A Survey on Awareness and Attitude towards Menstruation among Females of Dhaka City

A Dissertation submitted to the Department of pharmacy, East West University, in partial fulfilment of the requirements for the degree of Bachelor of Pharmacy

Submitted by

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DECLARATION BY THE RESEARCH CANDIDATE

Myself, Noosrat Imrose, hereby declare that this dissertation, entitled **"A survey on Awareness and Attitude towards Menstruation among Females of Dhaka City"** submitted to the Department of Pharmacy, East West University, in partial fulfillment of the requirement for the degree of Bachelor of Pharmacy, is a genuine and authentic research work carried out by me under the guidance of **Nigar Sultana Tithi**, Senior Lecturer, Department of Pharmacy, East West University, Dhaka. I further certify that all sources of information of dissertation are duly acknowledged. The contents of this dissertation, in full or in parts, have not been submitted to any other institute or University or any other degree.

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CERTIFICATE BY THE SUPERVISOR

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THIS PAPER
IS DEDICATED
TO MY BELOVED
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Abbreviations	Elaboration
PMS	Pre Menstrual Syndrome
STD	Sexually Transmitted Diseases
STI	Sexually Transmitted Infections
IUD	Intrauterine devices
WHO	World Health Organizations
HIV	Human immune deficiency virus
HBV	Hepatitis B Virus
HPV	Human Papilloma Virus
LGV	Lymphogranulosa Venereum
NGU	Nongonococcal Urethriis

Abstract

Menstruation is a normal physiological phenomenon for females still it is associated with some degree of sufferings & embarrassment. The main objective of this study was to assess the menstrual pattern, disorders, hygiene practices, and attitudes of Bangladeshi female. A total of 259 female were evaluated under this study aged 16 to 23yrs from different universities, colleges and slums of the Dhaka city using a structured questionnaire. Among them 79.92% female were from non-slum area and 20.08% were from slum area. Almost 52.9% had completed their H.S.C. and 4.63% were illiterate. The age of menarche was found 12 to 14yrs in majority cases. Most of the girls (85.3%) had the prior knowledge about menstruation but (78.38%) felt nervous at the first time & the most common source of information was family members (73.36%) usually mother & sister.It has seen that, Menstruation is a natural event to 92.28%, debilitating event to 42.47%, bothersome event to 44.40% women of total respondents. Majority (89.19%) of the respondents has a normal duration and 50.19% has a normal amount of flow. The study indicates that 78.76% of the respondents think that, menstruation is a physiologic process and 51.35% respondents are aware of the source of bleeding. Although 86.87% have knowledge about the ideality of using sanitary napkin but 83.40% are comfortable of using it. It is found that almost 90% of them mentioned about suffering from at least two different Premenstrual syndrome and dysmenorrhea was the main menstrual problem reported by 62.55% of the respondents. In that case analgesic or anticholinergic were found commonly used by them to control pain. Relative openness about menstruation or related topics with family members very poor in majority. So the teachers, family members, health educators & media should play an important role in improving menstrual hygiene, practice and awareness growing up by providing more knowledge about this topic.

Key words: Menstruation, Knowledge, Attitude, Practice, Dysmenorrhea, Bangladesh, Awareness.

CHAPTER ONE

INTRODUCTION

1.1 Reproductive health

Reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to thereproductive system and to its functions and processes. Reproductive health therefore implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so(International Center for Health,2006).

1.2Importance of reproductive health education

Ultimate goal of any reproductive or sexual health education or program is to ensure cost effectiveness, quality and sustainability for maintaining a good reproductive health. Reproductive health awareness is an educational approach which is both relevant and sensitive to many communities' existing sexual and reproductive health needs and concerns (Pyper, 1997). International consensus affirms that adolescents need and have a right to sexual and reproductive health (SRH) information and services. In the field of study it has been required since the mid-1990s to take a course titled “family planning” that covers broad reproductive health issues. More recently, a special course on HIV/AIDS was developed as an appendix to biology books, and 13,000 teachers and school physicians were trained to educate students in high schools to make them aware about the disease and self-protection (Wahba and Fahimi, 2012). In a word the main concern of reproductive health education also called sexual education is to control sexually transmitted diseases, prevent unplanned pregnancies and problems with pregnancy and fertility also problems with childbirth and the health of babies and mothers (Brice, 2016).

1.3Reproductive system

The reproductive system is a collection of internal and external organs in both males and females that work together for the purpose of procreating. Due to its vital role in the survival of the species, many scientists claimthe reproductive system as the most important systems in the entire body (Zimmerman,2016).

1.3.1Function of Reproductive system

The major function of the reproductive system is to make sure that the human species survives. The four main functions of the human reproductive system are:

- ✓ To produce egg and sperm cells
- ✓ To transport and sustain these cells
- ✓ To nurture the developing offspring
- ✓ To produce hormones.

All of these functions are divided by their primary and secondary, or accessory, reproductive organs (TES,2016).

1.4Female reproductive system

The female reproductive system is the reproductive system of females. It consists of two parts the external structure and the internal structure. Its function is to enable reproduction of the species. Sexual maturation is the process that this system undergoes in order to carry out its role in the process of pregnancy and birth (Stoppler,2015).The external structures of the female reproductive system include the clitoris, labia minora, labia majora and Bartholin's glands. The major internal organs of the female reproductive system include the vagina (the birth canal) and uterus (where the fertilized egg develops) and the ovaries (where the eggs are produced and the fallopian tube)(Zimmerman,2016).

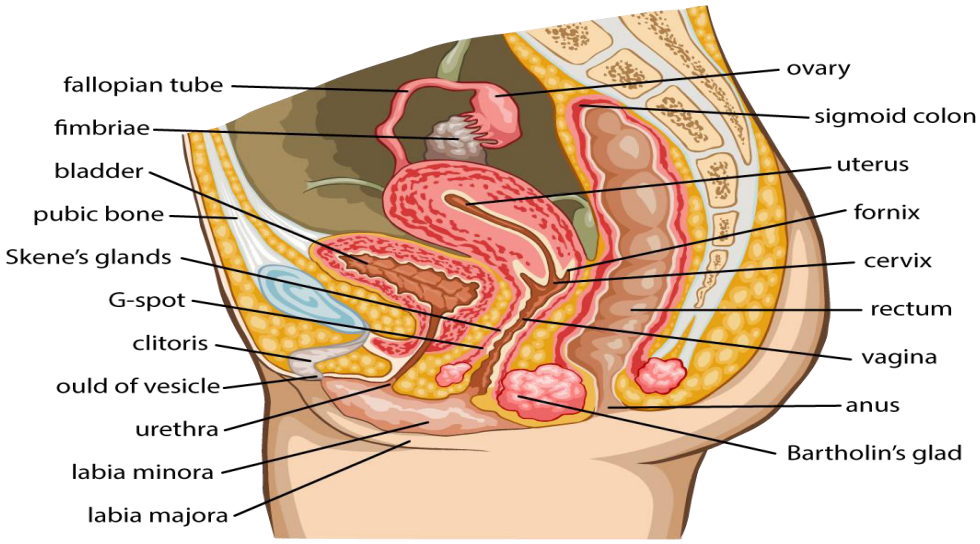

Figure 1.1:Female Reproductive System

1.4.1External Organs of female reproductive system

The outside (external) structures of the female reproductive system are grouped together in an area. The external genital organs include the mons pubis, labia majora, labia minora, Bartholin glands, and clitoris. The area containing these organs is called the vulva. The external genital organs have three main functions:

- Enabling sperm to enter the body
- Protecting the internal genital organs from infectious organisms
- Providing sexual pleasure (Patient,2015)

The main external structures of the female reproductive system include:

1.4.1.1 Mons pubis The mons pubis is a rounded mound of fatty tissue that covers the pubic bone. During puberty, it becomes covered with hair. The mons pubis contains oil-secreting (sebaceous) glands that release substances that are involved in sexual attraction (Knudtson and Mclaughlin, 2016)

1.4.1.2 Labia majora The labia majora (literally, large lips) are relatively large, fleshy two folds of skin that extend from the front of the vaginal opening to the back of it that enclose and protect the other external genital organs. They are comparable to the scrotum in males. The labia majora contain sweat and sebaceous glands, which produce lubricating secretions. The outer surfaces of the folds have darker-colored skin and stronger hairs, while the inner folds are smoother(Taylor, N.D; Knudtson and Mclaughlin,2016).

1.4.1.3 Labia minora The labia minora (literally, small lips) can be very small or up to 2 inches wide. The labia minora lie just inside the labia majora and surround the openings to the vagina and urethra. A rich supply of blood vessels gives the labia minora a pink color (Knudtson and Mclaughlin,2016).

1.4.1.4 The clitoris The clitoris, located between the labia minora at their upper end which is a lump of tissue. This becomes full of blood during sexual excitement (like the penis in the man but much smaller). The clitoris is very sensitive and is the main source of female sexual pleasure (Knudtson and Mclaughlin, 2016;Patient,2015).

1.4.1.5 Bartholin's glands These glands are located besides the vaginal opening and produce a sticky substance to moisten (lubricate) the vagina for sexual intercourse (Patient,2015;WebMD,2016).

1.4.1.6 Urethra The outer female genitals also include the urethra. Located between the vaginal opening and the frontal connection of the labia minora, the urethral opening is where a woman expels urine from her body (Health line,2015).

1.4.2Internal Organs of Female Reproductive system

The internal genital organs form a pathway (the genital tract). This pathway consists of the following:

- Vagina (part of the birth canal), where sperm are deposited and from which a baby can emerge
- Uterus, where an embryo can develop into a fetus
- Fallopian tubes (oviducts), where a sperm can fertilize an egg
- Ovaries, which produce and release eggs(Knudtson and Mclaughlin,2016)

1.4.2.1 Vagina

The vagina is a muscular tube about three to four inches long that ends the birth canal which is the area between the lower part of the womb (the cervix) and the outside of the body. The vagina receives the penis during sexual intercourse and is a passageway for childbirth (Patient,2015). The vaginal opening is visible from the outside but it is protected by the labia when a woman stands and during most activities (Health line, 2015).

1.4.2.2 Uterus

The uterus is a thick-walled, muscular, pear-shaped organ located in the middle of the pelvis, behind the bladder, and in front of the rectum. The uterus is anchored in position by several ligaments. The main function of the uterus is to sustain a developing fetus. The uterus consists of the cervix and the main body (corpus) (Knudtson and Mclaughlin,2016)

1.4.2.3 Cervix

The cervix is the lower part of the uterus, which protrudes into the upper part of the vagina. It can be seen during a pelvic examination. Like the vagina, the cervix is lined with a mucous membrane, but the mucous membrane of the cervix is smooth (Knudtson and Mclaughlin,2016).

1.4.2.4 Uterine (Fallopian) tubes

Narrow tubes that are attached to the upper part of the uterus which are about 4 to 5 inches (about 10 to 13 centimeters) long extend from the upper edges of the uterus toward the ovaries. They serve as tunnels for the ova to travel from the ovaries to the uterus. The fertilization of an egg by a sperm (conception) normally occurs in the uterine tubes. (Patient,2015;Knudtson and Mclaughlin,2016).

1.4.2.5 Ovaries

The ovaries are usually pearl-colored, oblong, small, oval-shaped glands that are located on either side of the uterus. They are attached to the uterus by ligaments. In addition to producing female sex hormones (estrogen and progesterone) and male sex hormones, the ovaries produce and release eggs. (Knudtson and Mclaughlin,2016;Patient,2015).

1.4.3Function of female reproductive health

The female reproductive system enables a woman to:

- Formation of female gametes (ova)
- Reception of male gametes (spermatozoa)
- Allow sperm to meet the ova
- Makes its own hormones that help to control a woman's monthly cycle
- Provide the space and conditions to allow a baby to develop
- Parturition (childbirth)
- Lactation, the production of breast milk which provides complete nourishment for the baby in its early life.
- Protect and nourish the fertilized egg until it is fully developed(Patient,2015 ; Guyton and Hall, 2001)

1.5Puberty

Puberty is the age at which the internal reproductive organs reach maturity. This is called the menarche and marks the beginning of the childbearing period. The ovaries are stimulated by the gonadotrophins from the anterior pituitary, follicle stimulating hormone and luteinizinghormone. The age of puberty varies between 10 to 14 years and a number of physical and psychological changes take place at this time:

- **Physical changes:**In the females the uterus, the uterine tubes and the ovaries reach maturity, the breasts develop and enlarge,pubic and axillary hair begins to grow.

- **Sexual changes:**The gonads develop, producing mature gametes. The secondary sex characters appear. In the female the most characteristic feature is the appearance of menstrual cycle and ovulation (menarche).

- **Mental changes:** The appearance of sexual desire etc.(Guyton & Hall, 2001; Chatterjee, 2003).

1.6Menstruation

Menstruation, or period, is normal woman's vaginal bleeding that occurs as part of a woman's monthly cycle. Every month, women's body prepares for pregnancy. If no pregnancy occurs, then menstruation occurs and then a women's uterus, or womb, sheds its lining. The menstrual blood is partly blood and partly tissue from inside the uterus (Medline plus,2016). Menstrual blood flows from the uterus through the small opening in the cervix and passes out of the body through the vagina. Most menstrual periods last from 3 to 7 days (Nelson, 2009).

1.6.1Premenstrual syndrome (PMS)

Premenstrual syndrome (PMS) has a wide variety of symptoms .It's estimated that as many as 3 of every 4 menstruating women have experienced some form of premenstrual syndrome. The list of potential signs and symptoms for premenstrual syndrome is long, but most women only experience a few of these problems (Mayo clinic, 2014).

Emotional and behavioral symptoms	Physical signs and symptoms
• Tension or anxiety	• Joint or muscle pain
• Depressed mood	• Headache or backache
• Crying spells	• Fatigue , tiredness
• Mood swings and irritability or anger	• Weight gain related to fluid retention
• Appetite changes and food cravings	• Abdominal bloating/pain/cramp
• Trouble falling asleep (insomnia)	• Breast tenderness
• Social withdrawal	• Acne flare-ups
• Poor concentration	• Constipation or diarrhea (Mayo clinic, 2014)

Table 1.1: Premenstrual syndrome (PMS)

For some, the physical pain and emotional stress are severe enough to affect their daily lives. Regardless of symptom severity, the signs and symptoms generally disappear within four days of the start of the menstrual period for most women (Mayo clinic, 2014).

1.6.2Menstrual cycle

The menstrual cycle is the monthly series of changes a woman's body goes through in preparation for the possibility of pregnancy (Mayo clinic,N.D).When periods (menstruations) come regularly; this is called the regular menstrual cycle. Having regular menstrual cycles is a sign that important parts of one's body are working normally. The menstrual cycle provides important body chemicals, called hormones, to keep anyone healthy. It also prepare one's body for pregnancy each month. A cycle is counted from the first day of 1 period to the first day of the next period. The average menstrual cycle is 28 days long. Cycles can range anywhere from 21 to 35 days in adults and from 21 to 45 days in young teens. The rise and fall of levels of hormones during the month control the menstrual cycle (Barclift, 2014).

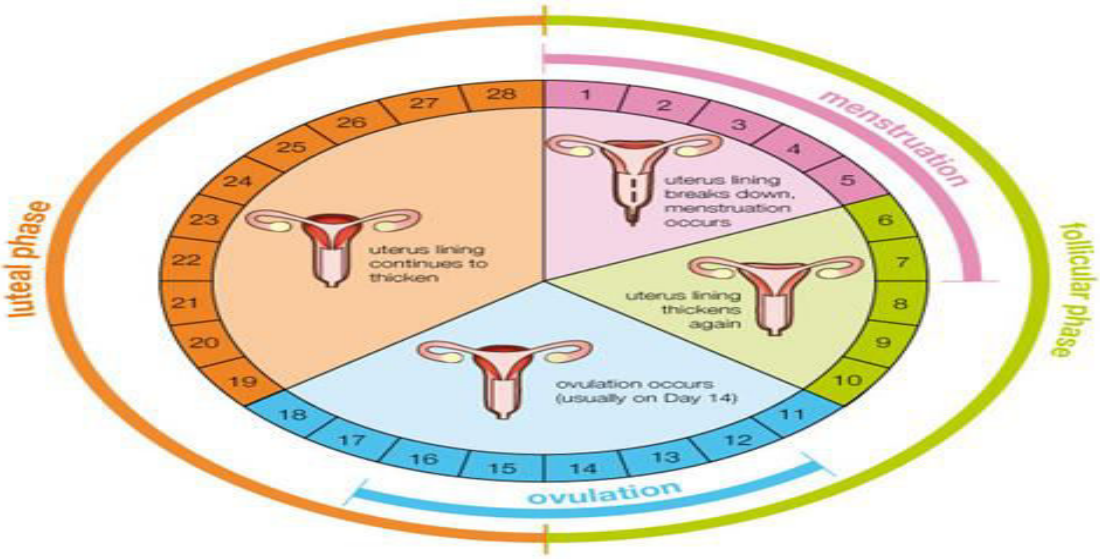

Figure1.2: Menstruation cycle

1.6.3During the menstrual cycle

In the first half of the cycle, levels of estrogen (the "female hormone") start to rise. Estrogen plays an important role in keeping one healthy, especially by helping one to build strong bones and to help keep them strong as she get older. Estrogen also makes the lining of the uterus (womb) grow and thicken. This lining of the womb is a place that will nourish the embryo if a pregnancy occurs. At the same time the lining of the womb is growing, an egg, or ovum, in one of the ovaries starts to mature. At about day 14 of an average 28-day cycle, the egg leaves the ovary. This is called ovulation.

After the egg has left the ovary, it travels through the fallopian tube to the uterus. Hormone levels rise and help prepare the uterine lining for pregnancy. A woman is most likely to get pregnant during the 3 days before or on the day of ovulation. It should be kept in mind that, women with cycles that are shorter or longer than average may ovulate before or after day 14.

