30%) had moderate knowledge and none had adequate knowledge. After administration of structured teaching programme whereas in the overall post test knowledge score, none of high school girls had inadequate knowledge and 58 (72.5%) of the high school girls had adequate knowledge.
- The structured teaching programme was effective in improving knowledge of healthy practices of sanitary pads usage.The overall mean knowledge level obtained by the high school girls following administration of structured teaching programme was 24.24 in post test which was found to be higher than the overall mean knowledge level 13.56 in the pre test. The statistical test indicated that structured teaching programme was effective in improving knowledge regarding healthy practices of sanitary pads usage.The mean enhancement between pre test and post test was 10.68 and the obtained paired"t" value was 37.03. It was found to be statistically significant at the level of $P< 0.05$.
- There is a statistically significant association between pre test knowledge and selected variables with Age group, Educational level, Type of family, Occupation of mother, Number of siblings. Hence H_2 was accepted. However , there was no significant

association between pre test knowledge and religion ,family income ,education of father , education of mother and source of information.Hence ,stated hypothesis H_2 is rejected above selected variables.

IMPLICATIONS OF THE STUDY

The findings of the study have implications in the field of nursing education, nursing practice, nursing research and nursing administration.

- Nursing Education
- Nursing Practice
- Nursing Research
- Nursing Administration

Nursing education:

Nursing education emphasizes that health care system should pay more attention to train the nursing students on family centered care approach, role of community health nurse in quality assurance, consumer roles and involvement in school health care services. Hence the use of education devise strategies should encourage involvement of school girls in school health programme to impart healthy practices of sanitary pads usage to promote better healthy life outcome. Planned health education programme by health professionals should be made on ongoing process in the primary health center, school health services and in the community settings.

Nursing practice

Lack of knowledge among high school girls regarding the health aspects is the major cause for the high school girls mortality and morbidity rates. Nursing plays very important role in imparting the knowledge for high school girls regarding anatomy and physiology of the reproductive system, meaning of menstruation and menstrual cycle, purpose of menstrual hygiene, risk factors for reproductive tract infection due to poor menstrual hygiene and menstrual hygiene practice. Thus acquisition of knowledge helps in better outcome of health condition.The findings of the study indicates that the nurse teacher in the community area or in school should encourage individual conversation with the girls-to-be as part of the basic programme, enhancement of knowledge by providing structured teaching programme to high school girls on routine menstrual hygiene in Schools and community settings. Such practice of high school girls involvement in healthy practices of sanitary pads usage lead can do better health outcome to have healthy life of the girls.

Nursing Research

It is essential to identify at present the level of knowledge regarding healthy practices of sanitary pads usage among high school girls to know the extent of information necessary to be given on talk. The extensive research must be conducted in this area to identify several more effective methods of education. This study also brings about facts that more studies need to be done in different settings, which is culturally acceptable as better teaching strategies of education. This study can be baseline for the future study.

Nursing Administration

Instructions providing maternity services should review their policies and practices regarding high school girls involvement in healthy practices of sanitary pads usage. Nursing administration should

necessarily involve in formulating policies, guidelines and health education for expectant girls in hospitals as well as in the school and community settings. This study finding helps in reviewing policies at administrative level.

SUMMARY

Research is a scientific , systematic, controlled, orderly and objective investigation to develop, refine and expand body of knowledge. Research is needed to evaluate the effectiveness of nursing treatment modalities, to determine the impact of nursing care on the health of individuals or to test theories. Nursing practices are undergoing tremendous changes and challenges. In order to meet social challenges and needs , nursing practice must be research baced. Nursing research is scientific, systemetic and refining the nursing knowledge to improve quality of nursing care, nursing education, nursing administration. This chapter presents the summary of the study, its discussion, conclusions, its Implications and recommendations.

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of structured teaching programme on knowledge regarding healthy practices of sanitary pads usage among high school girls in selected schools at Bangalore.

The purpose of the study was to assess the level of pre & post test knowledge regarding healthy practices of sanitary pad usage among high school girls before & after the structured teaching programme. The study was conducted in Sarvodaya National Public School ,Bangalore.A evaluative approach & quasi experimental research design was adopted to assess the knowledge on regarding healthy practices of sanitary pads usage. I select sample by using structured knowledge questionnaire to collect data from high school girls.Data obtained were analysed & interpreteted in terms of objective of the study. Descriptive & inferential statistics was used to analysis the data, the level of significance was set at .05 levels.

HYPOTHESIS

- H1- There is statistically significant difference between pretest and posttest knowledge scores with high school girls regarding healthy practices of sanitary pads usage.
- H2- There is significant association between the levels of knowledge of high school girls regarding healthy practices of sanitary pads usage with selected demographic variables .

CONCEPTUAL FRAMEWORK

The conceptual framework based on the Noel. J. Penders Health promotional model (2002). Pre experimental (O1 X O2) one group pre and post test design was adopted for this study. 80 high girls of class ix & x standard studying in Sarvodaya National Public school were selected by non probability convenient sampling technique method. Data were collected by using structured Interview schedule. The study also revealed that high school girls gained knowledge after the administration of structured teaching programme. Review of literature was done from published article, past research studies, textbooks, reports and internets search regarding healthy practices of sanitary pads usage . It helps the investigator to collect the appropriate and relevant information to support the study, design the

methodology, conceptual frame work and development of the tool land also helped to plan the analysis of data .

ANALYSIS OF THE DATA:

Data obtained was analysed & interpreted in terms of objective of the study. Descriptive and inferential statistics were used for data analysis, the level of significance was set at .05 levels.

FINDINGS OF THE STUDY

I. Demographic characteristics:

- The majority of participants 47 (58.8%) of girls were in age group of 15 years.
- The majority of participants 54(67.5%) of girls studying 9th standard.
- The majority of the participants 54(67.5%) were Hindus
- The majority of the participants 47(58.8%) belonged to nuclear family
- The majority of the participants 65(81.3%) got information from mothers.
- The majority of participants 48(60%) fathers have secondary education.
- The majority of participant monthly income 37(46.2%) have income of Rs 4001 & above
- The majority of participants 40(50%) mothers have primary education.
- The majority of the participants 48(60%) were mothers occupation house wife.
- The majority of participants 54(67.5%) have two siblings

II. Effectiveness of structured teaching programme on menstrual hygiene among high school girls.

Majority of high school girls in pre-test had inadequate knowledge 56(70%), 24(30%) had moderate knowledge, and 0(0%) i.e. none of them were having adequate knowledge. After administration of structured teaching programme majority of high school girls had adequate knowledge 58(72.5%), 22(27.5%) had moderate knowledge, 0(0%) i.e. none of them had inadequate knowledge in the post test. The overall mean% of post – test knowledge score (80.8%) is higher than the mean% of pre – test score (45.2%). The mean% of enhancement of knowledge on menstrual hygiene among high school girls in pre test and post test score (35.6%) is significant at 0.05% level as the 't'= 1.96 *P<0.01. This indicates that the structured teaching programme was effective in increasing the knowledge of high school girls regarding healthy practices of sanitary pads usage.Hence the research hypothesis H1 is accepted.

III. The association between the knowledge scores and selected demographic variables:

There is a significant association between knowledge score on menstrual hygiene among high school girls and the selected demographic variable such as Age group $\chi 2$ =9.48 (P<0.05) educational status $\chi 2$=3.92 (P<0.05), Family type $\chi 2$=5.40 (P<0.05), Occupation of mother x2= 6.11 (P<0.05) Number of siblings $\chi 2$= 6.22(P<0.05). Hence, stated hypothesis H2 is accepted.There is no significant association between knowledge score on menstrual hygiene among high school girls and the selected demographic variable such as Religion $\chi 2$ = 0.05 (P>0.05), family income $\chi 2$ = 0.22 (P>0.05), education of father $\chi 2$ = 0.55 (P>0.05) , education of mother $\chi 2$ =1.38 (P>0.05) and source of information $\chi 2$ = 1.92 (P>0.05). Hence, stated hypothesis H2 is rejected.

