

A Study on Menstrual Hygiene Practices Among Adolescent School Girls in a City of North 24 Parganas

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Abstract

Adolescence is commonly understood as the stage of life that begins at the onset of puberty, when sexual maturity or the ability to reproduce is attained. It is a period of rapid psychological and biological changes that both boys and girls must navigate. However, adolescent girls, in particular, face unique challenges related to menstrual health and hygiene. This study focuses on the menstrual health and hygiene management practices among adolescent school-going girls in government schools of North 24 Parganas. Government schools have been selected as the field area of study, recognizing that they primarily cater to socially deprived sections of society, where families from middle-class backgrounds often prioritize boys' education over girls'.

The study highlights the deep-rooted myths and taboos associated with menstruation, often reinforced by religious and cultural beliefs, and their impact on girls' health and hygiene. Additionally, it examines the materials used during menstruation, the level of knowledge among adolescent girls, and the need for improved facilities to ensure effective menstrual waste management. Despite the well-established link between inadequate sanitation facilities, lack of privacy, and water shortages in schools with high absenteeism and dropout rates among girls, menstrual health management remains largely unaddressed. Critical issues such as ensuring privacy, water availability, and raising awareness among boys and men continue to be overlooked.

Findings from this study reveal that menstrual hygiene practices among a large proportion of adolescent girls remain unsatisfactory. Ignorance, misinformation, and unsafe practices related to menstruation persist, highlighting the urgent need for awareness programs, better sanitation facilities, and policy interventions to improve menstrual health management in schools.

Keywords: Adolescence, Puberty, Menstrual Health, Menstrual Hygiene Management (MHM), Adolescent Girls, Government Schools, Myths and Taboos, Religious and Cultural Beliefs, Sanitation Facilities, Menstrual Waste Management

Introduction

Menstruation is an essential biological process, an experience shared by women across the world. The shame and silence associated with it is also a global rule. At the onset of menstruation at puberty, girls become confused and/or frightened due to lack of knowledge of the normal biological process of human body. During this situation they undergo several physiological and psychological changes. The adolescents remain unaware of their own bodily changes. This time they are advised by senior women

members of the family to follow some myths and taboos as prevalent in the society, although these are not at all scientific. They are told not to discuss these issues with their brothers, fathers or male friends. Social media and social movements along with awareness campaigns and initiatives taken by government or NGOs has brought about changes and has become successful in breaking the silence to some extent. Yet it is not a rapid process. The problem is multi-dimensional and can only be changed gradually due to traditional norms and sentiments associated with it. This necessitates carrying out a study in present social scenario, how young adolescent girls of an urban area, belonging to similar socio-economic background are affected physically and mentally during this normal biological process occurring in their lives. So, a study is carried out with a group of adolescent girls of a particular source in some urban locality to find their problems on menstrual hygiene associated with socio-economic background, menstrual hygiene practices and physical discomforts during menstruation. In addition to this an attempt is made to observe how rigidly they have been following the myths and taboos related to menstruation in this modern era. Therefore, to gather the information on these aspects an attempt has been made to study among a group of 100 girls of a school at Barrackpore City of the northern fringe of Kolkata which is situated in North 24 Parganas district of West Bengal.

Menstruation is a normal and healthy part of a woman's life, yet girls are taught not to discuss it openly. The topic has been felt to be very relevant to present social issue. Movies, which are considered to be the mirror of our society have also highlighted this issue in the films like "Padman" based on the life of a social activist Arunachalam Muruganantham. The campaigns like "Happy to bleed" or the "Sabarimala Temple Case" have proved the myths and taboos regarding menstruation in the society all the more prominent. In Sabarimala temple there was no permission for entry of women "of menstruating age". However, after a series of protests and legal battles, the Honorable Supreme Court finally ruled that women of all age groups can enter the Sabarimala temple. Besides the prohibition of menstruating women from entering temples, there are several other myths, such as not touching pickles and not entering the kitchen during menstruation (The Indian Express 2023).

The taboos are not only prevalent in the rural areas but are quite present in urban areas as well. Further it is seen in the society that girls suffer from poor menstrual hygiene, originating from lack of knowledge, culture and tradition, and socio-economic and environmental constraints, leading to inconveniences, humiliation and stress. This causes reduced school attendance and poor academic performance, or even dropouts, and ultimately infringes upon girls human rights. (Lahme et al, 2016).

There are also beliefs that menstruating women are "impure" and "dirty". According to the 2011 Census data, approximately 336 million girls and women in India are of reproductive age. Data from the National Family Health Survey (NFHS) 2015–2016 indicates that only 36% of them use sanitary napkins. A 2014 report titled "*Spot On*" by Dasra revealed that nearly 23 million girls in India drop out of school annually due to inadequate menstrual hygiene management facilities, limited access to sanitary napkins, and lack of awareness about menstruation. Additionally, a high rate of absenteeism has been observed among girls who do not drop out but face challenges during menstruation (Upadhyay, 2019).