A woman becomes pregnant if the egg is fertilized by a man's sperm cell and attaches to the uterine wall. If the egg is not fertilized, it will break apart. Then, hormone levels drop, and the thickened lining of the uterus is shed during the menstrual period and bleeding from the vagina starts (Nelson, 2009).

1.6.4General symptoms of menstruation

Besides bleeding from the vagina, women's may have

- Abdominal or pelvic cramping
- Lower back pain
- Bloating and sore breasts
- Food cravings
- Mood swings and irritability
- Headache and fatigue (Medline Plus, 2016)

1.6.5Menopause

The menopause usually occurs between the ages of 45 and 55 years, marking the end of the childbearing period. It may occur suddenly or over a period of years, sometimes as long as 10 years and is caused by changes in sex hormone levels. The ovaries gradually become less responsive to FSH and LH, ovulation and menstrual cycle become irregular, eventuallyceasing. Several other phenomena may occur at the same time including:

- Short-term unpredictable vasodilatation with flushing, sweating, andpalpitations, causing discomfort and disturbance of the normal sleep pattern.
- Shrinkage of breasts
- Axillary and pubic hair become sparse
- Atrophy of sex organs
- Episodes of uncharacteristic behavior sometimes occur, e.g. irritability, mood changes.
- Gradual thinning of the skin(Guyton & Hall, 2001).

1.6.6Problems occur in women during their periods

Women can have a range of problems with their periods, including pain, heavy bleeding, and skipped periods. Some problems are very common during the cycle and some problems can be occurred as disturbance among the cycles.

1.6.7 Some common problems

1.6.7.1Amenorrhea

Amenorrhea is the absence of menstrual bleeding. Amenorrhea is a normal feature in prepubertal, pregnant, and postmenopausal females. In females of reproductive age, diagnosing amenorrhea is a matter of first determining whether pregnancy is the etiology (Bielak, 2014).

Primary amenorrhea is the absence of menstrual bleeding and secondary sexual characteristics (for example, breast development and pubic hair) in a girl by age 14 years or the absence of menstrual bleeding with normal development of secondary sexual characteristics in a girl by age 16 years.

Secondary amenorrhea is the absence of menstrual bleeding in a woman who had been menstruating but later stops menstruating for three or more months in the absence of pregnancy, lactation (the ability to breastfeed), cycle suppression with systemic hormonal contraceptive(birth control) pills, or menopause(Nelson,2014)

In some cases, not having menstrual periods can mean that one's ovary has stopped producing normal amounts of estrogen. Missing these hormones can have important effects on overall health. Hormonal problems, such as those caused by polycystic ovary syndrome (PCOS) or serious problems with the reproductive organs, may be involved. It's important to talk to a doctor if anyone has this problem (Nelson, 2014).

1.6.7.2Dysmenorrhea

Painful periods, including severe cramps. Menstrual cramps in teens are caused by too much of a chemical called prostaglandin. Most teens with dysmenorrhea do not have a

serious disease, even though the cramps can be severe. In older women, the pain is sometimes caused by a disease or condition such as uterine fibroids or endometriosis(French, 2005).

Dysmenorrhea is thought to be caused by the release of prostaglandins in the menstrual fluid, which causes uterine contractions and pain. Vasopressin also may play a role by increasing uterine contractility and causing ischemic pain as a result of vasoconstriction. Elevated vasopressin levels have been reported in women with primary dysmenorrhea (French, 2005; Coco, 1999).

For some women, using a heating pad or taking a warm bath helps ease their cramps. Some over-the-counter pain medicines can also help with these symptoms. They include:

- Ibuprofen (for instance)
- Ketoprofen (for instance)
- Naproxen (for instance)

If these medicines don't relieve pain or the pain interferes with work or school, one should see a doctor. Treatment depends on what's causing the problem and how severe it is (OWH, 2014; Coco, 1999).

1.6.7.3 Abnormal uterine bleeding

Abnormal uterine bleeding (AUB)that's different from normal menstrual periods and irregular bleeding from the uterusthat is longer or heavier than usual or does not occur at your regular time. For example, one may have heavy bleeding during her period or in between periods. (Web med, N.D). It reflects a disruption in the normal cyclic pattern of ovulatory hormonal stimulation to the endometrial lining. About 1-2% of women with improperly managed anovulatory bleeding eventually may develop endometrial cancer (Behera, 2015)

Symptoms of abnormal uterine bleeding

- Bleeding between periods
- Bleeding after sex or menopause
- Spotting anytime in the menstrual cycle
- Bleeding heavier or for more days than normal (Barclift, 2014).

1.6.7.4Some other problems

- **Menorrhagia** is when a woman has very heavy periods with excess bleeding.
- **Oligomenorrhea** is when a woman misses or has infrequent periods, even though she has been menstruating for a while and is not pregnant.
- **Toxic shock syndrome** is caused by toxins released into the body during a type of bacterial infection that is more likely to develop if a tampon is left in too long. It can produce high fever, diarrhea, vomiting, and shock.This is uncommon but life-threatening. It can produce high fever, diarrhea, vomiting, and shock (Durani,2013).

1.6.7.5The duration of changing pad and/or tampon

A pad should be changed before it becomes soaked with blood. Each woman decides for herself what works best. One should change a tampon at least every 4 to 8 hours. Make sure to use the lowest absorbency tampon needed for flow. For example, junior or regular tampons for the lightest day of period. A super absorbency tampon for lightest days increases one's risk for toxic shock syndrome (TSS). TSS is a rare but sometimes deadly disease. TSS is caused by bacteria that can produce toxins. If one's body can't fight the toxins, then immune (body defense) system reacts and causes the symptoms of TSS (Barclift, 2014).

The Food and Drug Administration (FDA) recommends the following tips to help avoid tampon problems:

- Follow package directions for insertion.
- Choose the lowest absorbency for your flow.
- Change your tampon at least every 4 to 8 hours.
- Consider switching between pads and tampons.
- Don't use tampons between periods (Barclift, 2014).

1.7Pregnancy

Pregnancy is the period of time between conception and birth. A full-term pregnancy lasts 9-10 months and usually does not involve major health problems. Sometimes, however, complications develop that jeopardize the health of mother and baby (Human Diseases and conditions forum, 2016)

1.7.1Length of gestation

The average length of human gestation is approximately 280 days, or 38- 40 weeks, from the first day of the woman's last menstrual period. The medical term for the due date is estimated date of confinement (EDC). However, only about four per cent of women actually give birth on their EDC(Better health, 2014).

1.7.2Method of due date calculation

A simple method to calculate the due date is to add seven days to the date of the first day of your last period, then add nine months. For example, if the first day of your last period was 1 February, add seven days (8 February) then add nine months, for a due date of 8 November (Better health, 2014).

1.7.3Signs of pregnancy

- Missed period, breast changes, tenderness, tiredness , dizziness
- Nausea with or without vomiting, frequent urination.

Nausea generally affects pregnant women during the first three to four months of the pregnancy. Tiredness tends to be more acute during the first and last three months (Stewart, N.D.)

1.7.4Stages of pregnancy

A pregnancy has 3 trimesters

- First trimester (week 1-week 12)
- Second trimester (week 13-week 28)
- Third trimester (week 29-week 40) (Womenshealth.gov, 2010)

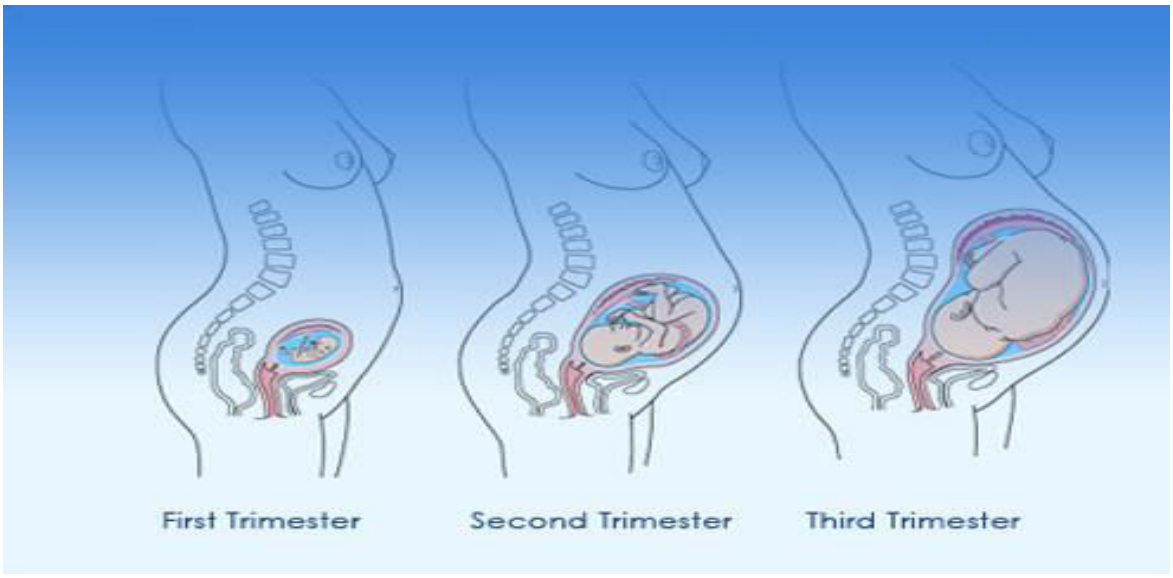

Figure 1.3: Stages of Pregnancy

1.7.4.1The 1st trimester

These are the first 3 months or 13 weeks of the pregnancy. The baby develops the fastest during this period and becomes almost fully formed by the end of it. Women say this trimester is when they are most likely to feel tired, nausea, and breast tenderness (Stewart, N.D.).

1.7.4.2The 2nd trimester

This is from the 14th to 26th week of the pregnancy. During this trimester it becomes obvious that the mother is pregnant. As well as weighing more because of the growing

baby, the expanded uterus, the placenta, and the amniotic fluid, the mother lays down extra reserves of fat. The baby continues to grow or develop. During second trimester the mother will feel the baby's movements, as will others if they place their hands on the mother's stomach - sometimes movement may be observed without touching(Baby center, 2014).

1.7.4.3The 3rd trimester

This is from week 27 until the baby is born. During this trimester the baby will build up fat stores, and continue growing rapidly. The baby's lungs will develop, as will his/her sense of hearing, taste and sight. The mother may experience backache and find it harder to get into the right position for a good night's sleep. The mother will also be urinating more often as the baby and everything around him/her presses against her bladder. She may also experience contractions that take place many days or weeks before the birth - they are called Braxton Hicks contractions - these are not the contractions of labor. (Nordqvist, 2014)

Figure1.4: Pregnancy stages week by week

1.7.5Complications during pregnancy

The following conditions are commonly experienced by mothers during their pregnancy:

- Anemia, heartburn
- Constipation, hemorrhoids
- Genital infections
- Morning sickness

- Gestational diabetes
- Preeclampsia/eclampsia and toxemia
- Hypertension (high blood pressure), hypotension (low blood pressure)
- Nausea and vomiting, urinary tract infections
- Moodiness (Human disease and Condition forum, 2016)

1.7.6Ideal spacing between pregnancies

In many research studies has shown comparison with babies conceived 18 months to 23 months after one's previous pregnancy and babies conceived within six months and result shows that a short gap between pregnancies may mean one's baby's more likely to:

- be born prematurely
- have a low birth weight
- be small for her age (Baby center, 2014;Youll, 2015)

These risks are particularly increased if one get a gap of six months or less. These risks were still evident for babies conceived within 7 to17 months of the previous birth, although to a lesser extent than those conceived within six months. If anyone takes an 18 to 23 month gap between pregnancies she'll have time to recover her energy and replenish her body's resources (Baby center, 2014; Youll, 2015)

American experts recommend at least a year women wait after giving birth to become pregnant again to improve the chances of a healthy baby. As says of Dr. Allison Bryant (maternal-fetal medicine specialist at Massachusetts General Hospital and an expert on birth spacing) best scientific evidence is that adverse outcomes are highest in women who wait less than 6 months between a birth and conception of the next pregnancy (Baby center, 2014).

1.8Contraception

Contraception (birth control) prevents pregnancy by interfering with the normal process of ovulation, fertilization, and implantation. Every month a woman's body begins the

process that can potentially lead to pregnancy. Any woman who wants to prevent pregnancy must use a reliable form of birth control. (Healthofchildren, 2016)

1.8.1Types of Contraception

There are different kinds of birth control that act by preventing at different points in the process, from ovulation through fertilization to implantation and can be divided into a few groups based on how they work.

- Hormonal methods: Hormonal methods prevent ovulation include birth control pills (oral contraceptives), Depo Provera injections, and Norplant. Norplant is a long-acting birth control formula implanted under the skin of the upper arm.
- Barrier methods: These methods work by preventing the sperm from getting to and fertilizing the egg. Barrier methods include male and female condom, diaphragm, and cervical cap.
- Spermicides: These medications kill sperm on contact. Most spermicides contain nonoxynyl-9. Spermicides come in many different forms such as jelly, foam, tablets, and even a transparent film. All are placed in the vagina.
- Intrauterine devices (IUDs): These devices are inserted into the uterus, where they stay from one to ten years. An IUD prevents the fertilized egg from implanting in the lining of the uterus and may have other effects as well.
- Tubal ligation: This medical procedure is a permanent form of contraception for women. Each fallopian tube is either tied or burned closed. The sperm cannot reach the egg, and the egg cannot travel to the uterus.
- Vasectomy: This medical procedure is a male form of sterilization and should be considered permanent. In vasectomy, the vas defrens, the tiny tubes that carry the sperm into the semen, are cut and tied off. (Healthofchildren, 2016; Keller, 2013).

  Unfortunately, there is no perfect form of birth control. Only abstinence (not having sexual intercourse) protects against unwanted pregnancy with 100 percent reliability. (Health of children, 2016; Keller, 2013)

1.8.2Use of contraception

The methods of birth control differ from each other regarding when they are used. They are only effective if used faithfully. Birth control pills work only if taken every day.

Some methods of birth control must be used specifically at the time of sexual intercourse (Male and female condoms, diaphragm, cervical cap, spermicides). All other methods of birth control must be working all the time to provide protection automatically (hormonal methods include Depo Provera, Norplant, IUDs, tubal sterilization)(Healthofchildren, 2016; Keller, 2013)

1.8.3Precautions

There are risks associated with some forms of birth control. Some of the risks of each method are:

- Birth control pills: The hormone (estrogen) in birth control pills can increase the risk of heart attack in women over forty who smoke.
- IUD: This device can increase the risk of serious pelvic infection. The IUD can also injure the uterus by poking into or through the uterine wall.
- Tubal sterilization: "Tying the tubes" is a surgical procedure and has all the risks of any other surgery, including the risks of anesthesia, infection, and bleeding.
- Condom: The most common problems associated with condoms are breakage during use and improper technique in using condoms. These can lead to pregnancy and sexually transmitted diseases, especially HIV. (Keller, 2013)

1.8.4Risks

Many methods of birth control have side effects. Knowing the side effects can help a woman to determine which method of birth control is right for her. There is no perfect form of birth control. The risks include:

- Hormonal methods: The hormones in birth control pills, Depo Provera, and Norplant can cause changes in menstrual periods, changes in mood, weight gain, acne, and headaches.
- Barrier methods: Some women get more urinary tract infections if they use a diaphragm because the diaphragm can press against the urethra, the tube that connects the bladder to the outside.
- Spermicides: Some are allergic to spermicides or find them irritating to the skin.
- IUD: A woman may have heavier menstrual periods and more menstrual cramping with an IUD in place.

- Tubal ligation: Some women report increased menstrual discomfort after this surgery. (Healthofchildren, 2016)

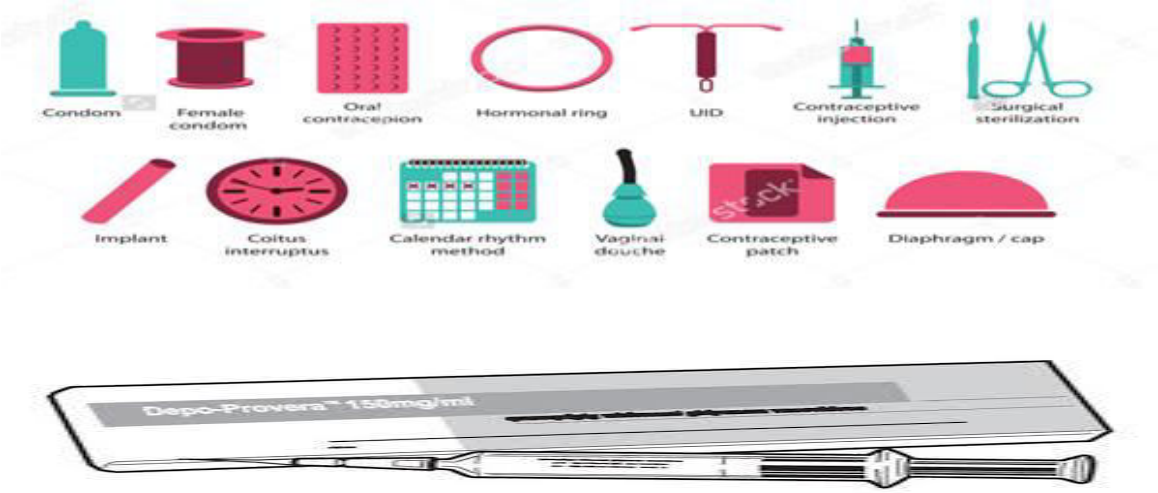

Figure 1.5: Various types of contraception, including birth control pills, condoms, and diaphragm.