The conceptual framework based on the Noel. J. Penders Health promotional model (2002) is used in my study.Overall experience of conducting this study was statisfying and enriching even the respondents were happy & satisfied with the information they received. For the investigator the study was new learnig experience , and showed that there is a great need to educate adolesecent girls regarding the usages of sanitary pads.

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CONSENT FORM OF THE RESPONDENTS

Dear Participants,

I Miss Amrita Sinha, second year Msc nursing student of Sarvodaya college of Nursing, as a partial fulfillment of the course, I'm conducting a study and the selected problem is " **A study to assess the effectiveness of structured teaching programme on knowledge regarding healthy practices of sanitary pads usage among high school girls in selected schools at Bangalore** " . I would like to get some information regarding your knowledge on healthy practices of sanitary pads usage . The information will be kept confidential and will be used for the study purpose only. Thank you for your information and kind participation.

Yours faithfully

Amrita Sinha

Signature of investigator,

I am willing to participate in the study and aware that the information provided will be kept confidential and used for the study purpose.

Signature of participants, Date :

Place : Bangalore

SARVODAYA COLLEGE OF NURSING
(Affiliated to R.G.U.H.S & Recognised by I.N.C., New Delhi & K.N.C., Bangalore)
#11/2, Magadi Main Road, Agrahara Dasrahalli, Bangalore-560079. INDIA,
PH. : 080-32484257, Fax : 08042057208,
Email : mailsarvodaya@gmail.com web : www.sarvodayaedu.org

Ref. : SCN 184/2019.20 Date : 26/02/2020

CERTIFICATE OF ETHICAL CLEARANCE

This is to certify that **Ms. AMRITA SINHA.,** is a postgraduate, M.Sc., Nursing student in the department of **OBG Nursing.** She has been admitted to this course during the academic year 2019 – 20. The ethical committee has issued ethical clearance to the candidate to carry out thesis work on the synopsis / topic submitted by her.

Chairman
Ethical Clearance Committee
Sarvodaya College of Nursing
Bangalore

STRUCTURED KNOWLEDGE QUESTIONNAIRE ON THE HEALTHY PRACTICES OF SANITARY PADS AMONG HIGH SCHOOL GIRLS

INSTRUCTIONS TO THE PARTICIPANTS:

Dear participants, there are four types of questionnaires. You are requested to answer all items.

This information will be treated as confidential. Kindly put a (√) mark to the answer you feel correct in the specific column, mentioned to the right side of the questionnaire.

SECTION –I; DEMOGRAPHIC PROFORMA

1. Age :
   - A. 13 years ( )
   - B. 14 years ( )
   - C. 15 years ( )
   - D. 16 years ( )
2. Education :
   - A. Ix standard ( )
   - B. X standard ( )
3. Religion :
   - A. Hindu ( )
   - B. Muslim ( )
   - C. Christian ( )
   - D. Any other ( )
4. Type of family :
   - A. Nuclear ( )
   - B. Joint ( )
   - C. Extended Family ( )
5. Educational status of the mother :
   - A. No formal education ( )
   - B. Primary ( )
   - C. Secondary ( )
   - D. Higher Secondary ( )

E. Graduation ( )

5.Educational status of father :

A. No formal education ( )

B. Primary ( )

C. Secondary ( )

D. Higher Secondary ( )

E. Graduation & Above ( )

7. Income of the family per month :

A. Rs. 2000 or below ( )

B. Rs. 2001 to 3000 ( )

C. Rs. 3001 to 4000 ( )

D. Rs. 4001 and above ( )

8. Occupation of mother :

A. House wife ( )

B. Government employee ( )

C. Private employee ( )

9. Source of information regarding menstruation :

A. Mother ( )

B. Friends / Relatives ( )

C. News papers ( )

D. T.V / Computer ( )

10. Number of siblings :

A. 1 ( )

B. 2 ( )

C. 3 ( )

D. Above 3 ( )

SECTION –II KNOWLEDGE QUESTIONNAIRE

PART –I ANATOMY AND PHISIOLOGY OF THE REPRODUCTIVE SYSTEM

1. Among the following which one is the female reproductive organ ?

A. Kidney ( )

B. Uterus ( )

C. Urethra ( )

D. Intestine ( )

2. Where is uterus situated?

A. In the stomach ( )

B. In the chest ( )

C. In the lower abdomen ( ) D. In the upper abdomen ( )

3. The reproductive period in a female is :

A. Between 10 – 15 years ( )

B. Between 15 - 45 years ( )

C. Between 45 – 50 years ( )

D. Between 50 – 60 years ( )

4. The organs responsible for menstruation are:

A. Ovary and uterus ( )

B. Fallopian tubes ( )

C. Intestine ( )

D. Both A & B ( )

5. The number of Ovaries present in a woman :

A. One ( )

B. Two ( )

C. Three ( )

D. Four ( )

6. The ovum is produced in the

A. Uterus ( )

B. Fallopian tubes ( )

C. Ovaries ( )

D. Vagina ( )

PART –II MENSTRUATION

7. Age of menarche

A. 11 Year ( )

B. 12 year ( )

C. 13 year ( )

D. 14 year ( )

8. What is the duration of normal menstrual flow

A. 1 – 3 days ( )

B. 3 – 5 days ( )

C. 6 – 8 days ( )

D. 8 – 10 days ( )

9. Nature of menstruation practice

A. Cloth ( )

B. Menstrual cup ( )

C. Sanitary pads ( )

D. Others ( )

10. What is the process by which the ovum is released from the ovary?

A. Menstruation ( )

B. Ovulation ( )

C. Menopause ( )

D. Menarche ( )

11. How many egg/s is / are released normally in a month ?

A. One ( )

B. Two ( )

C. Three ( )

D. More than three ( )

12. Average blood loss during menstruation is

A. 35 – 40 ml ( )

B. 41 – 45 ml ( )

C. 46 – 50 ml ( )

D. 51 – 56 ml ( )

13. What is the normal interval between menstrual cycle

A. 28 days ( )

B. 30 days ( )

C. 32 days ( )

D. Abnormal cycle ( )

14. which is the dietary pattern during menstruation

A. A diet rich in iron & calcium ( )

B. Liquid diet ( )

C. Light diet ( )

D. Well balanced diet ( )

15. How do you feel previous day of menstrual cycle

A. Breast tenderness ( )

B. Abdominal discomfort ( )

C. Mood swing ( )

D. All the above ( )

PART – III MENSTRUAL HYGIENE (HEALTHY PRACTICES OF SANITARY PADS)

16. How many layers are there in a sanitary pad?

A. One ( )

B. Two ( )

C. Three ( )

D. Four ( )

17. If clothes are used how it is washed & stored?

a) Clean and covered place ( )

b) Clean and open space ( )

c) Unclean place ( )

d) Not using reusable absorbent ( )