Girls and women often experience various physical discomforts during the two to seven days of menstruation each month. These issues may range from heavy and painful periods to the absence of periods altogether. Common problems include dysmenorrhea (painful cramps), menorrhagia (heavy bleeding), nausea, weakness, and premenstrual syndrome (PMS), all of which contribute to significant physical distress (Begum et al., 2016).

Hence, in the present scenario it has become increasingly important to understand the impact of socio-

cultural background, the menstrual hygiene practices and the prevalent myths and taboos on girls during the biological process, which is a natural phenomenon.

Unless the menstrual hygiene practices and the myths and taboos prevailing among the girls and women are understood, it is difficult to find out the way through which this social stigma and myths can be approached. This is required to bring a positive change in the perception of menstruation among girls and women, which will lead them to adopt healthy practices during menstruation. So, in this study an attempt has been made to obtain the socio-economic background, menstrual hygiene practices and beliefs on myths and taboos regarding menstruation among a section of adolescent girls at Barrackpore city.

Importance of study

Menstruation time for a girl child is always a new venture/ a new phase and a challenging stage as per their peer group discussion. Many types of girl's nature we can observe among the students as well as among the children at our own houses. It's a transition phase in life from child to become a woman. At the onset of menstruation at puberty, girls become confused and/or frightened due to lack of knowledge of the normal biological process of human body. They undergo several physiological and psychological changes. During this phase the girls are suggested and advised by senior women members of the family or the neighbors to follow some myths and taboos which are prevalent in the society, which are never been considered as scientific. In this new modern age, we still carry the age old societal ill practices and thoughts residing in a city irrespective of any rural areas. This necessitates a researcher to study the present social scenario about the young adolescent girls of a city belonging to similar socio-economic background are affected physically and mentally.

MENSTRUATION: A COMPLEX EXPERIENCE FOR MANY

Adolescence- a transitional period

The Latin word *adolescere* means "to grow up" or "to grow into maturity". This is a transitional period in a person's life between childhood and adulthood. The term Adolescence is commonly understood as the stage of life that begins at the onset of puberty, when sexual maturity or the ability to reproduce is attained. It is a period of rapid change both psychologically and biologically. Both boys and girls have to go through this developmental stage.

Puberty or sexual maturity marks the end of childhood and signifies the beginning of adolescence. This stage is characterized by dramatic physical changes. It is a gradual process. Primary and secondary sexual characteristics develop as a result of the hormones released during that time. In girls, this is marked by rapid growth in height which happens about two years before menarche, the onset of menstruation. (N.C.E.R.T Class XI, Psychology, 2019)

Adolescence stage can be more specifically divided into 3 parts- Early adolescence, Middle adolescence and Late adolescence. Early adolescence is the age between 11 to 13 years, Middle adolescence is the age between 14 to 15 years and Late adolescence is between ages 16 to 18 years. Each of these is characterized by different physical growth, cognitive/intellectual development, Autonomy, body image development, peer group influence and identity development. (National Health Mission. 2005-2012)

Menstruation

Menstruation occurs when part of the endometrium (the inner layer of the uterus.), a mucous membrane

filled with blood, is shed and expelled from the uterus. (Dahlqvist , 2016)

Menstruation is a biological process and is a part of reproductive system. Reproductive system includes two ovaries, two fallopian tubes and a uterus. Thousands of eggs are stored in these ovaries. A baby girl, at the time of her birth is born with these egg cells in her ovary. During puberty, the pituitary gland, in women, produces hormones which travel through the bloodstream to ovaries causing one of the eggs to mature and release. Every month an egg matures and is released from one of the ovaries. The fallopian tubes then carry the released egg i.e., ova from one of the ovary to the uterus or womb.

Each ova have the potential to develop into a baby, hence when an egg is released from the ovary, the uterus starts preparing for it and creates a thick wall of blood tissues which is known as endometrium. The fertilized egg, created by union of female egg and male sperm, becomes an embryo and attaches itself to the uterine lining. It receives all the nourishment and eventually becomes a fetus who later becomes a baby. But when female's egg won't get fertilized, it cannot transform into an embryo. So, the uterus sheds this unwanted lining of tissues and blood along with unfertilized egg through the vagina. This flow of blood and tissues through the vagina is called menstruation and more commonly periods. This menstruation cycle is repeated every month. (Bora, 2018)

Role of Socio-economic Conditions

Studies have found that an increase in age, socio-economic status, and maternal literacy levels are significantly associated with higher usage of sanitary napkins among girls. Religion also plays a role in influencing sanitary napkin usage. Additionally, the age of the girls impacts their adoption of sanitary napkins. Researchers have demonstrated that factors such as lower socio-economic status, lack of access to information about menstruation, and limited financial resources to purchase menstrual hygiene products affect menstrual behavior. The economic condition of girls influences their purchasing capacity for sanitary napkins, directly affecting their hygiene. There is a significant relationship between socio-demographic variables and menstrual hygiene. (Kanyadi and Metgud, 2016)

Menstrual Hygiene Practices

Menstrual hygiene management according to WHO and UNICEF Joint Monitoring Programme (JMP) for drinking water, sanitation, and hygiene is defined as: "Women and adolescent girls are using a clean menstrual management material to absorb or collect menstrual blood, that can be changed in privacy as often as necessary for the duration of a menstrual period, using soap and water for washing the body as required, and having access to safe and convenient facilities to dispose of used menstrual management materials. They understand the basic facts linked to the menstrual cycle and how to manage it with dignity and without discomfort or fear."