1.9STD/STI

Sexually transmitted diseases (STDs) are infections that can be transmitted through sexual contact with an infected individual. These are also termed sexually transmitted infections (STIs). STDs can be transmitted during vaginal or other types of sexual intercourse including oral and anal sex. (Robertson, 2010)

1.9.1 Risky Population

Anybody who has engaged in unprotected sexual intercourse or contact is at risk of transmitting an STD. However, the risk is higher in certain groups which include:

- Those with partners who have had multiple sex partners,commercial sex workers
- Those who do not use condoms during sexual activities(Robertson, 2010; Mandal, 2014)

1.9.2Causes of STD

The causative organisms behind STDs include viruses, bacteria, parasites(Robertson, 2010)

Name of STD/STI	Caused by/Type of STD/STI	Associated problems
Chancroid	*Haemophilus ducreyi*	Produces genital sores
Gonorrhea ('The Clap')	*Neisseria gonorrhoeae*	Different problems
Chlamydia	*Chlamydia trachomatis*	Infect the penis, vagina, cervix, anus, urethra, eye, or throat.
Genital Warts (HPV)	*Human papilloma virus* (HPV)	Can lead to precancerous changes in the cervix, cervical cancer, or anal cancer
Hepatitis (A, B & C)	Infected with HSV2 – the strain of the herpes virus	Swelling and inflammation of the liver
Herpes (HSV1 & HSV2)	*Herpes simplex virus* type 1 and type 2 (HSV-1 & HSV-2)	Affects the mouth and lips and causes cold sores or fever blisters
HIV & AIDS	*Human immunodeficiency virus* (HIV)	Changes a cell's DNA
Human Papilloma virus (HPV)	*Human Papillomavirus*	Can infect the genital area, vulva, vagina, cervix, rectum, anus, penis, or scrotum
Lymphogranuloma Venereum (LGV)	*Chlamydia trachomatis*	chronic (long-term) infection of the lymphatic system

Name of STD/STI	Caused by/Type of STD/STI	Associated problems
Mononucleosis	*Epstein-Barr virus* (EBV)	Causing fever, sore throat, and swollen lymph glands, especially in the neck
Mycoplasma Genitalium	*Mycoplasma Genitalium*	Can infect the urethra, cervix, throat and anus
Nongonococcal Urethritis (NGU)	Chlamydia (most common), Herpes simplex virus (rare), & *Mycoplasma genitalium.*	Create infection of the urethra
Scabies	disease caused by a very small species of mite	An easily spread skin disease
Syphilis	*Treponema pallidum*	Can cause serious damage to your brain, heart, nervous system, and even lead to death.
Trichomoniasis	*Trichomonas vaginalis*	Parasiting infection
Vaginitis	Bacteria, yeasts, viruses, and other parasites	Allergy

Table 1.2:Causes of STD

(Pierce, 2006;The STD Project, 2016)

1.9.3Prevention from STD or STI

To prevent getting a sexually transmitted disease, or STD, one should always avoid sex with anyone who has genital sores, a rash, discharge, or other symptoms. The only time unprotected sex is safe is if anyone and her partner has sex only with each other, and

if it's been at least six months since they each tested negative for STDs. Otherwise one should follow the instructions:

- Latex condoms use at every time of sex.
- Avoid sharing towels or underclothing and washing before and after intercourse
- Getting a vaccination for hepatitis B and tested for HIV.
- If anyone have a problem with drug or alcohol abuse, should get help. People who are drunk or on drugs often fail to have safe sex.
- Consider that not having sex is the only sure way to prevent STDs

New research shows that doing so also irritates a woman's vagina and cervixand may increase the risk of an STD infection. Current recommendations are to avoid using condoms with nonoxynol-9.(Johnson, 2015)

CHAPTER TWO

LITERATURE REVIEW

Menstruation is a normal physiological phenomenon for females still it is associated with some degree of sufferings & embarrassment. A study was conducted about the menstrual pattern, disorders & hygiene practices among 68 adolescents from Mrs. N.C.Gandhi& Mrs. B.V.GandhiMahila Arts & Commerce College, Bhavnagar city. Adolescent girls of Mahila College in Bhavnagar City. Results has shown that In spite of relative openness in the society, the menstrual hygienic practices have not changed much. The mean age of menarche was 14.5. Most of the girls (85.3%) had the prior information about menstruation & the most common source of information was from family members (mother & sister) & least common was school teacher. The most common menstrual pattern was >30/3-5 days. Dysmenorrhea was the main menstrual problem reported by them (66.2 %). 66.2 % girls used old plain cloth as menstrual absorbent. Menstrual problems particularly dysmenorrhea is common among adolescent girls. In most of the girls' menstrual hygiene practices found to be poor. So the teachers, family members, health educators & media play very important role in improving menstrual hygiene in adolescence (Solanki *et al.,* 2012).

A study was done over 64 girls of rural area and it is clear from the study findings that majority of the girls were having correct knowledge about menstruation. Regarding the practices, only 10 girls were using boiled, and dried cloth as menstrual absorbent. Though almost all 64 girls received advice regarding menstrual hygiene from different sources, some of their practices were unhygienic. This shows that the mothers of these girls were lacking of right knowledge and the same thing was transferred to their off springs. The girls should be educated about the significance of menstruation and development of secondary sexual characteristics, selection of a sanitary menstrual absorbent and its proper disposal. (Devi and Ramaiah, 1994)

From the study of Hickey we are able to know that menstrual disorders in adolescence may present diagnostic and management challenges for the gynecologist. This review has described about the common like cyst, dysmenorrhea, abnormal uterine bleeding, amenorrhea and uncommon menstrual disorders or complications that may arise in early reproductive life, together with guidance on their investigation and management (Hickey, 2003)

A study was conducted by Dasgupta and Sarkar on 2008 among 160 adolescent girls of a secondary school situated in the field practice area of Rural Health Unit and Training Center,

Singur, West Bengal. From the result it was demonstrated that out of 160 respondents, almost 67.5% girls were aware about menstruation prior to attainment of menarche. Where the first informant regarding menstruation in case of 37.5% girls was delivered from mother. Among those respondents almost 86.25% girls believed it as a physiological process. 48.75% girls knew the use of sanitary pad during menstruation. Regarding practices, 11.25% girls used sanitary pads during menstruation. Both soap and water is used for cleaning purpose of 97.5% girls. Regarding restrictions practiced 85% girls practiced different restrictions during menstruation (Dasgupta and Sarkar, 2008).

Menstruation is generally considered as unclean in the Indian society. According to the study of Subhash et al. (2011) isolation of the menstruating girls and restrictions being imposed on them in the family, have reinforced a negative attitude towards this phenomenon. The study was conducted among 387 adolescent school going girls in the field practice area of the Rural Health Unit and Training Centre, Saoner, in the Nagpur district in January- March, 2011 which is a community based, cross sectional study. They designed and structured questionnaire used in the study where the data collection technique was a personal interview of the study subjects. Among those only 36.95% of the girls were aware of menstruation before menarche. The major source of information about menstruation for them was found to be their mothers. More than three fourth of the girls in the study were not aware of the cause and the source of the bleeding. A majority of them had knowledge about the use of sanitary pads. The mean age of menarche in the study subjects was 12.85 ± 0.867 years; sanitary pads were used by 49.35% of the elected girls. The practice of the use of old clothes was reported in 45.74% of the subjects. Three fourth of the study girls practiced various restrictions during menstruation. Some menstrual hygiene indices have shown a significant difference in the rural and urban girls. From the total study it was concluded that a variety of factors are known to affect menstrual behaviors from those one of the most influential being economic status and residential status (urban and rural) (Subhash*et al.*, 2011).

From the study of Pundkar*et al.* (2014) it was found a community based cross sectional study on adolescent girls carried at Municipal Corporation School, Ahmednagar. A pretested, semi structured questionnaire was used for data collection. From study it was evident that the mean age of girls was 13 years and the range was between 11 to 16 years. It was evident that only

62.14% girls were aware about menstruation before menarche and a majority of girls 71% were not aware of the source of the menstrual bleeding. The study showed that among all respondents almost 31.42% of girls used sanitary pads during menstruation 64.28% of girls used cloth pieces and 4.28% girls used both sanitary pad and cloth. The cleaning of external genitalia was satisfactory in 97 % of girls and only 3% of girls showed unsatisfactory result. After studied over the analysis it can be said that among the adolescent school girls, the knowledge on menstruation is poor and the practices are often not optimal for proper hygiene (Pundkar*et al.*, 2014).

The objective of the study of Gultie*et al.* (2014) was therefore to assess the age of menarche and knowledge of adolescents about menstrual hygiene management in Amhara province. The study was school based cross sectional and conducted from November 2012 to June 2013. In this study, 492 students were included, making a response rate of 100% among them mean age at menarche was 13-14.5 years. The main sources of information about menstrual hygiene management were teachers for 43.1%. Four hundred forty six 90.7% respondents had high level knowledge about menstrual hygiene management. Most of the respondents 92.9% and 96.5% had access for water and toilet facility respectively. School teachers were the primary source of information. Place of residence and their mother's educational status were independent predictors of menstrual hygiene management. From the study we can concluded that knowledge of respondents about menstrual hygiene management was very high and thus, the government of Ethiopia in collaboration with its stalk holders should develop and disseminate reproductive health programs on menstrual hygiene management targeting both parents and their adolescents (Gultie*et al.*, 2014).

The aim of the paper of Dennerstein*et al.* (2010) is to assess the effects of premenstrual symptoms on quality of life as measured by the impact symptoms have on women's activities of daily life (ADL).It was across-sectional survey where population-based, face-to-face interview was occurred with 1202 women aged 15–49 years recruited by random sampling in cities of Hong Kong, Pakistan and Thailand. From the study it is fjord down that 23 premenstrual symptoms have ADL. Premenstrual physical and mental symptom domains had similar negative effects on ADL.74% of women were not affected or minimally affected in ADL, 17% had a clinically significant effect on ADL and 9% were severely affected in ADL. ADL were predominantly affected by premenstrual symptom severity. Oral contraceptive pill users and

women living in Pakistan reported less impact on ADL, while married women report more impact of symptoms on ADL. So it can be concluded the severity of premenstrual symptoms was found to have a significant impact on ADLs with the type of activity affected, reflecting how women predominantly spend their time in the different cultures studied (Dennerstein*et al.*, 2010).

Premenstrual syndrome (PMS) is defined as the recurrence of psychological and physical symptoms in the luteal phase, which remit in the follicular phase of the menstrual cycle. Symptoms of which fall in three domains: emotional, physical and behavioral e.g. irritability, anger, headache, fatigue, food cravings etc. From the survey study of Brahmbhatt et al., 2013 which was conducted among 50 young & 50 middle aged women of S.B.K.S Medical Institute and Research Centre can find the prevalence of premenstrual syndrome with an emphasis on its management. Responses to a feedback questionnaire covering various aspects related PMS were obtained from 50 participants belonging to each group. The participants belonged to different range of literacy. It was found that 42% faced PMS regularly, while 58% occasionally. Almost 68% suffered with backache, 64% leg cramps, 62% fatigue, breast tenderness and anger whereas 58% suffered with anxiety and generalized body ache. Of all the sufferers only 34% had received the treatment for PMS. Irrespective of the age PMS is common problem faced by women. With their study they observed that literacy has not mattered in the management of this health problem. Since there are reports stating that the severity of PMS can hamper the daily routine and even lead to suicidal tendency, it is essential that awareness programs need to be conducted to address the importance of managing the issue by pharmacological and non-pharmacological methods (Brahmbhatt *et al.*, 2013).

From the research study of Knauss*et al.* (2011) about the relationship between premenstrual syndrome (PMS) and major depression examined the relationship between moderate to severe PMS and major depression in a population-based sample of women of reproductive age. The objectives of the study were to assess the association between premenstrual syndrome and major depression, to analyze how PMS and major depression differ and to characterize the group of women who report both PMS and major depression. The data of this study were obtained from the Swiss Health Survey 2007. The population-based sample consisted of 3518 women. The study showed the prevalence of major depression was 11.3% in women screening positive for moderate PMS and 24.6% in women screening positive for severe PMS. Compared to women

without any of these conditions, women who reported moderate to severe alcohol consumption had a lower risk for PMS. Women reporting use of antidepressants, and use of oral contraceptives had a higher risk for major depression compared to women without any of these conditions. Women reporting work dissatisfaction had a higher risk for PMS. The study concluded that a higher relative risk to report both PMS and major depression compared to women without PMS or major depression was related to factors such as high psychological distress, low mastery, psychotropic drug consumption, and low self-rated health. The results suggested that women who suffer from both PMS and major depression are more impaired compared to women with only one disorder. The results further indicated that PMS and major depression are different disorders that can, however, co-occur (Knauss*et al*., 2011).

Self-medication with antibiotics is an important factor contributing to the development of bacterial antibiotic resistance. The purpose of the study of Sapkota*et al*. (2010) was to evaluate the prevalence of self-medication with antibiotics for the treatment of menstrual symptoms among university women in Southwest Nigeria. It was a cross-sectional survey was administered to 706 female undergraduate and graduate students of four universities in Southwest Nigeria in 2008. The response rate was 95.4%.Among all participants 86% experienced menstrual symptoms, and 39% reported using analgesics to treat them and overall 24% of participants reported self-medicated use of antibiotics to treat the following menstrual symptoms: cramps, bloating, heavy bleeding, headaches, pimples/acne, moodiness, tender breasts, backache, joint and muscle pain. From the study we can know that ampicillin, tetracycline, ciprofloxacin and metronidazole were used to treat the most symptoms. Doctors or nurses 6%, friends 95% and family members 7%, were most likely to recommend the use of antibiotics for menstrual symptoms. This is the first formal study to report that approximately 1 out of 4 university women surveyed in Southwest Nigeria self-medicate with antibiotics to treat menstrual symptoms. This practice could provide monthly, low-dose exposures to antibiotics among users. After overall study it is concluded that further studies are necessary to evaluate the impacts of self-medication on student health (Sapkota*et al*., 2010).

The study done by Campbell and Grath (1997) was done to determine how adolescents use medication to manage menstrual discomfort. For this study 386 adolescent girls was taken as sample and the menstrual distress management questionnaire was designed for their study to

measure disability and medication use. Among all respondents 93% had menstrual discomfort during the last 3 menstruations and 70% of these had used over-the-counter (OTC) medications to manage the discomfort. Users of OTC medications reported greater symptom severity and disability than non-OTC users in where 75% of the OTC medication users took within the recommended dose of 1 to 2 pills, but 57% took medication less often than the maximum daily frequency. So from this study we can conclude that Adolescent girls frequently suffer from menstrual discomfort and use OTC medications to manage the discomfort, but they may not be using OTC medications effectively (Campbell and Grath. 1997)

By the study of Johnson and Adolesc, (1989) a multiple-choice questionnaire was administered to 182 adolescent women, ages 14-18 years, to assess the prevalence of dysmenorrhea, the morbidity associated with dysmenorrhea, and the level of knowledge regarding available treatment. Of the study group, 72.7% reported "pain or discomfort" during their period, 58.9% reported decreased activity, and 45.6% reported school or work absenteeism. Of the dysmenorrheic sample, only 15.5% had used a prescription medication and only 14.7% could name any nonsteroidal anti-inflammatory agent, except aspirin, as potentially effective in relieving dysmenorrhea. The data from Johnson and Adolesc, (1989) study suggested that there is substantial ignorance or misinformation among adolescent females regarding effective treatment for dysmenorrhea (Johnson and Adolesc, 1989).

Dysmenorrhea is the leading cause of recurrent short-term school absenteeism among adolescent girls. Controversy surrounds the relative role of psychological and biological variables in the pathogenesis of dysmenorrhea. Therefore, in the study of Klein and Litt, (1981) data from 2,699 menarcheal adolescents, drawn from a national probability sample of 12 to 17-year-old girls (the National Health Examination Survey). Among those adolescents (59.7%) report dysmenorrhea, 14% frequently miss school because of cramps. The greatest proportion of variation of independent variables in a stepwise multiple regression analysis in this study was predicted by gynecologic or post menarcheal age. Preparation for menarche, a psychological variable, did not predict either dysmenorrhea or subsequent school absence. Socioeconomic status was positively correlated with dysmenorrhea although race was not. The study data suggested that biologic variables play a substantial role in the pathogenesis of dysmenorrhea (Klein and Litt, 1981).

The main concern of Ortiz *et al*. (2009) study was to evaluate factors affecting the prevalence of dysmenorrhea in a group of Mexican students for what a questionnaire was administered to 1152 high school students and the obtained data about severity, symptoms, and medications used were analyzed. From the result it has been showed that Dysmenorrhea had a prevalence of 48.4% and was the cause of school absences for 24% of the affected students. It was mild in 32.9%, moderate in 49.7%, and severe in 17.4% of these students, of whom 28% consulted a physician and 60.9% self-medicated. The most common over-the-counter drugs used were a combination of paracetamol and pyrilamine maleate; metamizol (a nonsteroidal anti-inflammatory drug) and naproxen. We found a significant correlation between the presence of dysmenorrhea and smoking, cycle pattern, cycle duration, flow duration, and amount of flow. So from this study it can be demonstrated that he prevalence of dysmenorrhea was high in our sample. The condition caused short-term school absences and the students commonly addressed it by self-medicating (Ortiz *et al*., 2009).

Significance of the study

The main concern of reproductive health education also called sexual education is to know about reproductive health, puberty, menstruation, ideal practices clearly. To control sexually transmitted diseases, prevent unplanned pregnancies and problems with pregnancy, fertility, childbirth and the health of babies and mothers (Brice, 2016).This is why reproductive health education and awareness is very much significant. Many study had been conducted on this topic in abroad. From those studies it had come out that female were not so interactive to discuss about it openly.