18. Frequency of changing sanitary pads per day

A. Once a day ( )

B. Twice a day ( )

C. Thrice a day ( )

D. Four times a day and above ( )

19. Material used for cleaning of external genitalia

A. water and antiseptic ( )

B. soap and water ( )

C. only water ( )

D. not cleaning regularly ( )

20. Do food habits affect menstrual cycle? Yes/no

21. Poor menstrual hygiene practices leads to infections? Yes/no

22. What should be the bathing pattern during menstruation

A. Only body bath ( )

B. Head & body bath both daily ( )

C. No bath during the flow ( )

D. None of above ( )

23. How often perineal wash is taken

A. After attending toilet ( )

110

B. Once a day ( )

C. Twice a day ( )

D. Do not know ( )

24. Which technique is you preferred to clean perineum during menstruation

A. Front to back ( )

B. Back to the front ( )

C. Side to side ( )

D. Do not know ( )

25. Why sanitary pads are changed frequently

A. To prevent infection and rashes ( )

B. Due to influence of family member ( )

C. To avoid bad smell ( )

D. Don't know ( )

26. How used pads are disposed

A. With garbage ( )

B. By burning ( )

C. Wrap in paper & throw in dustbin ( )

D. Do not know ( )

27. How do you dry the washed clothes

A. In sunlight ( )

B. In shade ( )

C. In dark room ( )

D. Do not know ( )

28. Which factor does influence the preference of sanitary pad

A. Easy to wear ( )

B. Easy to dispose ( )

C. Prevent infection ( )

D. All the above ( )

29. What material is preferred for innergarments

A. Cotton ( )

B. Synthetic ( )

C. Nylon ( )

D. Others ( )

30. Unhygienic menstrual practice leads to

A. Infection ( )

B. Irritation in the genitalia ( )

C. Itching and rashes ( )

MASTER CHART - SIGNED AND SCANNED

Data demographic proforma

No.	Age	Edu	Rel	TF	Ed-Fa	Ed-Mo	IN	O-Mo	SI	NS	KB-G	KA-G
1	2	1	2	2	3	2	2	1	1	3	1	2
2	3	2	2	2	4	2	2	1	1	2	1	2
3	2	1	1	1	4	3	4	3	1	2	2	3
4	2	1	1	1	3	2	3	1	1	2	1	2
5	3	2	1	2	4	3	4	3	4	2	1	3
6	4	2	1	2	4	2	2	1	1	2	1	2
7	4	2	1	1	3	2	3	1	1	1	1	2
8	3	2	1	1	3	2	2	1	1	2	1	3
9	3	1	3	3	4	3	4	2	1	2	1	3
10	4	2	1	1	3	2	3	3	1	2	2	3
11	4	2	2	3	2	1	2	1	2	3	1	3
12	3	1	1	1	3	2	4	3	1	2	1	3
13	3	1	1	1	3	2	3	1	1	2	1	3
14	3	1	2	2	3	2	3	1	1	3	2	3
15	3	1	3	2	3	2	4	3	1	2	1	3
16	3	1	3	1	4	3	4	2	1	1	1	3
17	3	1	2	3	3	1	3	1	2	3	1	3
18	3	1	2	3	3	1	3	1	2	3	2	3
19	4	2	1	2	3	2	3	1	1	2	1	3
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21	3	1	1	1	2	1	2	1	1	2	1	3
22	3	1	1	1	3	2	4	3	1	2	2	3
23	3	1	1	1	3	2	3	1	1	2	1	3
24	3	1	2	2	3	1	3	1	1	2	1	2
25	3	1	2	2	2	1	2	1	2	2	2	3
26	3	1	3	1	3	2	4	1	1	2	2	3
27	3	1	3	2	3	2	4	3	1	2	1	2
28	3	1	3	2	3	2	4	2	1	1	1	3
29	3	1	3	1	3	3	4	2	1	2	2	2
30	3	1	3	1	4	3	4	2	1	2	1	3
31	3	1	1	1	4	3	4	2	1	2	2	3
32	3	1	1	1	3	2	4	1	1	2	1	3
33	3	1	1	2	4	3	4	3	1	2	1	3
34	3	1	1	1	3	2	3	1	1	2	2	3
35	3	1	1	1	3	2	4	2	1	2	1	3
36	3	1	1	2	4	3	4	3	1	1	2	3
37	3	1	1	2	3	3	4	3	1	2	1	3
38	3	1	1	2	4	4	4	3	1	2	1	3
39	3	1	1	2	4	4	4	3	1	1	1	3
40	3	1	1	2	3	3	4	3	1	2	2	2
41	3	1	3	1	3	2	4	1	1	3	2	3
42	3	1	3	1	4	3	4	2	1	2	1	2
43	2	1	3	2	4	4	4	3	1	2	1	3
44	2	1	3	1	3	3	4	3	1	2	2	3
45	2	1	1	1	4	3	4	3	1	2	2	3
46	2	1	1	1	4	3	3	1	1	2	2	2
47	3	1	1	1	4	3	3	1	1	2	1	3
48	3	1	1	1	3	2	3	1	1	2	1	3
49	3	1	1	1	3	2	3	1	1	2	1	2
50	3	1	1	2	3	3	3	1	1	2	1	3
51	3	1	3	1	3	3	3	1	1	2	1	3
52	4	2	1	1	3	2	3	1	1	2	2	3
53	4	2	1	1	4	4	4	2	1	1	2	3
54	4	2	1	1	4	3	4	3	1	2	1	2
55	4	2	1	1	3	2	3	1	1	2	1	3
56	4	2	1	1	3	3	4	3	1	2	1	3
57	4	2	2	2	3	2	2	1	2	3	1	2
58	4	2	1	1	3	2	3	1	1	3	1	2
59	4	2	3	2	3	2	3	1	2	3	1	2
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61	4	2	3	3	2	1	3	1	4	3	1	2
62	4	2	1	3	3	2	4	3	1	2	1	2
63	4	2	1	2	3	2	2	1	1	2	2	3
64	4	2	1	3	3	2	4	1	2	3	1	2
65	4	2	1	1	3	3	2	1	1	2	1	3
66	4	2	1	1	3	2	4	3	1	3	1	2
67	4	2	1	1	4	2	3	1	1	2	1	2
68	4	2	1	1	3	2	4	3	1	1	1	3
69	4	2	1	1	3	2	2	3	1	2	2	3
70	3	1	1	1	4	2	4	1	1	2	2	3
71	3	1	1	1	3	2	4	1	1	1	1	3
72	3	1	1	1	2	1	2	1	4	3	1	3
73	3	1	1	1	2	1	2	1	4	3	1	3
74	3	1	1	1	2	1	2	1	2	3	2	3
75	3	1	3	1	2	1	3	1	2	3	1	3
76	3	1	1	2	2	1	2	1	2	3	1	3
77	3	1	1	2	2	1	3	1	2	2	1	3
78	2	1	1	1	3	2	3	1	1	2	2	3
79	2	1	1	1	3	2	4	1	1	2	1	3
80	2	1	1	3	3	2	2	1	1	1	1	3

Amrita Sinha

Pre test data

No.	KB.I.1	2	3	4	5	6	II.7	8	9	10	11	12	13	14	15	III.16	17
1	0	0	1	0	0	0	0	1	0	1	0	0	1	0	1	1	0
2	0	1	0	0	1	0	0	1	0	0	1	0	1	1	0	1	0
3	1	0	1	0	0	1	0	1	1	1	1	0	0	1	0	1	1
4	1	0	0	0	1	0	1	0	0	1	0	0	1	0	1	0	0
5	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	0	0
6	0	1	0	1	1	0	1	0	0	1	0	0	1	0	1	1	0
7	0	0	1	1	0	1	0	1	0	1	0	1	0	1	1	1	0
8	0	1	0	1	0	1	0	1	1	0	1	0	0	0	0	1	0
9	1	0	0	0	0	1	1	1	0	0	0	1	0	1	0	0	1
10	0	0	1	1	1	1	0	0	0	0	1	1	0	1	0	1	1
11	0	1	1	0	0	0	0	0	1	1	0	1	1	1	1	0	0
12	1	0	0	0	1	0	0	0	1	0	0	1	1	0	0	0	1
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14	0	0	1	1	1	1	0	1	0	1	1	1	0	1	0	0	1
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18	0	1	0	0	1	1	1	0	1	0	0	1	1	1	1	1	0
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23	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	1	0
24	1	0	0	0	0	1	0	0	0	1	0	0	0	1	1	1	1
25	0	1	1	0	0	1	1	1	1	0	0	1	1	0	0	0	1
26	1	1	1	1	0	0	0	0	1	0	1	1	1	0	1	0	1
27	0	0	1	0	0	1	1	1	0	0	0	1	1	0	1	0	0
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30	0	1	1	1	0	0	1	1	1	0	0	1	0	0	1	0	1
31	0	1	0	0	0	0	1	1	0	1	1	1	0	1	0	1	1
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36	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1	1	0
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41	0	1	1	0	0	0	0	0	1	1	1	0	0	1	1	1	1
42	0	0	1	1	0	0	0	0	1	0	1	1	0	0	0	1	0
43	1	1	1	1	0	0	1	0	0	0	1	0	0	0	0	0	0
44	1	1	1	0	1	0	1	0	1	0	0	1	1	0	1	0	1
45	1	0	0	1	1	1	0	1	1	1	0	0	1	1	0	0	0
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48	1	1	1	1	1	0	0	1	0	1	1	0	0	0	1	0	0
49	1	0	0	0	1	1	0	0	0	1	0	0	0	1	1	0	0
50	1	0	0	0	0	0	1	0	1	0	0	1	1	0	1	1	0
51	0	0	1	0	0	0	0	1	0	1	0	0	1	0	1	1	0
52	0	1	0	0	1	0	0	1	1	0	1	0	1	1	0	1	1
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54	1	0	0	0	1	0	1	0	0	1	0	0	1	0	1	0	0
55	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	0	0
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57	0	0	1	1	0	1	0	1	0	1	0	1	0	1	1	1	0
58	0	1	0	1	0	1	0	1	1	0	1	0	0	0	0	1	0
59	1	0	0	0	0	1	1	1	0	0	0	1	0	1	0	0	1
60	0	0	1	1	1	1	0	0	0	0	1	1	0	1	0	1	1
61	0	0	1	0	0	0	0	1	0	1	0	0	1	0	1	1	0
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17	18	19	20	21	22	23	24	25	26	27	28	29	30	No.
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Post test data