In fact Bangladeshi women were found more uncomfortable than other countries due to some undefined social restrictions. Menstruation is a normal physiological phenomenon for females still it is associated with some degree of sufferings & embarrassment. It is clear from the study findings that majority of the educated girls were having correct knowledge about menstruation on contrast some misconception or lacking of knowledge are found in some uneducated persons. Mainly this is for their lifestyle or lower thirst of knowledge about these topics. Menstrual problems particularly dysmenorrhea is common among adolescent girls. In most of the girls especially in slum area, menstrual hygiene practices found to be poor. So the teachers, family members, health educators & media can play very important role in improving menstrual hygiene in adolescence, so there won't be any misconception to adolescent girls regarding menstrual hygiene.

Many common and uncommon menstrual disorders may arise in early reproductive life (Hickey, 2003). Awareness regarding the need for information about healthy menstrual practices is very important. It is essential to design a mechanism to address for the access of healthy menstrual knowledge (Subhash*et al.* 2011). Menstrual hygiene, a very important risk factor for reproductive tract infections, is a vital aspect of health education for adolescent girls. Educational television programs, 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 (Dasgupta and Sarkar, 2008).

Menstruation and menstrual 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 into adverse health outcomes. Menstrual hygiene, a very important risk factor for reproductive tract infections, is a vital aspect of health education for adolescent girls. So our study will be too helpful to identify the knowledge, practices, attitude, behavior and other important factors that play significant role during menstruation period. Also will help to know that how much they are aware about themselves.

Aims and Objectives

- To identify the knowledge level of the respondents about menstruation.
- To get an idea about the menstruation pattern, practice and attitude that time.
- To identify any factor that might be controlling their behavior or practices.
- To evaluate the prevalence of self-medication for the treatment of menstrual problems.

CHAPTER THREE

METHODOLOGY

3.1 Type of study

It was a prospective study.

3.2 Study area

The study was done at slum and educational institutions.

Educational institutes

East West University, North South University, Stamford University, Daffodil International University, Dhaka University, Eden Mohila College, Home Economics College, Viquarunnesa School and college, Ideal school and college.

Slum area: Babupura, Khilgaon, Malibagh, Manikdi, Meradia, Tikatoli.

3.3 Study population

In this study 259 female respondents were selected where 200 were from educational institute and 59 were selected from different slum.

3.4 Inclusion criteria

- Only female.
- Age among 16-23 years.

3.5 Exclusion criteria

Unwilling to participate or unable to comply with protocol requirements.

3.6 Procedure

- A questionnaire was prepared according to required information in order to secure and compile all the expecting information and other general information of a person in an organized manner.
- The collected data were checked after collection and analyzed with the help of Microsoft Office Excel and filtered accordingly for analysis.

- Some graphical representations were made from those analysis statuses and the result was shown in bar, pie and column chart and calculated the percentage of the different parameter of female reproductive health.

CHAPTER FOUR

RESULTS

4.1 Age of respondents

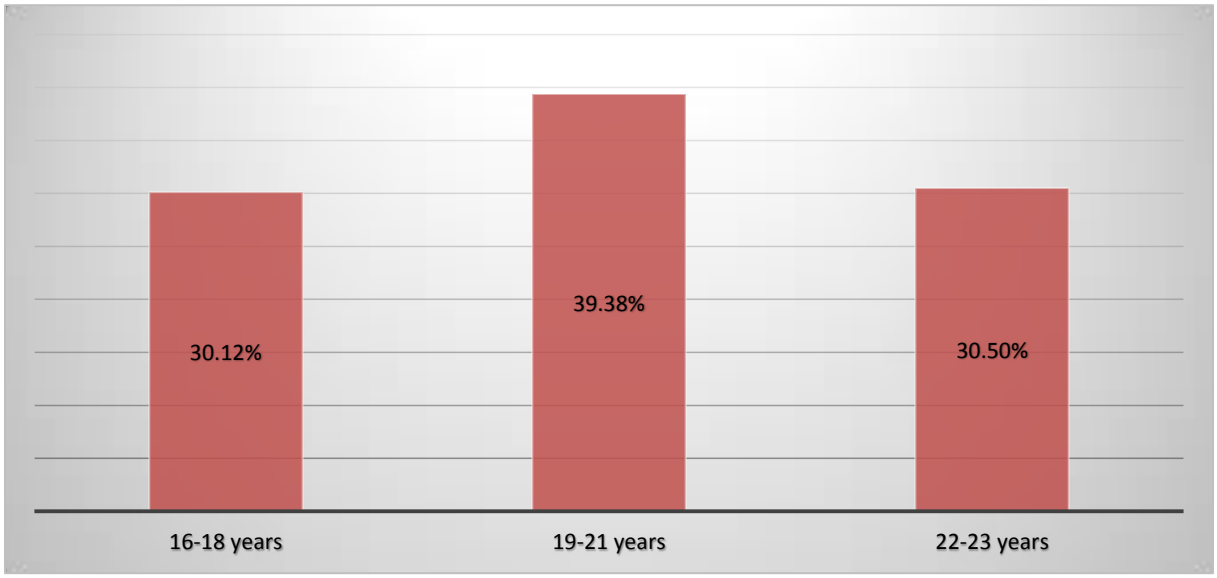

Fig 4.1: Age distribution of female

Majority 39.38% of the students among 259 female respondents were in the age group of (19-21) years. Almost same number of student 30.12% from the age group of (16-18) yrs and 30.50% from the age group (22-23)yrs participated in the study.

4.2 Religious status of respondents

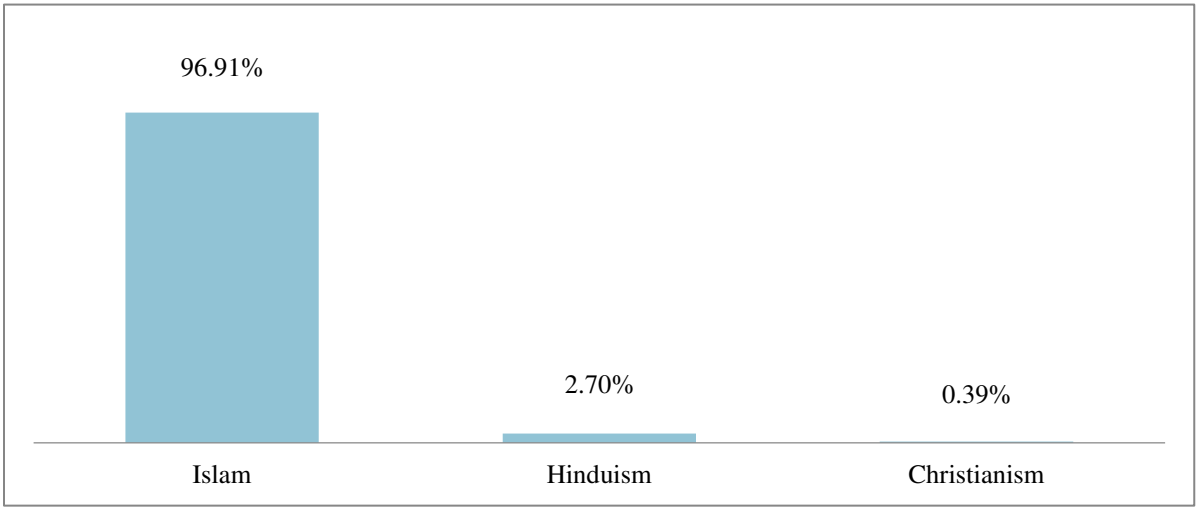

Fig 4.2: Different religions of the female respondents

As Bangladesh is a Muslim country so majority of the people living here is from the religion Islam. 96.91% female respondents were from the religion Islam 2.70% from Hindu and 0.39% were Christian.

4.3 Educational background of female respondents

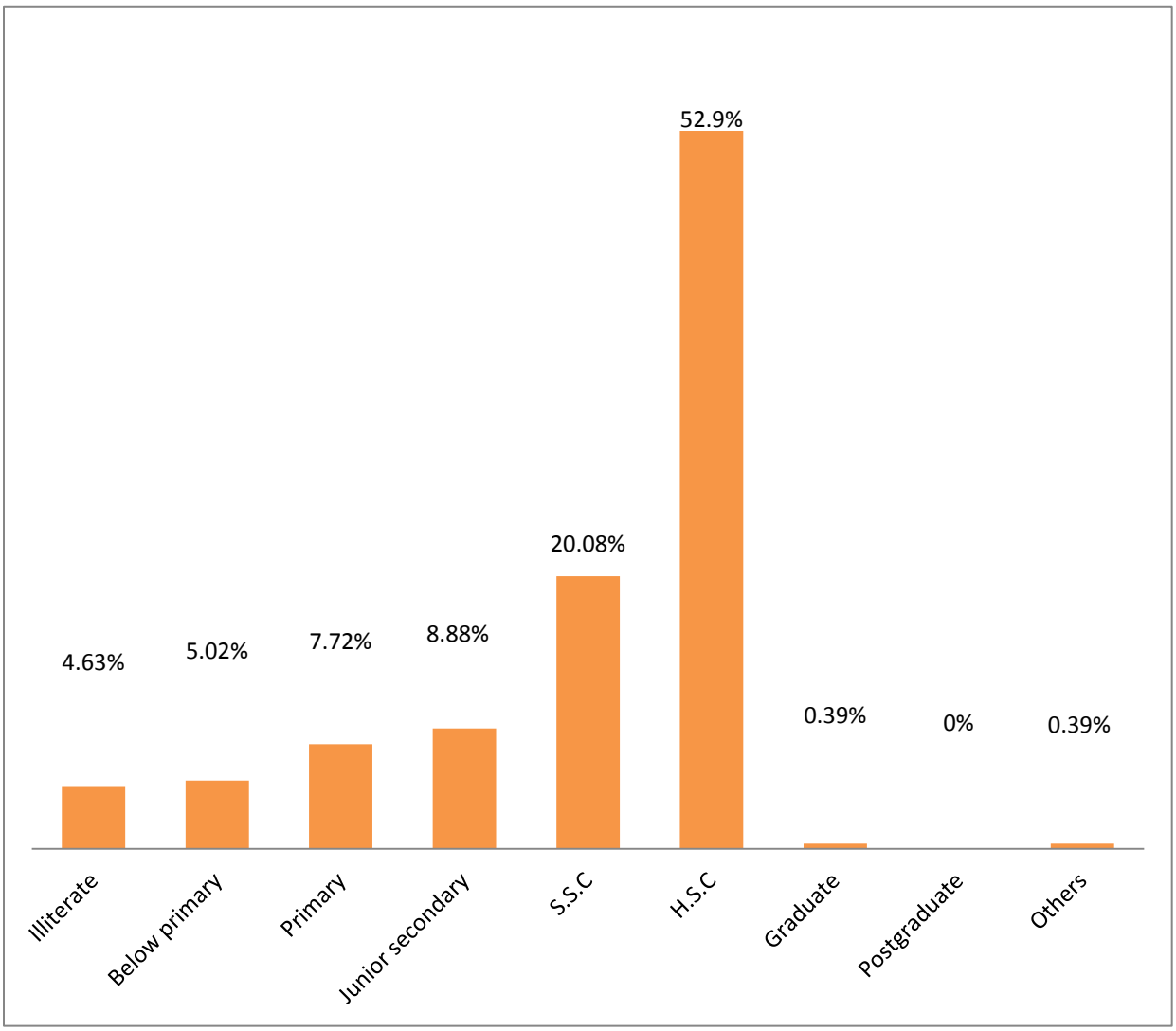

Fig 4.3: Educational status of the female respondents

Among female respondents who participated in this study 52.9% has completed their H.S.C. 20.08% S.S.C 8.88% J.S.C 7.72% P.S.C level of education. 5.02% were below primary and 4.63% were illiterate who were from slum area.

4.4 Place of study

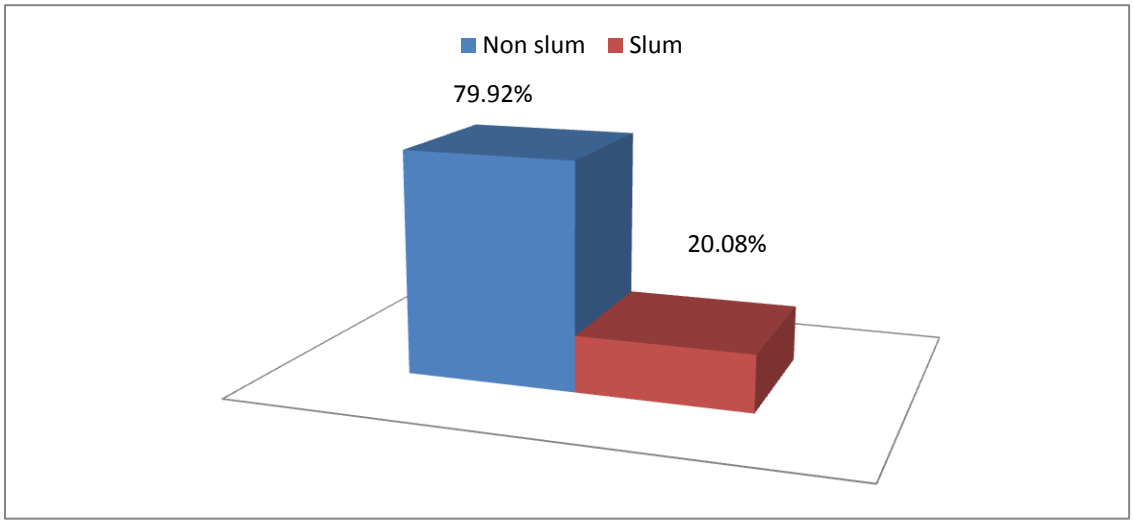

Fig 4.4: Area distribution of the female respondents

We divided the area of female respondents into two sectors one is non-slum area and other is slum area. 79.92% people were from non-slum area and 20.08% were from slum area.

4.5 Marital status of respondents

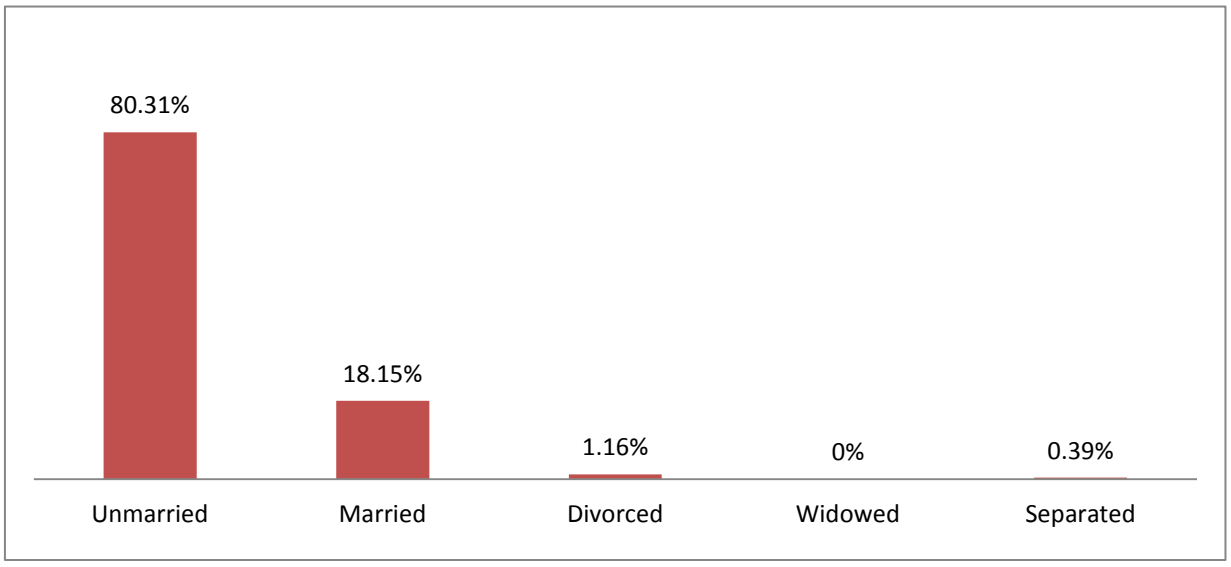

Fig 4.5: Marital status of female respondents

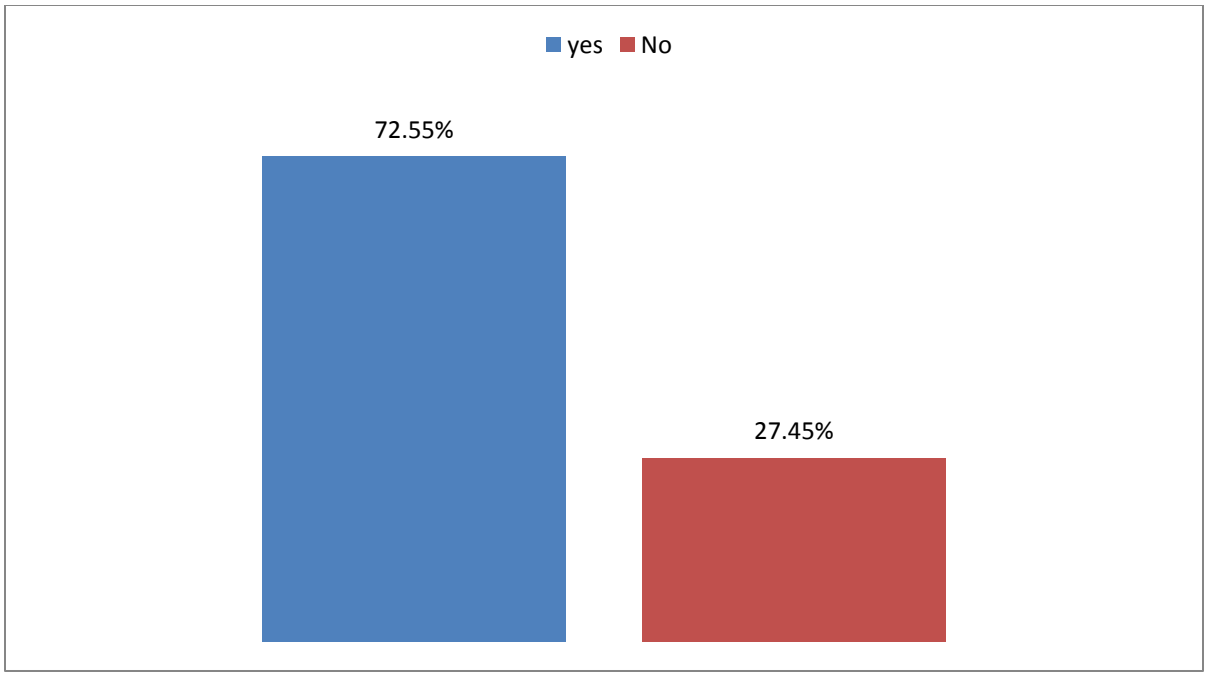

Fig 4.5.1: Number of children of female respondents

80.31% of female respondents were unmarried as the age group was (16-23). And 18.15% were married and among them 72.55% female respondents has child and 27.45% has no child in where most of the married persons were from slum area. Only 1.16% were found to be divorced and 0.39% were separated.

4.6 Living status

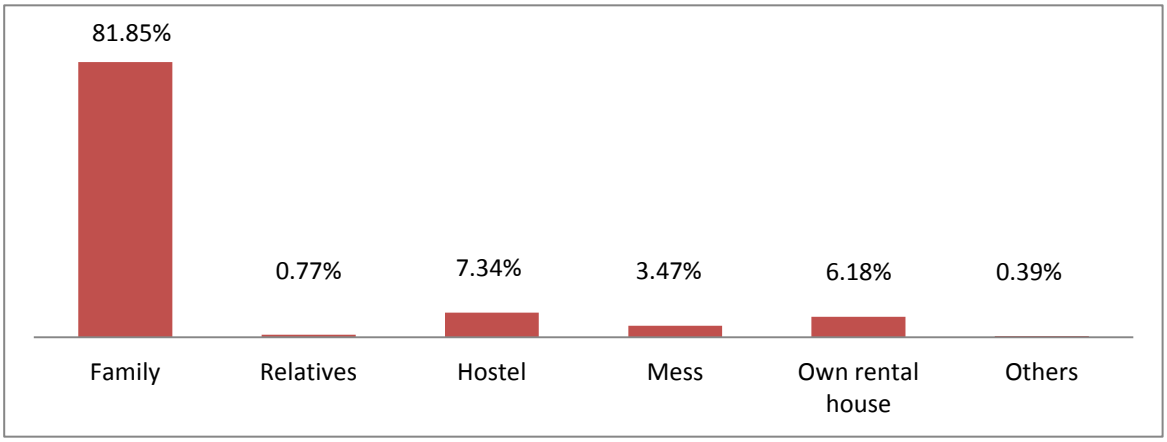

Fig 4.6: Accommodation status of female

Among 259 respondents 81.85% used to live with family and the type of their family was nuclear mostly 84.43% and 21.70% joint. And 6.18% lived in own rental house.

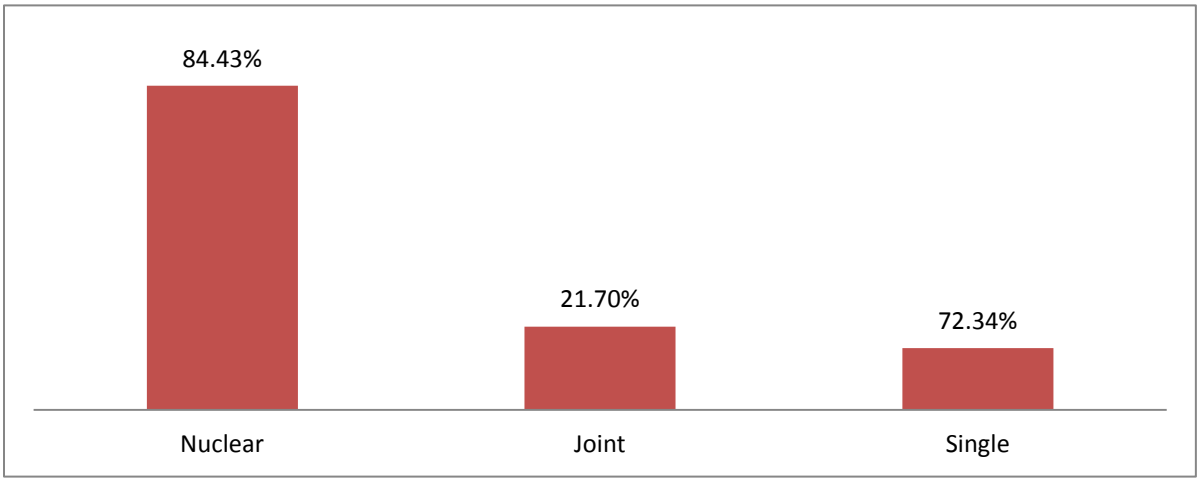

Fig 4.6.1: Type of family

4.7 Age at menarche

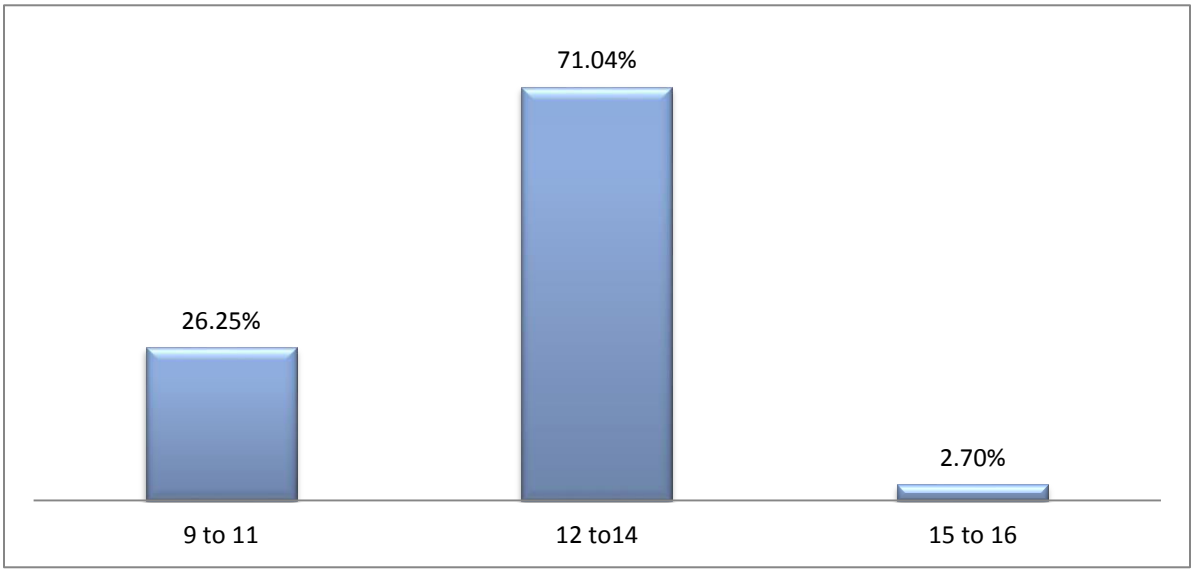

Fig 4.7: Age (yrs) at menarche

The result has showed that maximum adolescent menarche attaining age is 12 to 14 almost 71.04% of total sample and 26.25% attained at 9 to 11 and 2.70% has attained at 15 to 16.

4.8 Cycle regularity and duration of cycle

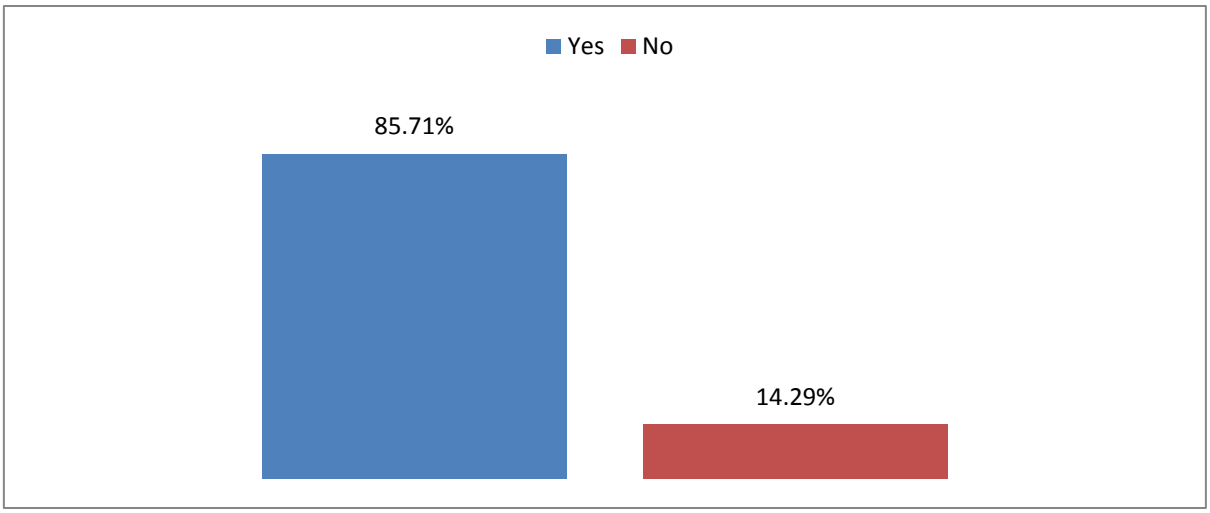

Fig 4.8: Cycle regularity

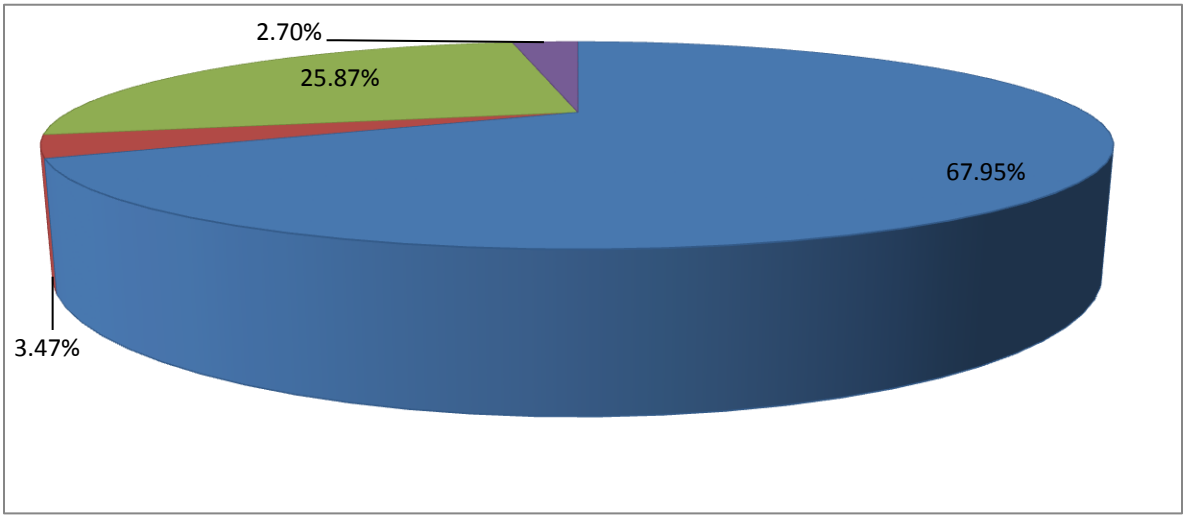

Fig 4.8.1: Duration of cycle

From the analysis it is concluded that most of the female has a regular period cycle almost 85.71% who has normal duration (67.95%) and some are not conscious about duration counting (25.87%) but some has irregularity that is abnormality (3.47%) near about 14.29% of total sample. And almost 2.70% female don't know the duration correctly.

4.9 Amount of flow

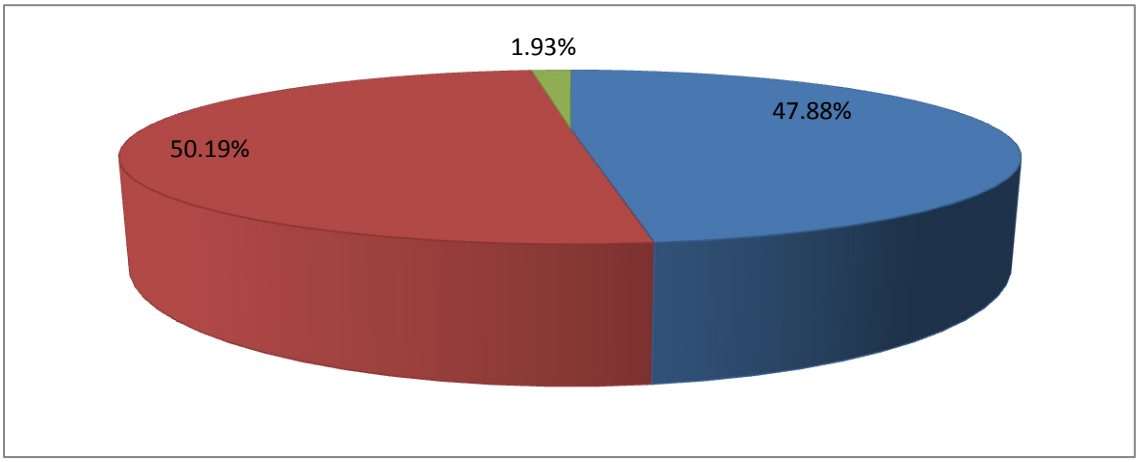

Fig 4.10: Amount of flow

Most of the respondents almost 50.19% has a normal amount of flow 3-4 days pads daily.47.88% has less than 3 pads flow and 1.93% has to use more than 4 pads daily.

4.10 Duration of flow

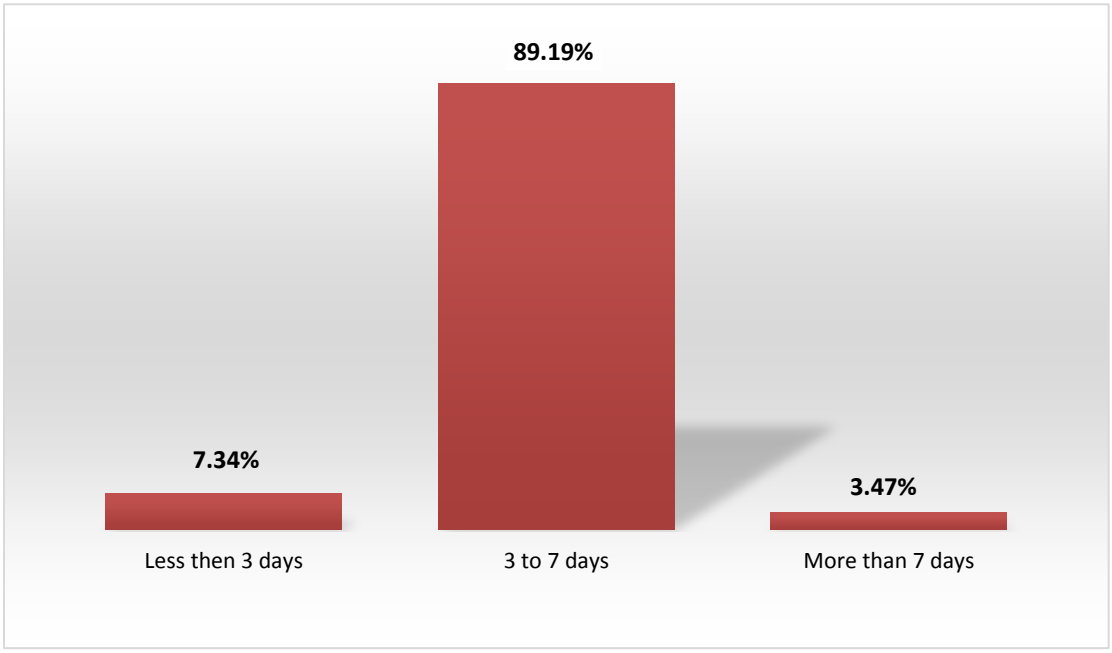

Fig 4.11: Duration of flow

Among the 259 respondents 89.19% has a flow of 3-7 days, 7.34% has a flow of less than 3 days but 3.47% female has a record of flow for more than 7 days.

4.11 Measures taken by females

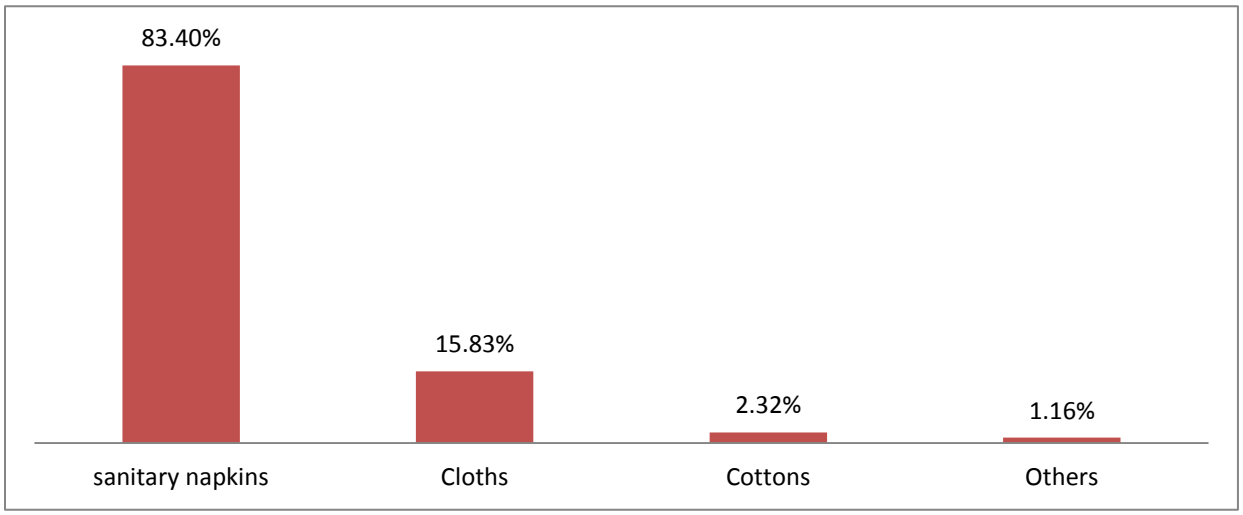

Fig 4.9: Measures taking during period

Almost 83.40% female are comfortable with sanitary napkins who are mainly from non slum are and 15.83% female prefers cloths (15.83%), cottons (2.32%) and others (1.16%) most of them are from slum area.