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Amrita Sinha

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1	0	1	1	1	1	1	1	1	0	1	1	79
1	1	1	1	0	1	1	1	1	0	1	1	80

Amrita Sinha

SCORING KEY FOR KNOWLEDGE QUESTION

QUESTION NO.	ANSWER	SCORING

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

Each correct response carries one (1) mark, wrong response carries zero (0) marks.

Total score :30

Adequate knowledge : 23-30 marks

Moderate knowledge : 16-22 marks

Inadequate knowledge : 0-15 marks

ANNEXURES

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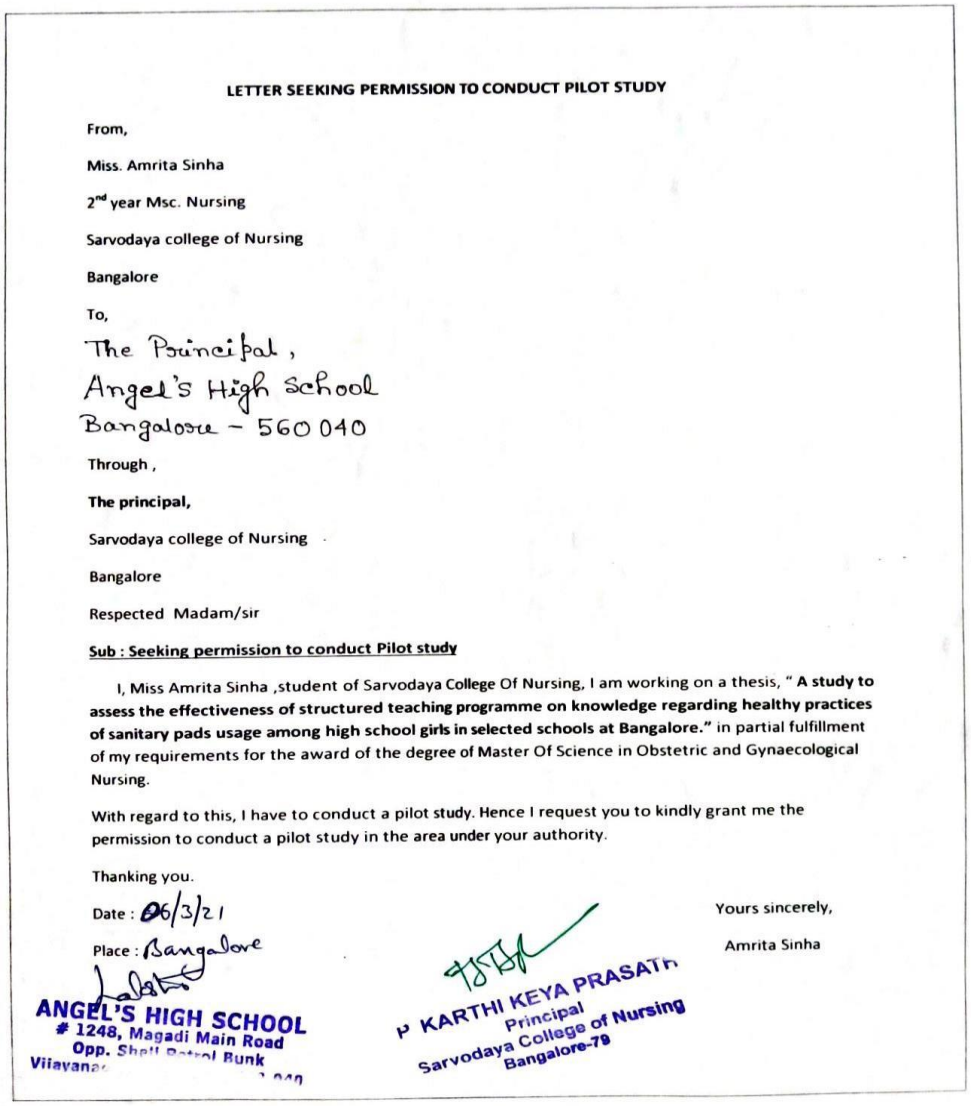
N.	Photos taken during study	160

ANNEXURE -A

LETTER SEEKING PERMISSION TO CONDUCT PILOT STUDY



LETTER SEEKING PERMISSION TO CONDUCT PILOT STUDY

From,

Miss. Amrita Sinha

2nd year Msc. Nursing

Sarvodaya college of Nursing

Bangalore

To,

The Principal,
Angel's High School
Bangalore – 560 040

Through,

The principal,

Sarvodaya college of Nursing

Bangalore

Respected Madam/sir

Sub : Seeking permission to conduct Pilot study

I, Miss Amrita Sinha ,student of Sarvodaya College Of Nursing, I am working on a thesis, " **A study to assess the effectiveness of structured teaching programme on knowledge regarding healthy practices of sanitary pads usage among high school girls in selected schools at Bangalore."** in partial fulfillment of my requirements for the award of the degree of Master Of Science in Obstetric and Gynaecological Nursing.

With regard to this, I have to conduct a pilot study. Hence I request you to kindly grant me the permission to conduct a pilot study in the area under your authority.

Thanking you.

Date : 06/3/21

Place : Bangalore

Yours sincerely,

Amrita Sinha

ANGEL'S HIGH SCHOOL
1248, Magadi Main Road
Opp. Shell Petrol Bunk

P KARTHI KEYA PRASATh
Principal
Sarvodaya College of Nursing
Bangalore-79

ANNEXURE - B

LETTER GRANTING PERMISSION TO CONDUCT PILOT STUDY

LETTER GRANTING PERMISSION TO CONDUCT PILOT STUDTY

From,

The Principal ,
Angel's High School

Bangalore- 560 040

To,

Miss Amrita Sinha

II M.Sc Nursing,

Sarvodaya college of Nursing.

Bangalore.

Dear Student,

As per your request forwarded through the principal, Sarvodaya college of Nursing, you are permitted to do the pilot study in ----School----, Bangalore.