4.12 Presence of Dysmenorrhea

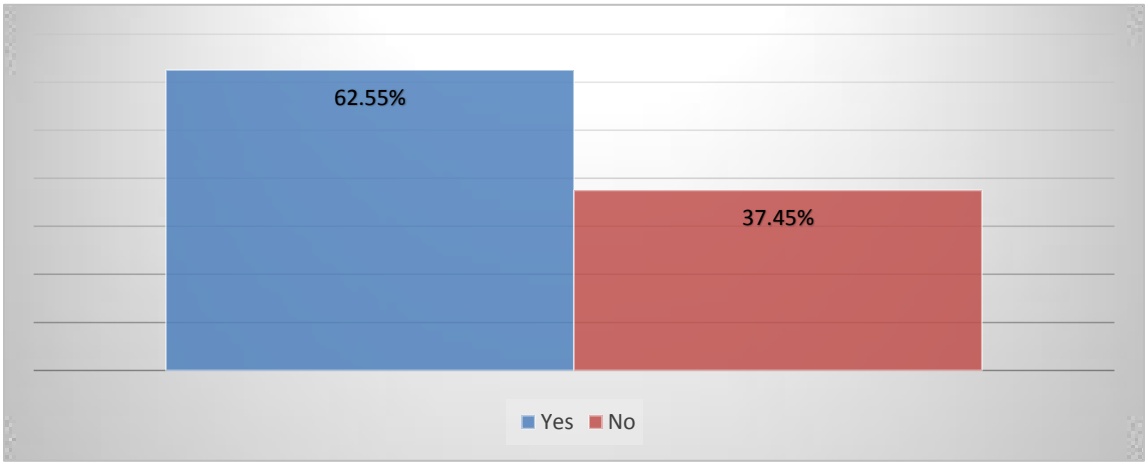

Fig 4.12: Pain during period (Dysmenorrhea)

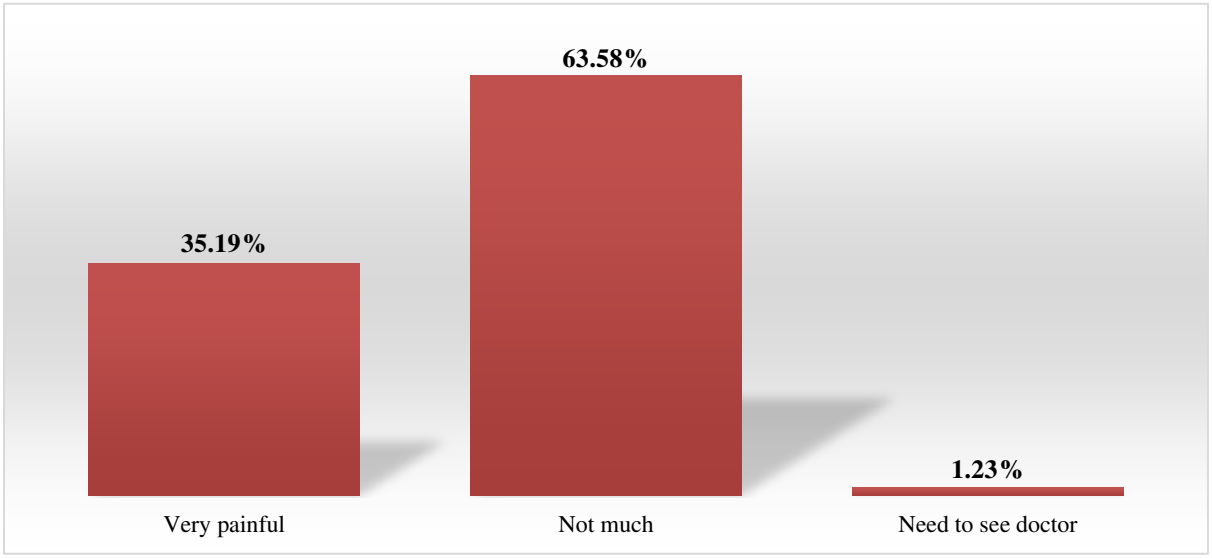

Fig 4.12.1: Level of pain

62.55% of total respondents has dysmenorrhea among those for 63.58% it is not much painful for 35.19% it is very painful and for 1.23% need to see doctor. Most of them take analgesic or NSAIDs or anticholinergic to control pain. Whereas 37.45% of total sample has no dysmenorrhea.

4.13 Premenstrual syndrome

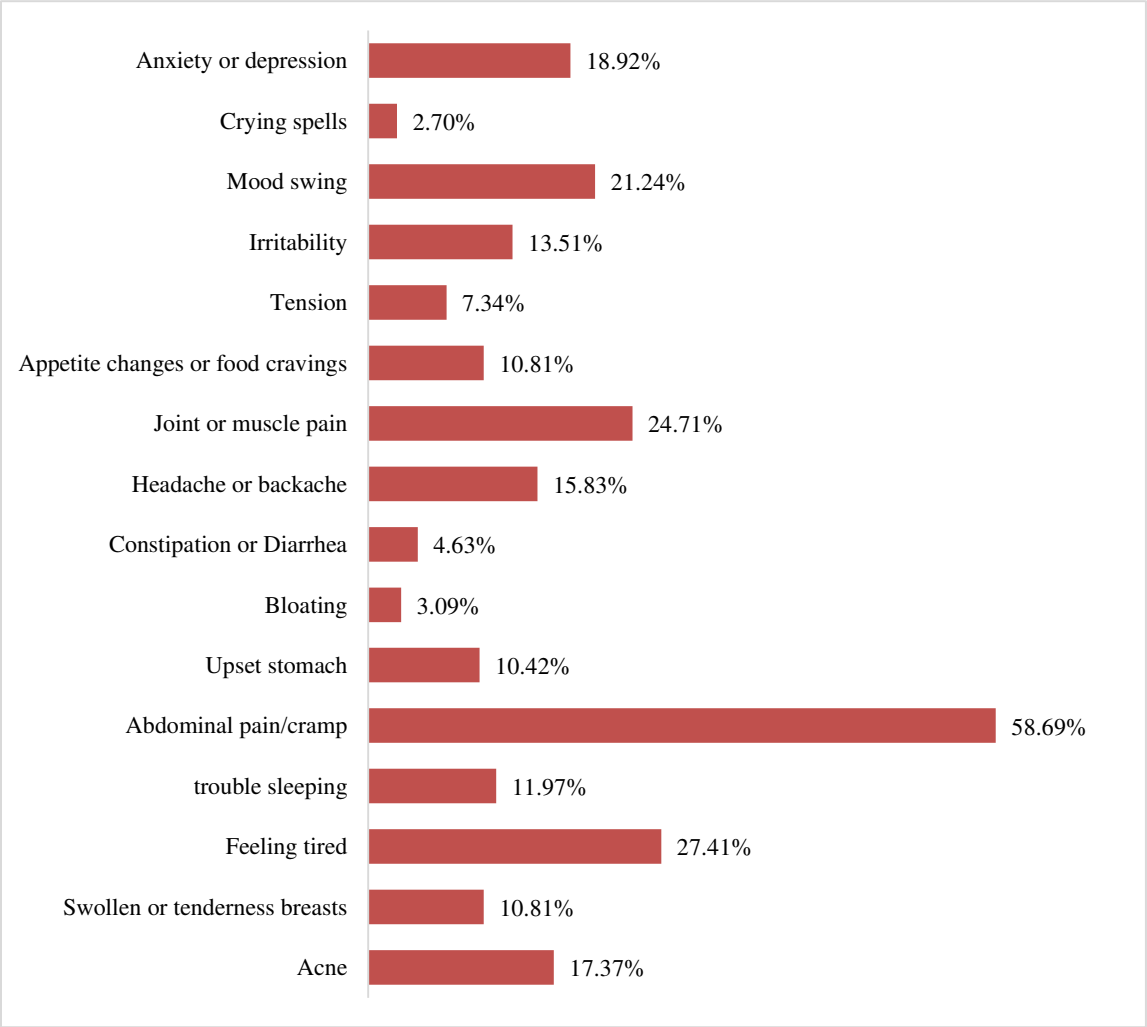

Fig 4.13: Premenstrual syndrome (PMS)

Among 259 respondents most of them have Premenstrual syndrome like abdominal cramp (58.69%), feel tiredness (27.41%), joint or muscle pain (24.71%), mood swing (21.24%), anxiety or depression (18.92%), acne (17.37%), headache or backache (15.83%), irritability (13.51%), trouble sleeping (11.97%), tenderness breast (10.81%), appetite changes (10.81%) stomach upset (10.42%), tension (7.34%), constipation or diarrhea (4.63%), bloating (3.09%), crying spell (2.70%).

4.14 Medication taken for premenstrual syndrome

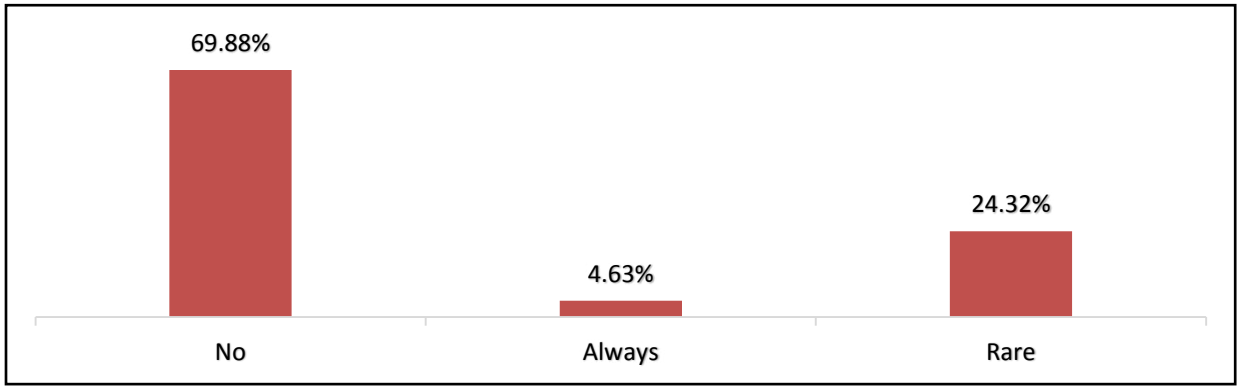

Fig 4.14: Medication for PMS

And 69.88% never, 4.63% always, 24.32% rarely they take analgesic or anticholinergic type medication to overcome the troubleness.

4.15 Medical history in family

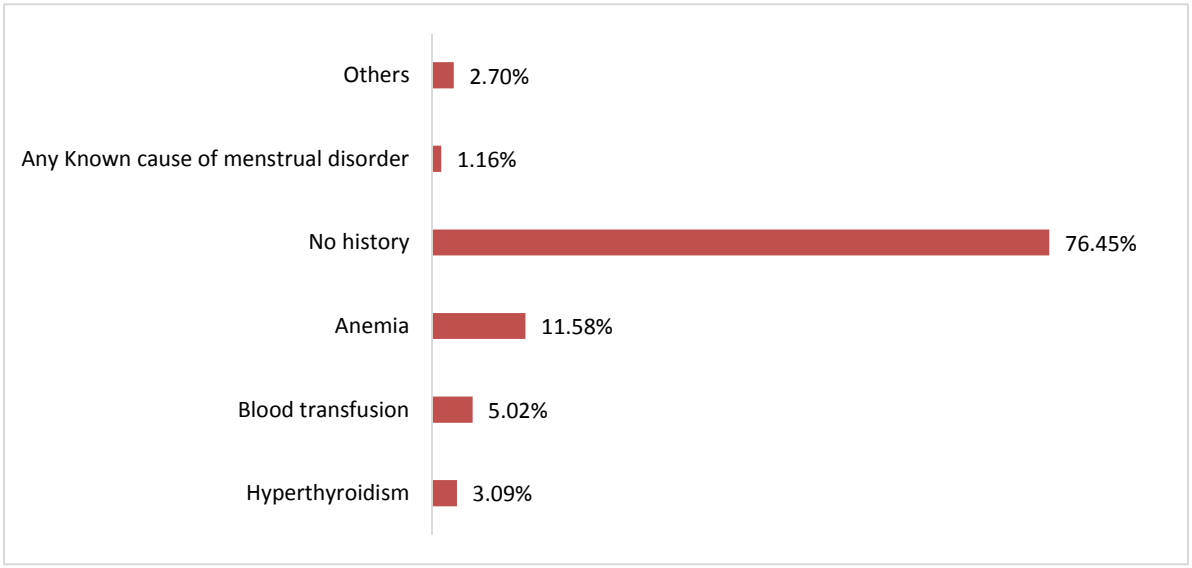

Fig 4.15: Medical history

In 259 respondents 76.45% have no medical history, 11.58% have anemia and 5.02% have blood transfusion history. Hyperthyroidism is present rarely 3.09%, Others 2.70% and any known cause of menstrual disorder 1.16%.

4.16 Family history of menstrual disorder

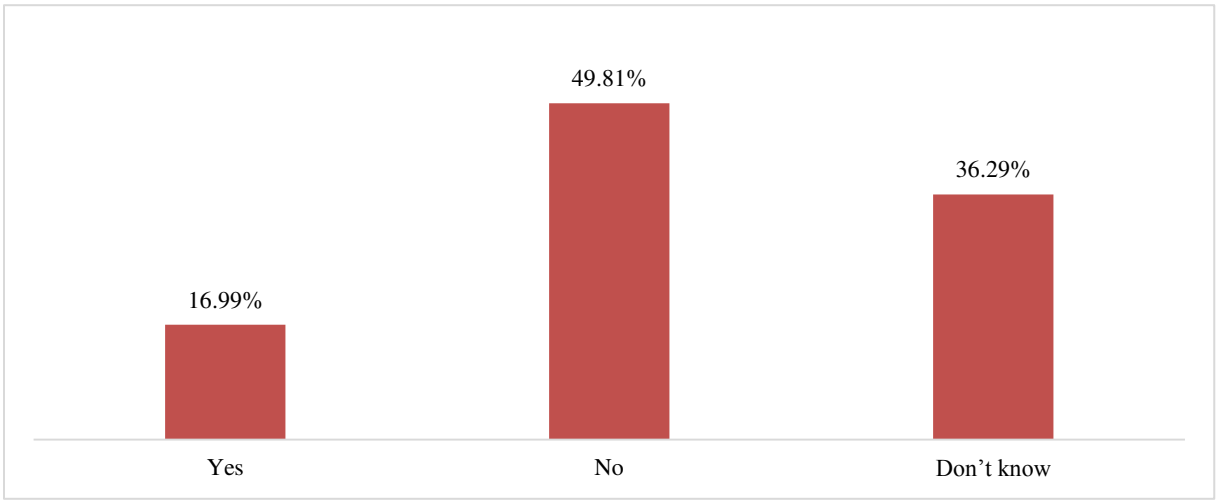

Fig 4.16: Family History

After analyzing all respondents data it is found that 49.81% have no and 16.99% has family history but 36.29% has no idea about family history.

4.17 Discussion of menstrual problems

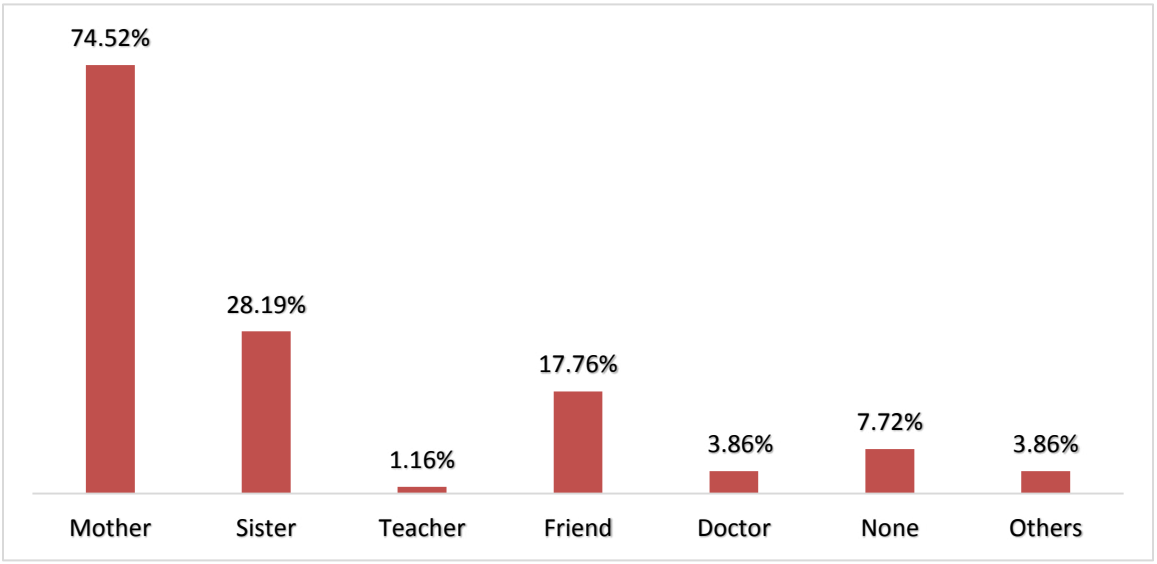

Fig 4.17: Menstrual problem discussion occur with

Most of the girls discussed about menstruation with mother (74.52%), sister (28.19%) and friend (17.76%) & least common with doctor (3.86%), others (3.86%) and teacher (1.16%).And finally 7.72% never discussed with anyone.

4.18 Prior knowledge of menstruation

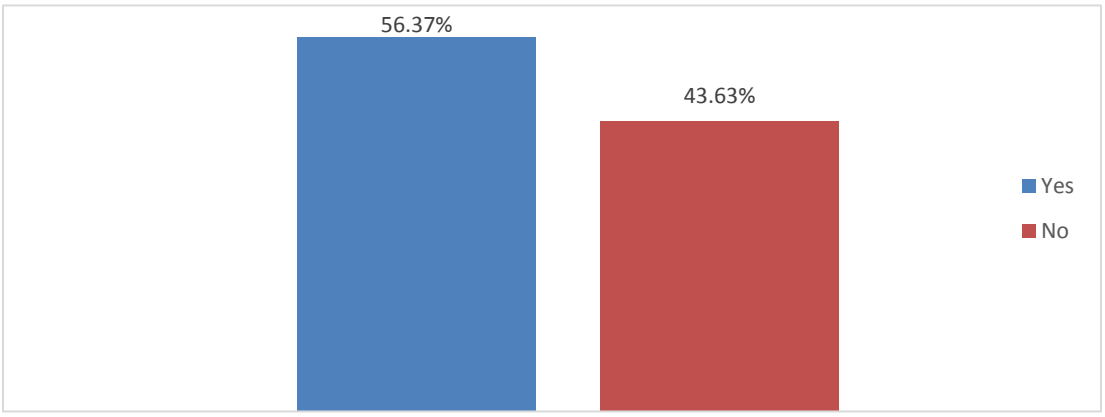

Fig 4.18: Heard before about menstruation

Menstruation is a phenomenon unique to the females. It is clear from the study findings that majority of the girls (56.37%) were having knowledge about menstruation or heard before.On the other hand 43.63% had no idea before.

4.19 Feeling at menarche

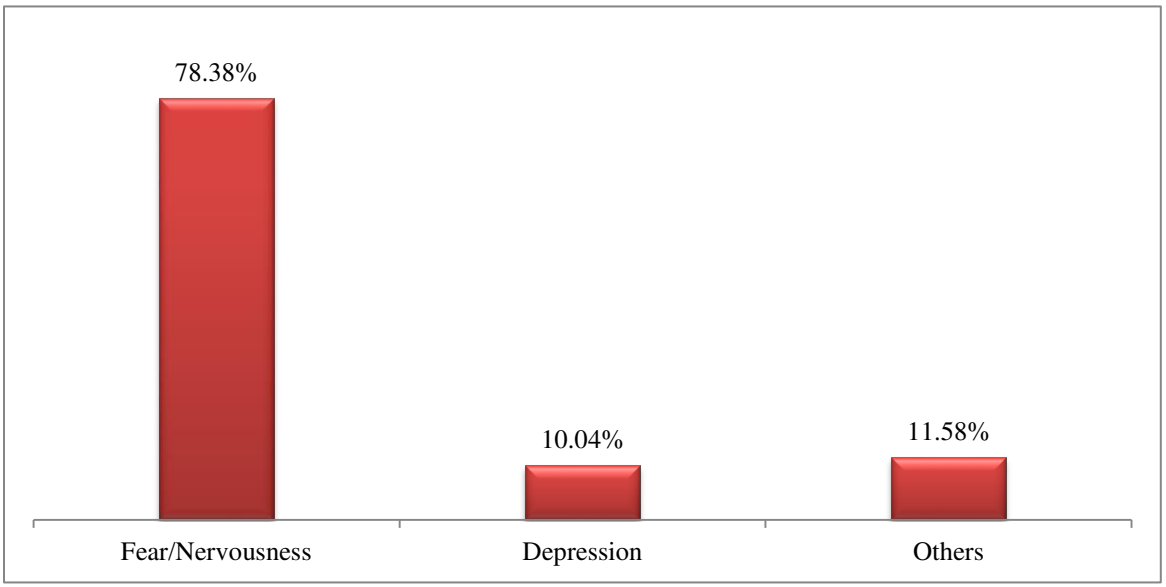

Fig 4.19: First feeling

As first feeling 78.38% felt nervous, 11.58% felt something else than fear and depression and 10.04% became depressed.

4.20 Menstruation is a physiological process

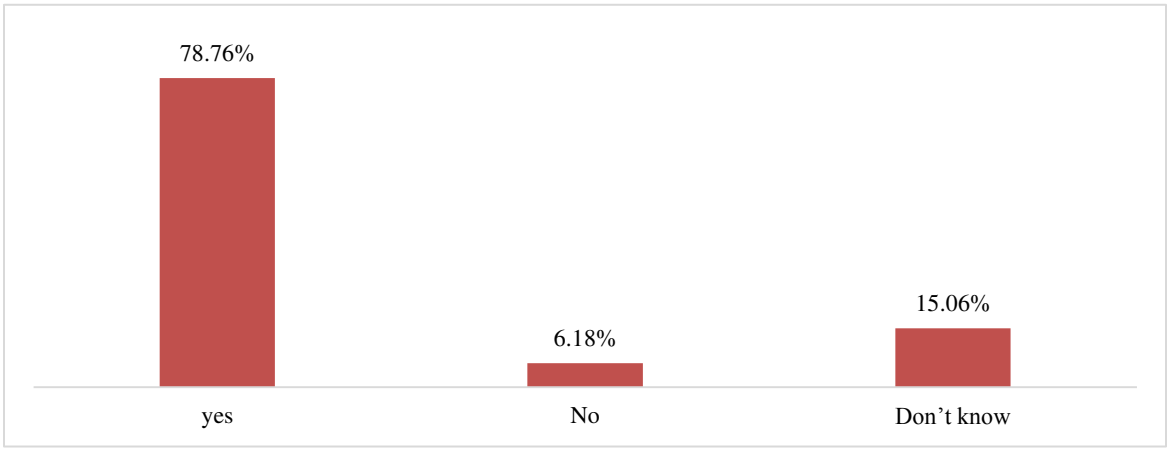

Fig 4.20: Menstruation is a physiologic process

Menstruation is a physiologic process it is known by 78.76%, unknown to 15.06% and wrong conception to 6.18%.

4.21 Uterus is source of menstrual bleeding

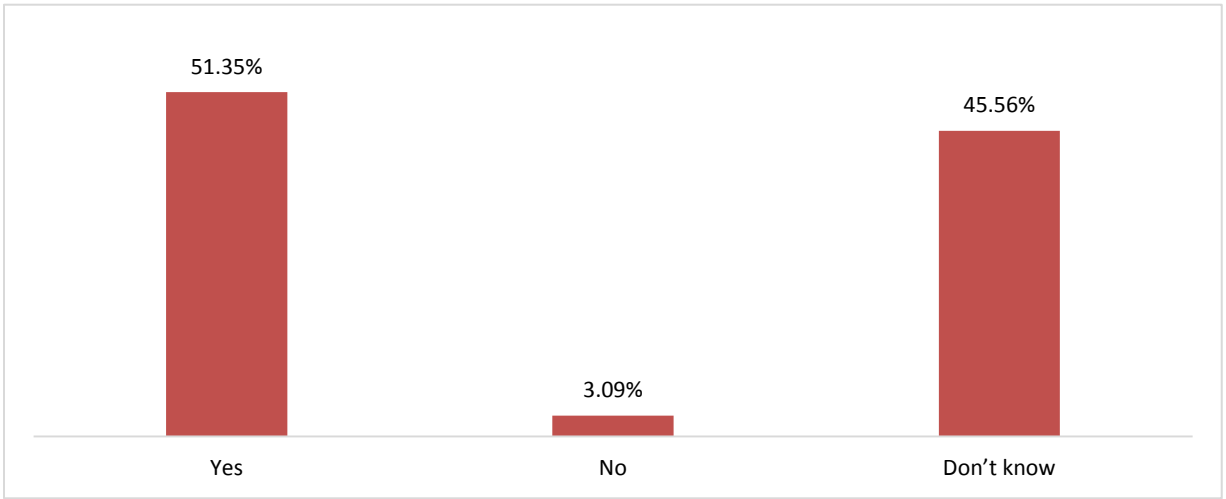

Fig 4.21: Uterus is source of menstrual bleeding

Uterus is source of menstrual bleeding it is known to 51.35%, unknown to 45.56% and misconception to 3.09%.

4.22 Normal age for menstruation

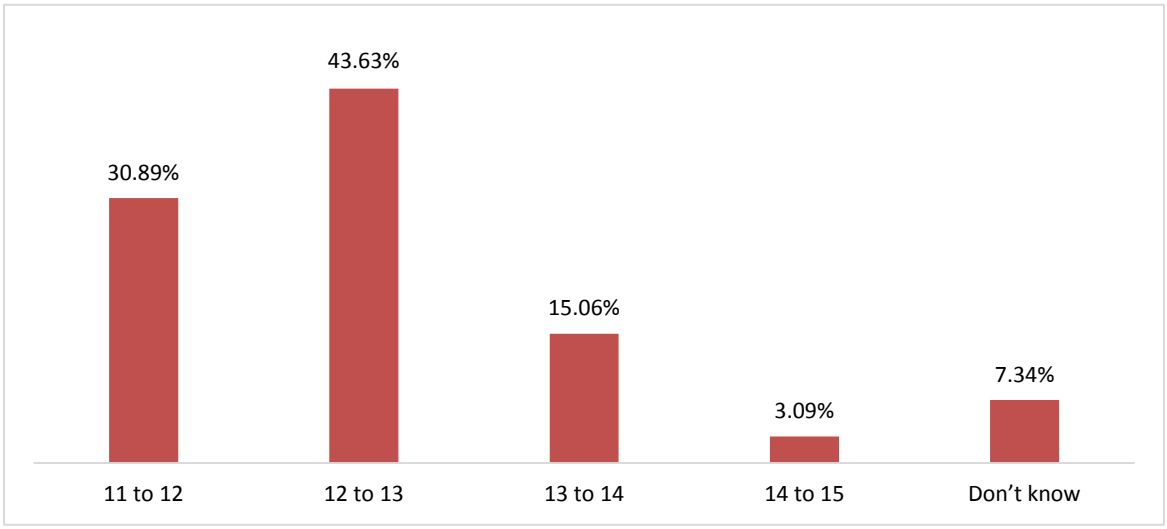

Fig 4.22: Normal age for menstruation

Normal age for menstruation is 11-12 known by 30.89%, 12-13 by 43.63%, 13-14 by 15.06%, 14-15 by 3.09% and 7.34% don't know the range actually.

4.23 Normal duration for menstruation

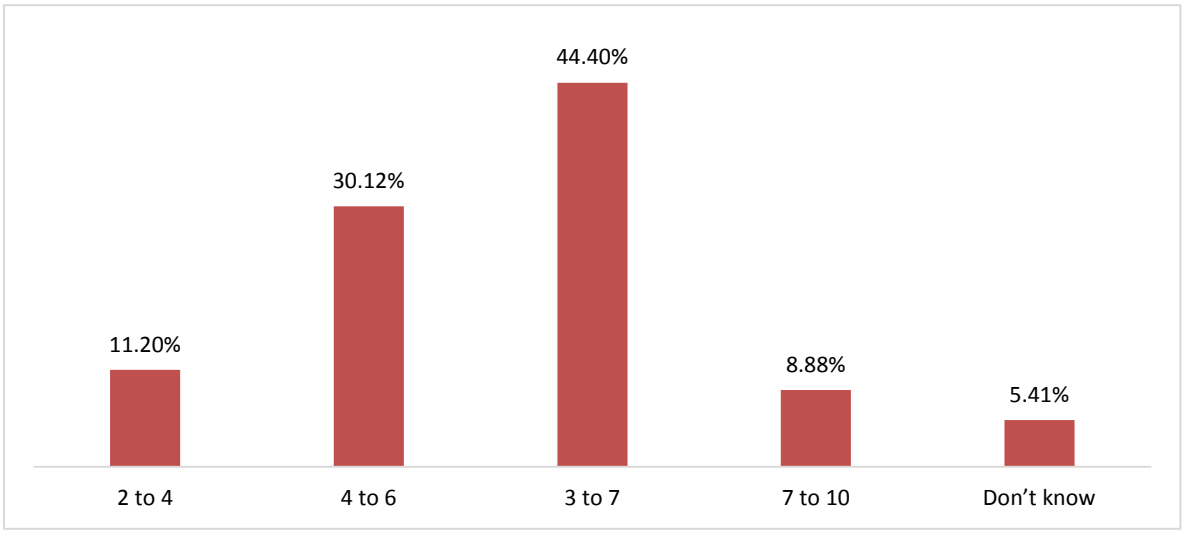

Fig 4.23: Normal duration for menstruation

Normal duration for menstruation is 3-7 days known by most of them 44.40%, 4-6 days by 30.12%, 2-4 by 11.20%, 7-10 by 8.88% and 5.41% has no idea about it.

4.24 Sanitary napkin is ideal

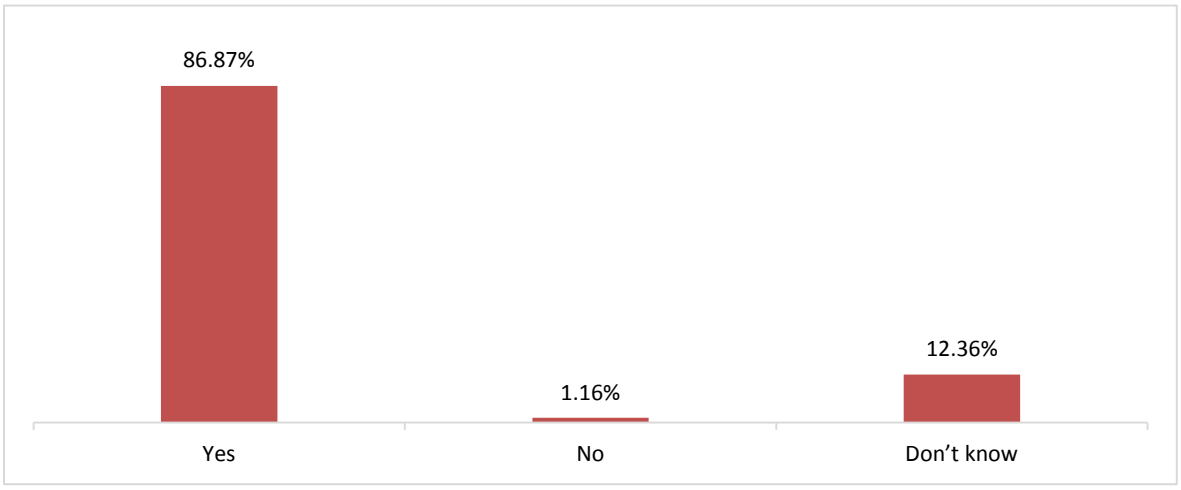

Fig 4.24: Sanitary napkin is ideal

Sanitary napkin is ideal to 86.87% female, not ideal to 1.16% and 12.36% have no idea about it.

4.25 Source of information

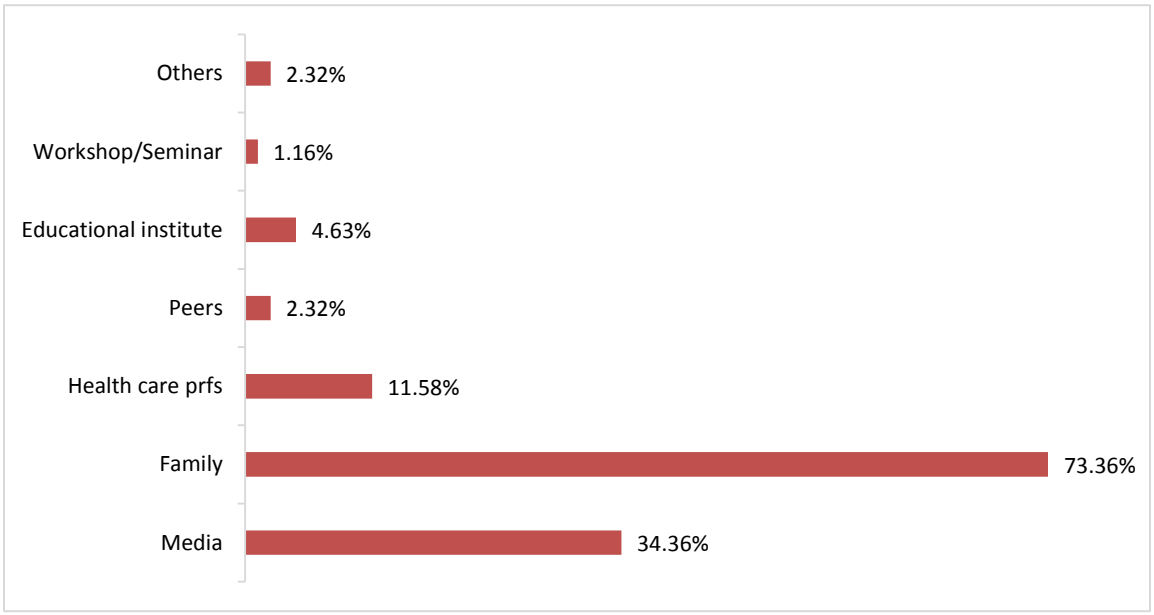

Fig 4.25: Source of information

Source of information is family to 73.36%, media to 34.36%, health care professionals to 11.58%, educational institute to 4.63%, peers to 2.32%, others to 2.32% and workshop to 1.16% respondents.