Date: 12/3/21

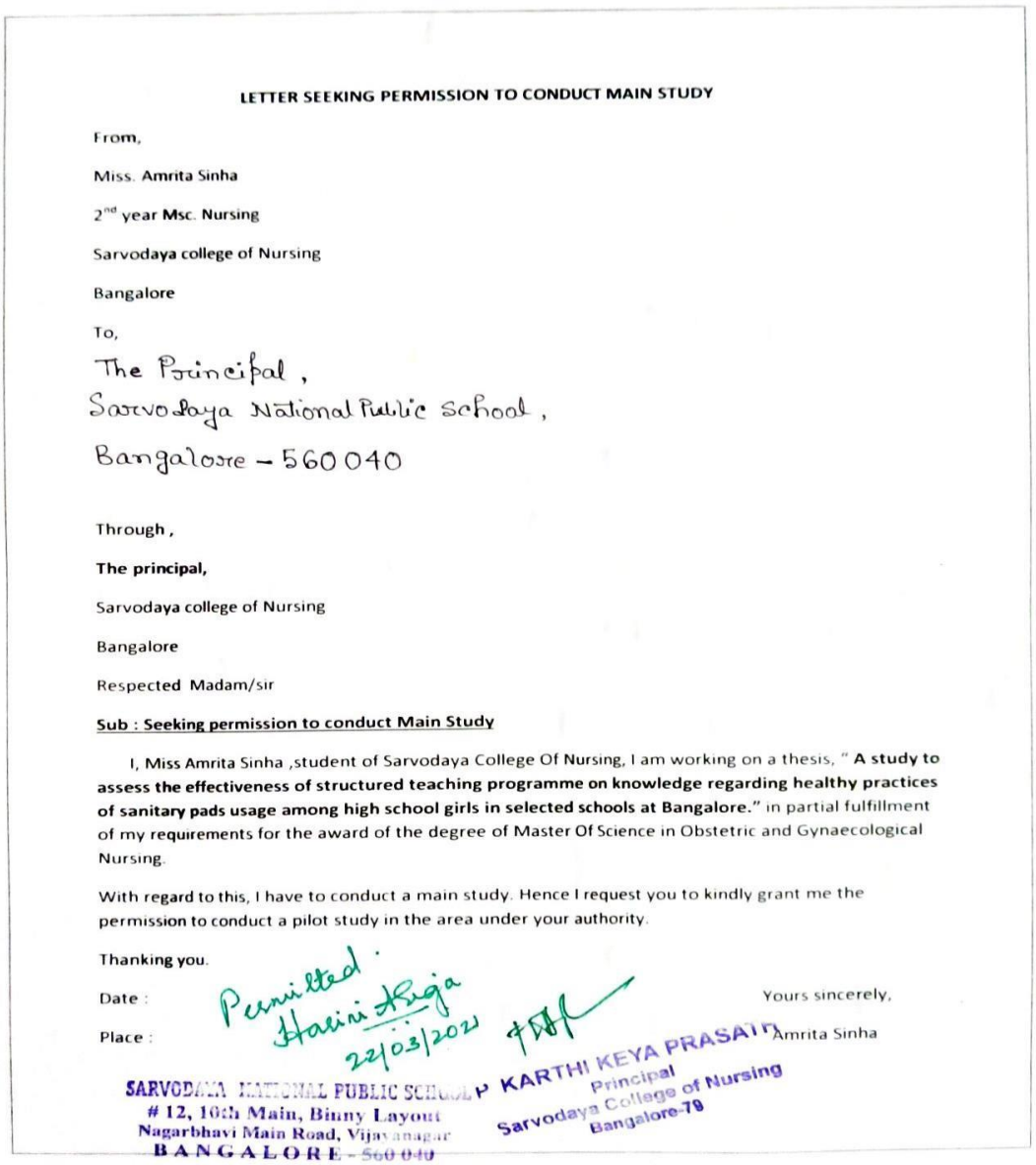
Signature: Lakshmi

Place: Bangalore

ANGEL'S HIGH SCHOOL
1248, Magadi Main Road
Opp. Shell Petrol Bunk
Vijayanagar, Ba[illegible]-560 040

ANNEXURE - C

LETTER SEEKING PERMISSION TO CONDUCT MAIN STUDY



LETTER SEEKING PERMISSION TO CONDUCT MAIN STUDY

From,

Miss. Amrita Sinha

2nd year Msc. Nursing

Sarvodaya college of Nursing

Bangalore

To,

The Principal,
Sarvodaya National Public school,
Bangalore – 560040

Through,

The principal,

Sarvodaya college of Nursing

Bangalore

Respected Madam/sir

Sub : Seeking permission to conduct Main Study

I, Miss Amrita Sinha ,student of Sarvodaya College Of Nursing, I am working on a thesis, " **A study to assess the effectiveness of structured teaching programme on knowledge regarding healthy practices of sanitary pads usage among high school girls in selected schools at Bangalore."** in partial fulfillment of my requirements for the award of the degree of Master Of Science in Obstetric and Gynaecological Nursing.

With regard to this, I have to conduct a main study. Hence I request you to kindly grant me the permission to conduct a pilot study in the area under your authority.

Thanking you.

Date :

Place :

Permitted.
Harini Raja
22/03/2024

Yours sincerely,

Amrita Sinha

SARVODAYA NATIONAL PUBLIC SCHOOL
12, 10th Main, Binny Layout
Nagarbhavi Main Road, Vijayanagar
BANGALORE - 560 040

P KARTHI KEYA PRASATH
Principal
Sarvodaya College of Nursing
Bangalore-79

ANNEXURE - D

LETTER GRANTING PERMISSION TO CONDUCT MAIN STUDY

LETTER GRANTING PERMISSION TO CONDUCT MAIN STUDY

From,

The Principal

Sarvodaya National Public school,

Bangalore.

To,

Miss Amrita Sinha

II M.Sc Nursing.

Sarvodaya college of Nursing,

Bangalore.

Dear Student,

As per your request forwarded through the principal, Sarvodaya college of Nursing, you are permitted to do the main study in Sarvodaya National Public School, Bangalore.

Date: 29/03/2021

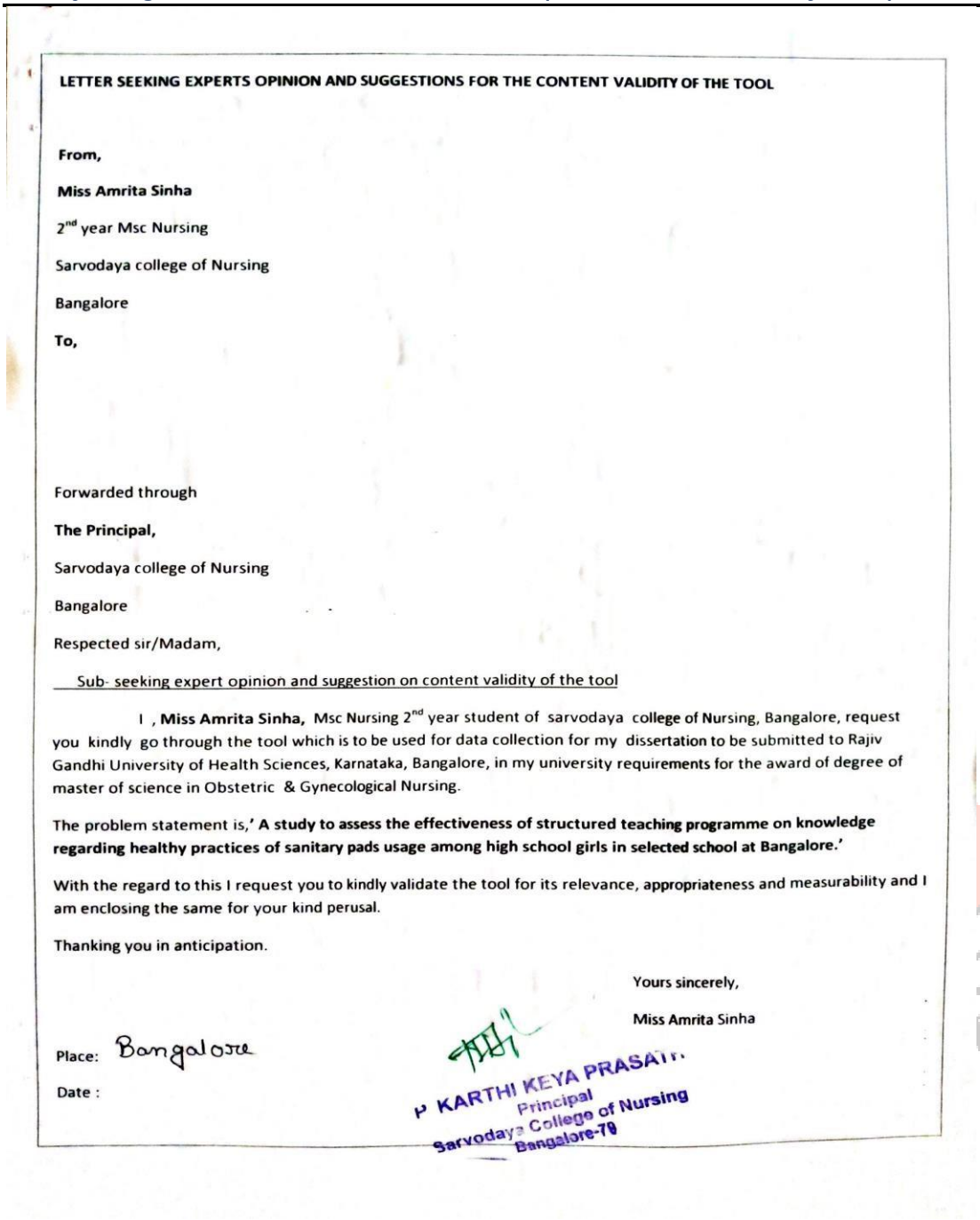
Signature: Harini Ahuja

Place:

PRINCIPAL
SARVODAYA NATIONAL PUBLIC SCHOOL
12, 10th Main, Binny Layout,
Nagarbhavi Main Road, Vijayanagar,
BANGALORE 560 040

ANNEXURE -E

LETTER SEEKING EXPERTS ' OPINION AND SUGGESTIONS FOR THE CONTENT VALIDITY OF THE TOOL



LETTER SEEKING EXPERTS OPINION AND SUGGESTIONS FOR THE CONTENT VALIDITY OF THE TOOL

From,

Miss Amrita Sinha

2nd year Msc Nursing

Sarvodaya college of Nursing

Bangalore

To,

Forwarded through

The Principal,

Sarvodaya college of Nursing

Bangalore

Respected sir/Madam,

Sub- seeking expert opinion and suggestion on content validity of the tool

I , **Miss Amrita Sinha,** Msc Nursing 2nd year student of sarvodaya college of Nursing, Bangalore, request you kindly go through the tool which is to be used for data collection for my dissertation to be submitted to Rajiv Gandhi University of Health Sciences, Karnataka, Bangalore, in my university requirements for the award of degree of master of science in Obstetric & Gynecological Nursing.

The problem statement is,' **A study to assess the effectiveness of structured teaching programme on knowledge regarding healthy practices of sanitary pads usage among high school girls in selected school at Bangalore.'**

With the regard to this I request you to kindly validate the tool for its relevance, appropriateness and measurability and I am enclosing the same for your kind perusal.

Thanking you in anticipation.

Yours sincerely,

Miss Amrita Sinha

Place: Bangalore

Date :

P KARTHI KEYA PRASAD
Principal
Sarvodaya College of Nursing
Bangalore-79

OBJECTIVES OF THE STUDY:

- To assess the level of knowledge regarding healthy practices of sanitary pad usage among high school girls before & after the structured teaching programme.
- To evaluate the effectiveness of the structured teaching programme on knowledge regarding healthy practices of sanitary pads usage among high school girls.
- To determine the association between the level of pre test knowledge on healthy practices of sanitary pads usage & selected demographic variables.

With regards to this, I request you kindly give your valuable suggestions regarding appropriateness of the tool, which i have enclosed. Kindly give your comment on the tool by using the evaluation criteria for modification of the tool.

I also request you to kindly sign the certificate stating that the tool has been validated. Your kind Co operation and expert judgement will be highly appreciated.

Thanking you.

Date : Yours' faithfully

Place : Bangalore. Miss Amrita Sinha

ANNEXURE - F

Blue Print of questionnaire

BLUE PRINT FOR THE TOOL

Content	**Knowledge**			**Comprehension**			**Application**			**Total**	
	Q.No	**Total No.**	**%**	**Q.No**	**Total No.**	**%**	**Q.No**	**Tota l No.**	**%**	**Q.No**	**%**
Knowledge question regarding anatomy and physiology of reproductive system	1,2,3,4,5,6	6	20%	_	_	_	_	_	-	6	20%
General information regarding menstruation	7,8,9,10,11,12,13,14	8	26.7 %	15	1	3.3 %	_	_	_	9	30%
Healthy practices of sanitary pads usage	16,19,20,21,22,23,29,30	8	26.7 %	-	_	_	17,18,24,25,26,27,28,	7	23.3 %	15	50%

ANNEXURE - G

EVALUATION CRITERIA CHECKLIST FOR THE VALIDATION OF THE TOOL

Dear Sir/Madam,

Kindly go through the content and place right mark against the questionnaire in the following columns ranging from relevant to not relevant, when found to be modification, kindly give your opinion in the remark column.

SECTION – A

(Demographic Data)

SL. NO.	ITEMS	RELEVANT	NEED MODIFICATION	NOT RELEVANT	REMARKS
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

Suggestions : **Signature of the Evaluator**

SECTION – B

SELF ADMINISTERED KNOWLEDGE QUESTIONNAIRE ON MENSTRUATION AND HEALTHY PRACTICES OF SANITARY PAD

Dear Sir/Madam,

Kindly go through the content and place right questionnaire in the following columns ranging from relevant to not relevant , whether need modification, kindly give your opinion in the remark column.

SL.NO.	ITEMS	RELEVANT	NEEDS	NOT	REMARKS

			MODIFICATION	RELEVANT	
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
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28.					

29.					
30.					

Suggestions if any :

Date :

Place : **Signature of expert**

Name and designation

ANNEXURE - H

CERTIFICATE OF CONTENT VALIDITY

This is to certify the tool developed by **Miss AMRITA SINHA,** 2nd year M.sc. Nursing student of Sarvodaya College Of Nursing, undertaking a research on " **A Study to assess the effectiveness of structured teaching programme on knowledge regarding healthy practices of sanitary pads usage among high school girls in selected schools at**

Bangalore."has been validated by me.

Signature :

Name :

Designation :

Date :

Seal:

ANNEXURE - I

LIST OF EXPERTS

1. Mrs. Divya B C

Vice principal and HOD

Obstetrics and Gynaecological Nursing Department

Sri Kalabyraveshwara Swamy College Of Nursing Bangalore.

2. Mrs. Bhagyalakshmi R.

Principal and HOD

Obstetrics and Gynaecological Nursing Department

Sri Lakshmi College Of Nursing Bangalore.

3. MRS. Sheela.J

Assistant Professor

Department of Obstetric and Gynecological Nursing

R V College of Nursing

4. Mrs Radhika K

Vice Principal and HOD

Obstetrics and Gynaecological Nursing Department

College of Nursing Columbia

5. MANJULA DEVI .A

Lecturer

Obstetrics and Gynaecological Department

Vijaynagar College of Nursing Bangalore.

6.Mrs. Gayathiri N.

Associate Professor

Obstetrics and Gynaecological Nursing

St John's college Of Nursing Bangalore.

7. Prof. Marie Rosy

Vice-Principal

Obstetric and Gynaecological Nursing Department

Aditya college Of Nursing Bangalore.

8. Dr. H. S Surendra

PhD. Professor of Statistics University of agricultural Sciences GKVK Bangalore.