4.26 Menstruation is a debilitating event

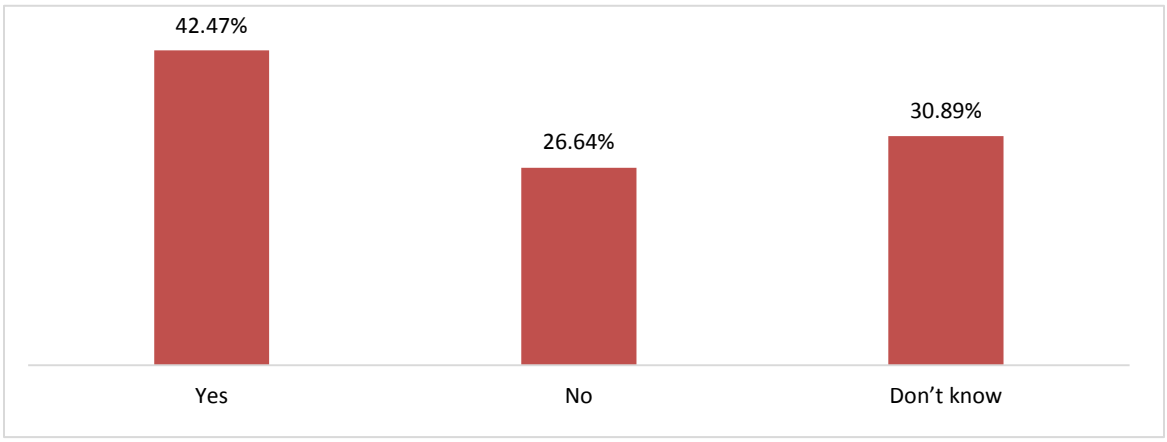

Fig 4.26: Menstruation is a debilitating event

Menstruation is a debilitating event to 42.47% and not to 26.64% whereas 30.89% have no idea about it.

4.27 Menstruation is a bothersome event

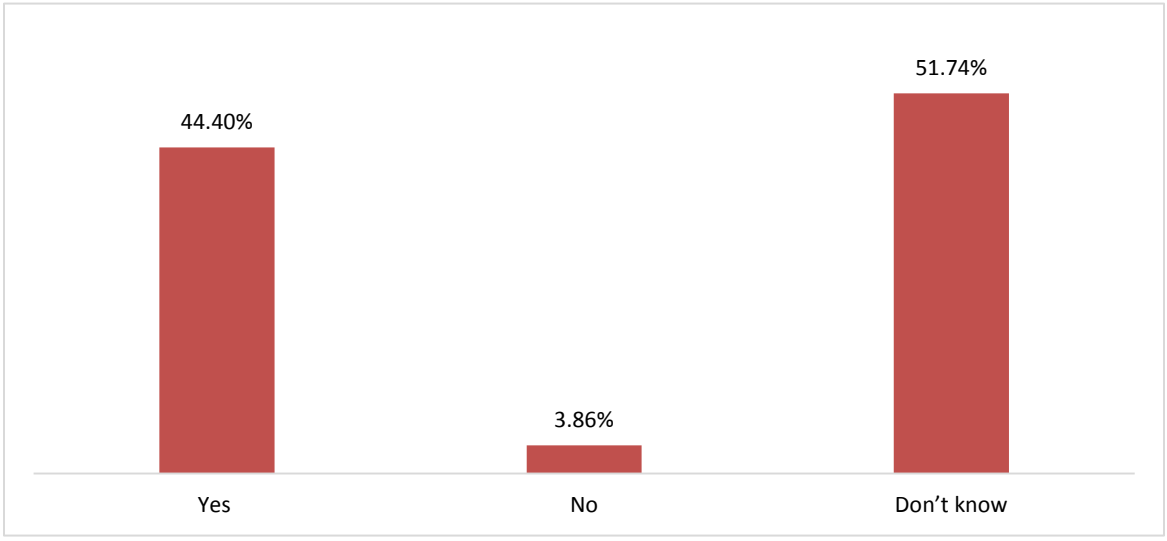

Fig 4.27: Menstruation is a bothersome event

Menstruation is a bothersome event to 44.40% and not to 3.86% whereas 51.74% have no idea about it.

4.28 Menstruation is a natural event

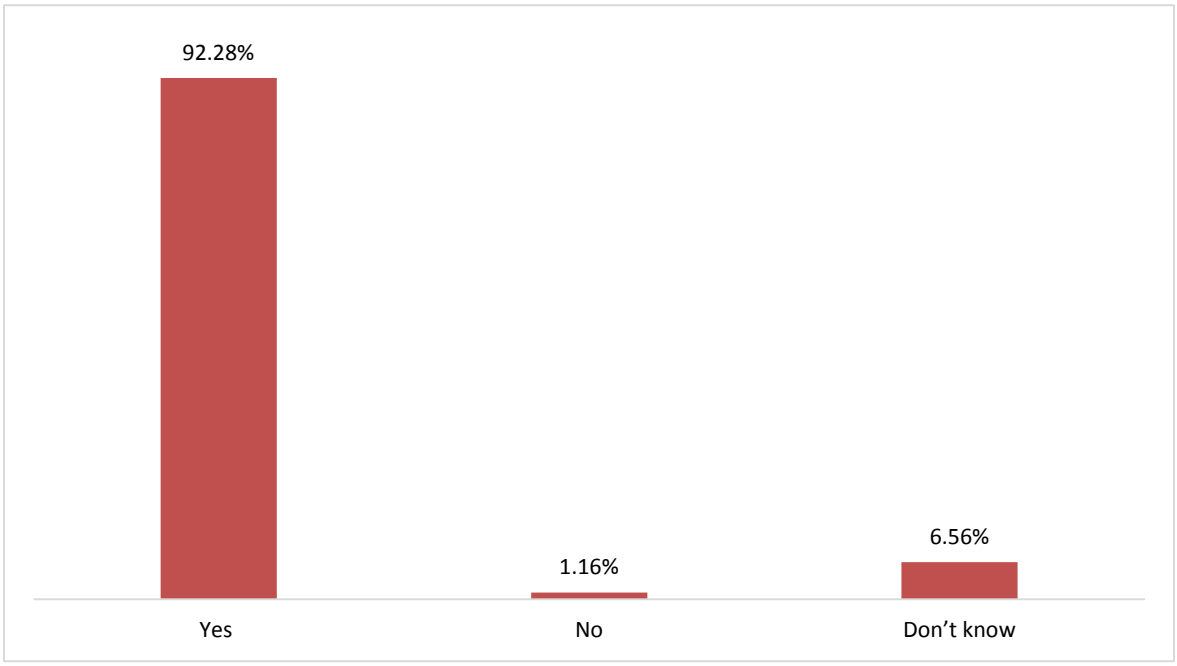

Fig 4.28: Menstruation is a natural event

Menstruation is a natural event to 92.28% and not to 1.16% whereas 6.56% have no idea about it.

4.29 Onset of menstruation is anticipated or predicted

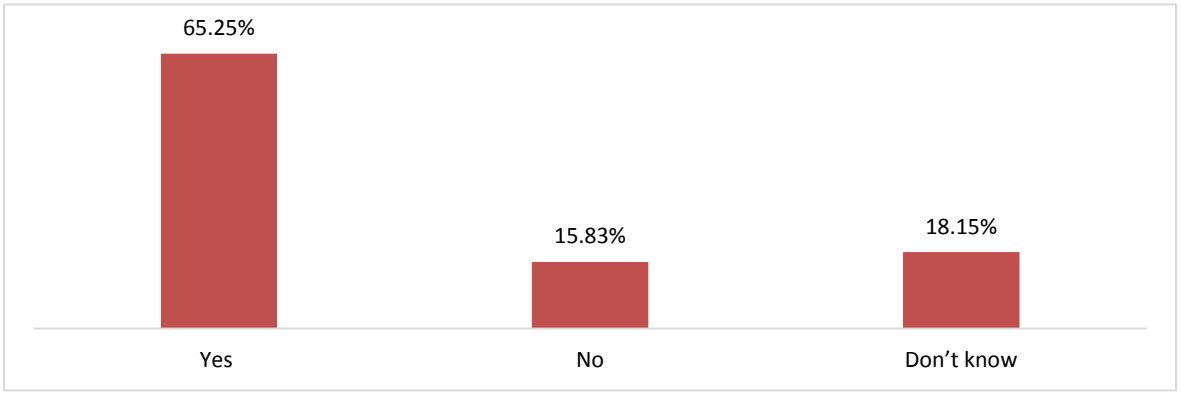

Fig 4.29: Onset of menstruation is anticipated or predicted

Onset of menstruation is anticipated or predicted to 65.25% and not to 15.83% whereas 18.15% have no idea about it.

4.30 Menstruation has no negative effect on women life style

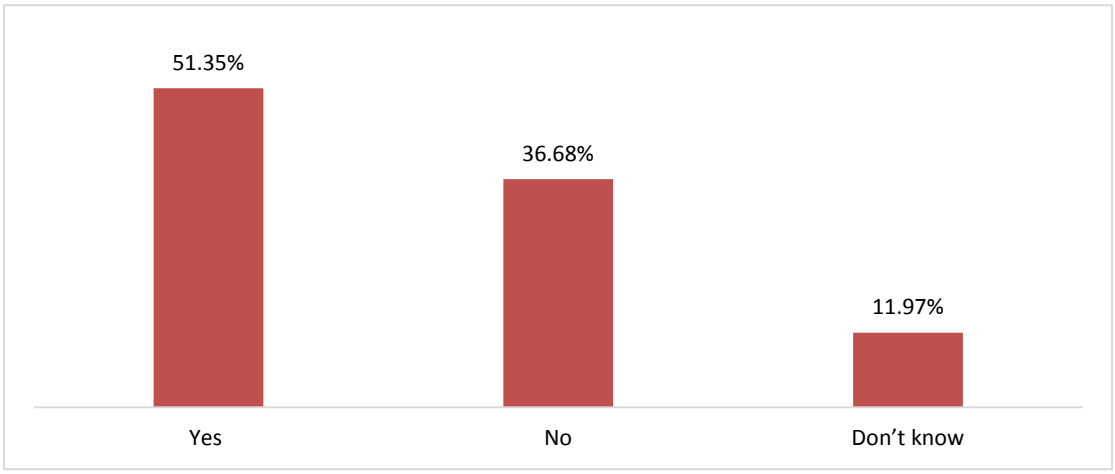

Fig 4.30: Menstruation has no negative effect on women

Menstruation has no negative effect on women to 51.35% and not to 36.68% whereas 11.97% have no idea about it.

4.31 Discussion occur about menstruation with male member

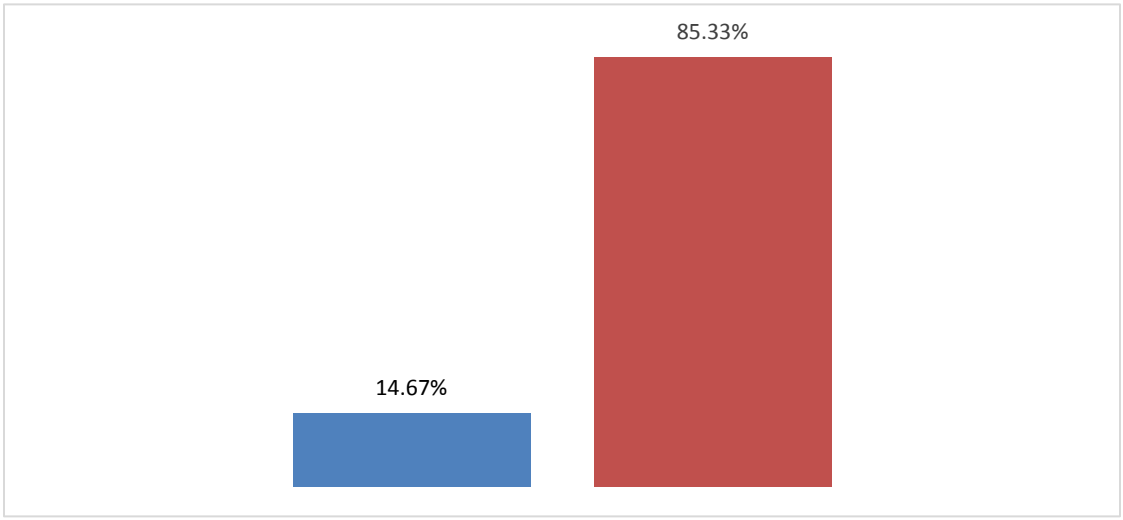

Fig 4.31: Discussed about menstruation with male member

85.33% female do not discuss about menstruation with male member but 14.67% female discuss with male member about menstruation but their level of openness is very low.

CHAPTER FIVE

DISCUSSION

Menstrual pattern, disorders, hygiene practices, and attitudes of 259 female respondents aged 16 to 23yrs from different universities, colleges and slums of the Dhaka city were evaluated. Among them 79.92% female were from non-slum area and 20.08% were from slum area. Almost 52.9% has completed their H.S.C. and 4.63% were illiterate.

From this study we are able to conclude that menstruation is a physiologic process to majority (78.76%) of the respondents and in the study of Dasgupta and Sarkar (2008) showed that 86.25% girls believed it as a physiological process. Majority have idea about source of menstrual bleeding around 51.35% of total respondents in my study. On the other hand from the study of Pundkar*et al.* (2014) it was observed that 70.71% were not aware of the source of the menstrual bleeding as they are not much adult to know all about menstruation or have lacking's of sources or the mothers of these girls were lacking of right knowledge and the same thing was transferred to their off springs..

Among 259 respondents we found that the women with higher educational status like undergraduate, college or school are more conscious about ideality of sanitary napkin almost 86.87% female and almost 83.40% female are comfortable with or use sanitary napkins. In the study of Subhash*et al.* (2011), Gultie*et al.* (2014) also mentioned the similar result. And according to the study of Dasgupta and Sarkar (2008) only 48.75% girls use sanitary pad during menstruation though they all are not well educated or not from well environment and according to the study Pundkar*et al.* (2014) 31.42% as they are only school going girls and not fully concern about hygiene.

From this study age of menarche was found 12 to 14yrs in majority cases and two persons had not attained menarche within due time. The study of other researchers among adolescent girls of West Bengal (Dasgupta and Sarkar, 2008), Ahmednagar (Gultie*et al.*, 2014), SingurPundkar*et al.* (2014) andSaoner (Subhash*et al.*, 2011) also found similar result for age of menarche which was 12-14.5yrs.

From the analysis it is concluded that most of the female had a regular period cycle (85.71%) and normal duration (67.95%). Most of the girls (85.3%) had the prior knowledge about menstruation but 78.38% felt nervous at the first time & the most common source of information was from

family members (73.36%) usually mother & sister. Similar results were found by Dasgupta and Sarkar (2008), Subhash*et al.* (2011). Whereas the study of Gultie*et al.* (2014) demonstrated that the main sources of information about menstrual hygiene management were teachers (43.1%) as they had a poor knowledge family background and in our study teachers were the least common source.

Among the 259 respondents, 89.19% has a normal flow of 3-7 days although it is correctly known by only 43.63%. Almost 50.19% has a normal amount of flow (3-4 pads daily) and 44.40% respondents know it very well.

From our study it is found almost 90% of them mentioned about suffering from at least two different Premenstrual syndrome. Among this most common is abdominal cramp (58.69%), feeling tiredness (27.41%) and joint or muscle pain 24.71% was very common as respondents reported this and most of them 69.88% always take analgesic or anticholinergic type medication to overcome the trouble of premenstrual syndroms. According to the study of Sapkota et al. (2010) showed almost 86% experienced premenstrual symptoms, and 39% reported using analgesics to treat them and overall 24% of participants reported self-medicated use of antibiotics to treat the premenstrual symptoms. The study of Campbell and Grath. (1997) reported that 93% had menstrual discomfort and 70% of these had used over-the-counter (OTC) medications to manage the discomfort.

Dysmenorrhea was the main menstrual problem reported by 62.55% of the respondents. Analgesic or anticholinergic were also found in most cases to control pain. Almost similar result was found in the study of Solanki *et al*, (2012) where 66.2% respondents and 72.7% from the analysis of Johnson and Adolesc, (1989) and 59.7% from Klein and Litt, (1981) research study were reported having dysmenorrhea as very common among adolescent girl. And those study data suggested that biologic variables play a substantial role in the pathogenesis of dysmenorrhea.

In the study of 259 respondents 76.45% have no medical history, some of them almost 11.58% have anemia, whereas 5.02% have blood transfusion history was found also and any known cause of menstrual disorder 1.16% was demonstrated where 16.99% has family history of menstrual disorder.

Among 259 respondents menstruation is a debilitating event to 42.47%, bothersome event to 44.40%, natural event to 92.28% and has no negative effect on 51.35% women of total respondents. The onset of menstruation is anticipated or predicted to 65.25% female of total sample.

From the study results has shown that relative openness about menstruation or related topics are very poor or rare and not openly discussed with male members in the society normally. 85.33% female do not discuss about menstruation with male member but 14.67% female discuss with male member about menstruation but their level of openness is very low.

CHAPTER SIX

CONCLUSION

This study indicated that the knowledge level of Bangladeshi female is good but not up to the mark and they have lack of interest to know about it. A high level of hesitation keep them away from openly discussion about it and social culture is the main obstacle behind this. Conducting this survey we found that still there is a necessity of improvement in their knowledge, attitude and regular practice. Educational television programs, 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 female. A variety of factors are known to affect menstrual behaviors, the most influential being economic status and residential status (urban and rural). Awareness regarding the need for information about healthy menstrual practices is very important. It is essential to design a mechanism to address and for the access of healthy menstrual knowledge. So more relevant study should be done to get more clear knowledge about this. And awareness should be provided properly to overcome these circumstances.

CHAPTER SEVEN

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