9.Dr. M.Mohan Kumar

Consultant

Madhu Hospital Magadi Main Road Banglore.

ANNEXURE - J

CERTIFICATE FOR ANALYSIS OF DATA

This is to certify that the data analysis by Amrita Sinha II year MSc Nursing student from Sarvodaya college of Nursing , undertaking a study on entitled " **A study to assess the effectiveness of structured teaching programme on knowledge regarding healthy practices of sanitary pads usage among high school girls in selected school Bangalore** " has been verified by me.

Date :

Place :

Signature of statistician

H.S. SURENDRA
Associate Professor
Dept. of Agril. Statistics,
Applied Mathematics & Computer Sciences
University of Agricultural Sciences
GKVK, BENGALURU - 560 065

136

ANNEXURE - K

CERTIFICATE OF ENGLISH EDITING

CERTIFICATE OF ENGLISH EDITING

This is to certify that the dissertation done by Miss Amrita Sinha II year Msc Nursing student from Sarvodaya college of Nursing undertaking a study on entitled " **A study to assess the effectiveness of structured teaching programme on knowledge regarding healthy practices of sanitary pads usage among high school girls in selected schools at Bangalore** " has been edited for English language appropiateness by me.

Place :Bangalore.

Signature of Editor

Name and designation

MANJUSHREE ENTERPRISES
No. 543/80, 7th Main,
VIJAYANAGAR,
BANGALORE-560040

ANNEXURE - L

STRUCTURED TEACHING PROGRAMME ON HEALTHY PRACTICES OF SANITARY PADS USAGE

OUTLINE OF THE PLANNED TEACHING PROGRAM

TOPIC: Healthy practices of sanitary pads usage

GROUP: Class ix girls' students

PLACE: Sarvodaya National Public School

DURATION: 35 min

METHOD OF TEACHING: Lecture cum discussion

TEACHING AIDS: charts, flip charts, & black board

PLANNED TEACHING PROGRAM

- GENERAL OBJECTIVES:

Students will gain knowledge & develop understanding regarding "Healthy practices of sanitary pads usages" and they will be able to apply this knowledge during menstrual cycle.

- SPECIFIC OBJECTIVES:

Students will able to

1.1.1. Outline the parts of female reproductive system

1.1.2. Identifying the important parts ,uterus

1.1.3. Lists down the main functions of ovaries

1.1.4. Explain briefly the menstrual cycle

1.1.5. Describe the normal interval and duration of menstruation.

1.1.6. Identify the physical and emotional changes in puberty.

1.1.7. Classify the effects of menstruation on the psychological well being of a girl.

1.1.8. Stress the importance of menstrual hygiene.

SL.NO	OBJECTIVES	TIME	CONTENT	A.V AIDS	TEACHING LEARNING ACTIVITIES	EVALUATION

1.	Students will be able to introduce the topic.	5 min	**INTRODUCTION**:- "HYGIENE IS TWO THIRDS OF HEALTH"- Lebanese Proverb Personal hygiene during menstruation explored including bathing and showering, and buying and using sanitary protection products. WHO has defined Adolescence as the period between 10-19 years of life. Adolescent girls constitute about 1/5th total female population in the world. Adolescence in girls has been recognized as a special period in their life cycle that requires specific and special attention. This period is marked with onset of menarche. Menstruation is a phenomenon unique to all females. It is still considered as something unclean or dirty in Indian society. This concept is responsible for related taboos. The first menstruation is often and traumatic to an adolescent girl because it usually occurs without her knowing about it.	Black board	Teacher introduce the topic . Students listen and clarify the doubts .	

2.	Students will be able to identify the parts of female reproductive system	5min	Although menstruation is a natural process, it is linked with several perceptions and practices, which sometimes result in adverse health outcomes. DIFFERENT PARTS OF FEMALE REPRODUCTIVE SYSTEM: The external organs which lie on the outer side of the body. The internal organs which lie within the pelvic cavity, which is the frame work of bones around the body below the waist. The female pelvis contains the internal reproductive organs namely, The uterus, uterine tubes and ovaries. The external reproductive organs are collectively known as vulva and parts of valve are; The mons veneries; a pad of fat lying in front of the symphysis pubis. This area becomes covered with hair at puberty. Labia majora; are two thick folds which form the sides of the vulva. They are composed of skin		Clarifying doubts. Points out on the chart each part of the female	Points the parts of female reproductive system?

			and fat. Labia minora; are two small folds of skin situated between upper parts of the labia majora. The clitoris; is a small structure above the urethra. The hymen is a thin membranous structure with a small hole at the center to allow the menstrual discharge to be drained away. It is placed at the outer opening of the vagina, thus separating the external and internal genitalia. The presence of hymen is a sign of virgin. Therefore manipulation by vaginal examination is avoided as far as possible before marriage. Vagina is a muscular tube. It is bounded by vulva below the uterus above, the bladder and urethra in front and the rectum behind- vagina is situated near to urethra. So there is chances of infections spreading from the vagina to the urethra leading to urinary tract infection, resulting in frequency of micturation and burning sensation during urination. Infection can occur mainly due to lackofperineal hygiene.	Charts showing anatomy of the female reproductive system.	reproductive system. Indicate the ovaries.	

3.	Students list down the functions of ovaries.		**THE INTERNAL ORGANS OF REPRODUCTION** OVARIES: The ovaries are two almond shaped glands placed one on each side of the uterus which produce the female egg cell or ovum. They correspond to the male testis. FUNCTIONS: To produce immature eggs; which slowly develop into mature eggs. To produce sex hormone; progesterone and estrogen which are highly important for the menstrual cycle. UTERINE TUBES : The female pelvic cavity contains two uterine tubes that extend from the uterus till the ovary. It transports the eggs from the ovary to uterus. Its length is about 10 cm. UTERUS: The dome shaped portion of the uterus above the uterine tubes is			List down the functions of ovaries?

4.	Identify the important parts of uterus.	5mim	called fundus, central portion is called body, narrow portion opening into vagina called cervix. FUNCTION OF UTERUS: The pathway for sperm to reach the uterine tubes. The site of the menstruation, implantation of fertilized ovum and for development of the fetus during pregnancy. Blood supply:The uterus is supplied by arterial blood both from the uterine artery and the ovarian artery. Nerve Supply: The nerves are derived from the hypogastric andovarian plexuses, and from the third and fourth sacral nerve. **MENSTRUAL CYCLE:** The menstrual cycle is a series of changes occurring in the inner lining of the uterus of the non pregnant female. Each month , uterus is prepared to receive fertilized ovum that develops into an embryo and then into a fetus until delivery though does not happen in each	Black board	Indicate the uterine tubes. Explain the parts of uterus.	Identify the parts of uterus?

5.	Explain about menstrual cycle.	2 min	cycle. Ovaries contains large number of immature ova. At each menstrual cycle, one of those ova begins to mature. As it approaches full development it reaches the surface of the ovary, as the surface of the ovary breaks out, the ovum escapes into the opening of the uterine tube. This process is called ovulation. It occurs on or about 14th day of 28 days menstrual cycle. Slippery clean mucus (like egg white) will come out of the vagina. Before and after ovulation there will be vaginal discharge. This is not a sign of ovulation. If the ovum is not fertilized the inner line of the uterus persists for 12- 14 days until just before the onset of the next menstrual cycle & then it is shed off and the cycle is repeated in every month. This process is called menstruation. The normal interval between each menstrual cycle is 28 –32 days and its duration is 3 – 5 days. Menstruation: The period—the shedding	Charts showing menstrual cycle.	Explain the menstrual cycle. Clarify the doubts. Asking the question.	Explain about menstrual cycle?

			of the uterine lining. The follicular phase: The time between the first day of the period and ovulation. The proliferative phase: After the period, the uterine lining builds back up again. Ovulation: The release of the egg from the ovary, mid-cycle. **PREMENSTRUAL** **MANIFESTATION :** Fatigue Digestive disturbance Making too much of fuss about eating Anaemia is common because of poor eating habits and blood loss During each menstrual period, girls frequently experience; . Headache .Backache . cramps and abdominal pain .Fainting .Vomiting .Skin irritation .Swelling of the legs and			
6.	Classify the pre menstrual symtomps.			Chalk board	Asking questions and clarifying doubts.	

			ankles. **EFFECTS ON ATTITUDES AND BEHAVIORS DURING MENSTRUATION :** Desire for isolation Bored with play they formerly enjoyed Rapid growth effects habitual patters of co-ordination and girl is awkward for a time Unco-operative, disagreeable, moodiness, temper outburst Warm, anxiety, irritability Depression, negative moods Loss of self confidence Fear that others will notice the body changes. **SANITARY NAPKIN**			
7.	List down the effects on attitude and behaviors.	2 min	A sanitary napkin, sanitary towel, sanitary pad ,menstrual pad, or pad is an absorbent item worn by a women to absorb menstrual blood. Sanitary pads comprise of multilayered structure in which each layer have	Cartoons showing behaviors changes.	Explaining with diagrams	List down the effects on attitudes and behavior

8.	Explain the layers of sanitary pads.	4min	specific function to perform, it consists of three main layers, **the top sheet**, **absorbent core & barrier sheet**. **Top sheet** is designed to transfer fluid quickly from the top sheet to secondary layers. Top sheet contains thermoplastic fibers to prevent capillary collapse of this layer ,and small amount of hydrophilic absorbent fiber to allow fluid to absorb. **Absorbent core** is interposed between top sheet and barrier layer main function is to absorb and retain fluid. Moreover, to have comfort , this core need to be thin ,soft & pliable. It is made up of wood pulp & bamboo fiber is a novel alternative raw material in absorbent core. It absorbs and wicks water 3-4 times better than cotton and reduces odor as the fiber is filled with multi micro holes and micro gaps. **TYPES OF SANITARY PAD** - Disposable sanitary pad	Flip charts	Explaining the hygienic practices.	s? Explain the layers of sanitary pads?

			-cloth sanitary pad **STEPS TO USE A SANITARY NAPKIN** Three parts Part 1 Putting it on Part 2 Wearing it comfortably Part 3 changing and disposing			
9.	Explain the ways , steps and means of maintaining the healthy practices of sanitary pads usages.	12min	**PUTTING IT ON:** choose a pad of the appropriate thickness, absorbency shape and style Get in position Remove and any wrapper or boxes from the pad Fold out the flaps or rings and take off the long center backing that covers the adhesive on the center. Stick the adhesive part to your panties			Explain types of sanitary pads?

			WEARING IT COMFORTABLY Wear the panties as usual Do a routine check, specially on heavy days Wash the genital area regularly It is important to wash vagina and labia. Don't use soaps or vaginal hygiene products, washing it with soap can kill the good bacteria making way for infections. **CHANGING AND DISPOSING** Every 4 hr change the sanitary napkin when you have your periods it is important to be ready. To have extra sanitary pads stored in clean pouch or paper bag. Discard your used sanitary product properly. It is essential to discard your used napkins properly because they are capable of spreading infections, will make very foul smell. Be aware of a pad rash; A pad rash may occur during			How do

			heavy flow. If pad wet for a long time and rubs along the thighs causing it to chaff. Change your pads regularly and stay dry to prevent rash. Have a bath regularly Bathing not only cleanses your body but also give you a chance to clean your private parts well. To get some relief from backache and menstrual cramps just stand under a shower of warm water that is targeted towards your back or abdomen you will feel much better at the end of it. **CONSEQUENCES OF UNHYGENIC SANITARY NAPKINS PRACTICES ON WOMEN'S HEALATH** Poor menstrual hygiene can cause, Fungal infection Reproductive tract infection Urinary tract infection also have women vulnerable to infertility.		Promote group activities.	you dispose sanitary pads after use?

			It is the maintenance of cleanliness of the whole body specially the perineal area during menstruation. **Importance :** To prevent soiling of the cloths. To prevent discomfort. To prevent bad odour. To prevent infection. To prevent promote feeling of freshness. **Bath :** In some cultures, bathing or washing hair during periods is not encouraged. However, it is very important to take bath daily and wash one self whenever required. Infact ,it is more important to wash during periods than other times particularly in the area around vagina. This will help to make the girls really fresh and clean. Cloths should be changed daily including			

under garments.

Perineal care:

During menstruation, the area should be washed with soap and water to keep the perineum clean. Washing should be done after excretion,while changing pads and during bath.

Washing and wiping should done from the front to back to avoid spreading bacteria from the anus to the vagina and urethra causing urinary tract infection. Wash hands before and after cleaning perineal area or changing sanitary pads or towels.

Use of sanitary pads and towels:

The best products which can be use during menstruation are commercially available sanitary pads are thoroughly washed and dry sanitary towels.

Sanitary towels:

The cloths which are used should be very clean. Cotton towels are very effective, to absorb menstrual blood. After every use,

the towels should be washed thoroughly with soap and water. Then dip it in a soap solution in a small bucket or a basin which is used only for that purpose. After few hours it should be rinsed out again. This is the most effective method to remove the stain. Drying under the sun light is very effective and the towel should be folded and kept for the next use.

It is ideal to have about 12 – 15 towels for a girl to use during one menstrual period.

Sanitary pads:

Pads are available in the market. There is no need to feel embarrassed about buying them.

Pads can use all through the periods, whether at home, at school or out having fun with friends. Girls can relax and enjoy herself, knowing that she is well protected.

Pads are disposable, once it is used, it should be well wrapped in a paper and should be either burned or dumped in the

waste basin. It should never be thrown out through the window or dumped in open spaces.

Pad should be changed every 3 – 6 hours or whenever soaked. Frequent change will help to prevent infection.

CONCLUSION :

Menstrual periods are parts of normal life and should not stop from doing anything which is normally done.

Menstruation does not make one unclean, it is not dirty blood and is sterile as it comes inside the uterus.

There is no harm in involving the daily routines and activities, like working in the kitchen, washing and cooking and taking part in religious activities, reading bible and going to temple or church. However ,in some culture people believe that during menstruation girls should not take part in religious activities or not to help or enter the kitchen.

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"TRUST IN THE LORD WITH ALL YOUR HEART AND LEAN NOT ON

YOUR OWN UNDERSTANDING"

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Date: Signature of the candidate

Place: Bangalore **(AMRITA SINHA)**

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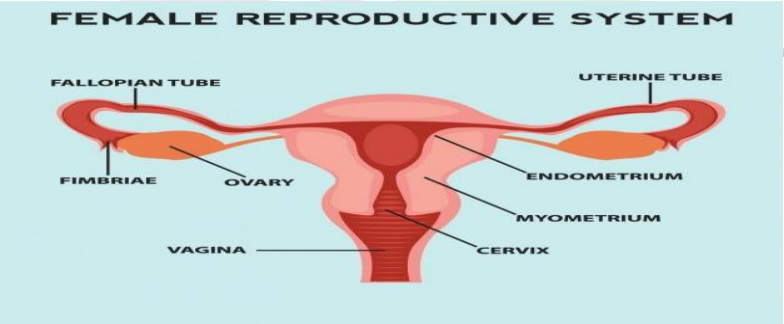
ANNEXURE - M

A. v aids on

1. Reproductive organs
2. Definition of menstruation
3. Menstrual cycle
4. Premenstrual symptoms
5. Sanitary pad
6. Direction / steps to use sanitary pads
7. Disposal of sanitary pads



WHAT ARE THE ADVANTAGES OF SANITARY NAPKIN?

- Sanitary napkin can be used and disposed in a much easier way as compared to cloth
- It has absorbent material layer, which provides a dry feeling
- Decreases chances of infections
- Helps in mobility and ease of daily routine work

Period Products