Menstrual health and hygiene (MHH) include both MHM and the broader systemic factors that link menstruation with health, well-being, gender equality, education, equity, empowerment, and rights. These systematic factors have been summarized by UNESCO as accurate and timely knowledge, available, safe, and affordable materials, informed and comfortable professionals, referral and access to health services, sanitation and washing facilities, positive social norms, safe and hygienic disposal and advocacy and policy. (UNICEF, 2019)

India is one of the signatories to Delhi Declaration 2008: "Sanitation for Dignity and Health", in the Third South Asian Conference on Sanitation (SACOSAN). This makes it essential for India to make sincere efforts to ensure that "the special sanitation needs of women (e.g. menstrual hygiene

management) will be integrated in planning, implementation, monitoring and measurement of program outcomes.” (The Delhi Declaration, SACOSAN-III 2008) It is also quite evident that effective management of menstrual hygiene will lead to fulfillment of Millennium Development Goals (MDG). It will contribute directly to MDG-7 which is on environmental sustainability. Additionally, proper facilities of for MHM will lead to less absenteeism in school and gender equality which will eventually lead to realization of MDG-2 on universal education and MDG-3 on gender equality and women empowerment. (Kumari and Sujatha, 2016).

Sowmyaa Bharadwaj and Archana Patkar (2004) rightly pointed out that Menstrual Hygiene Management (MHM) is notably absent from policy debates in both Africa and Asia, resulting in a lack of subsequent investment and action. This neglect is particularly striking and underscores the urgent need to prioritize this issue in policy discussions, translating it into concrete actions. Special attention must be directed towards the materials used during menstruation, educating adolescent girls, and improving the facilities available for effective management and disposal of menstrual waste.

Moreover, despite the link between inadequate sanitation facilities in schools and high absenteeism or drop-out rates, menstrual management remains unaddressed and overlooked. Critical issues such as ensuring privacy, water availability, and raising awareness among boys and men are largely ignored.

The significant gap is the limited effort toward the production and promotion of low-cost sanitary napkins, reusable materials, and research into biodegradable alternatives. The challenges of washing soiled materials and ensuring environment friendly disposal of sanitary napkins are absent from waste management training, infrastructure design, and impact evaluation.

Menstrual management remains a neglected issue across all aspects of research and development. (Bharadwaj and Patkar, 2004)

In the context of poor resources, women do not have access to basic facilities of water, bathroom and privacy, so the standard of hygiene cannot be maintained. Improvement of housing conditions with proper basic facilities and encouraging wide use of sanitary pads with affordable prices (social marketing) can improve the hygienic practices.

This study reveals that menstrual hygiene is not satisfactory among a large proportion of the adolescents and also ignorance, false perceptions, unsafe practices regarding menstruation and unwillingness of the mother to enlighten her child are also quite common factors responsible for this.

Poor genital hygiene practices significantly affects adolescents' health. Most girls are unaware and unprepared for menarche as they are not informed properly about menstruation. (Kaur et al, 2018)

Proper menstrual hygiene and accurate perceptions can prevent much suffering associated with menstruation. To bring about a change in menstrual hygiene practices, girls need to be educated about the facts and significance of menstruation, its physiological implications, the development of secondary sexual characteristics, and most importantly, proper hygienic practices, including the safe disposal of menstrual absorbents.

In this regard, incorporating compulsory sex education into the school curriculum, complemented by media campaigns and guidance from informed parents, can help dispel age-old misconceptions. This would enable girls to discuss menstrual matters and adopt cleaner practices without hesitation.

Furthermore, it is crucial to educate all mothers, regardless of their educational background, to empower them to address their daughters' concerns about menstruation and break societal inhibitions well before the onset of menarche.

The primary reason for the challenges faced by the participants was the lack of prior information about

menstruation. Friends and female relatives, such as married sisters, were the main sources of information and discussions about this "secret" topic. However, very few mothers were reported to have openly discussed menstruation and its related issues with their daughters. (Tabassum et al, 2015)

Menstrual disorders can vary widely, ranging from heavy, painful periods to the complete absence of menstruation. While menstrual patterns differ among individuals, women should seek medical advice if their cycles occur less than 21 days apart, more than three months apart, or if bleeding lasts longer than 10 days. These irregularities may indicate ovulation issues or other underlying medical conditions.

Dysmenorrhea, or painful menstrual cramps, involves severe, frequent cramping during menstruation. The pain typically occurs in the lower abdomen but may radiate to the lower back and thighs. Dysmenorrhea is categorized as either primary or secondary, depending on its underlying cause.

A) Primary dysmenorrhea. Primary dysmenorrhea is cramping pain caused by menstruation. The cramps occur from contractions in the uterus and are usually more severe during heavy bleeding.

B) Secondary dysmenorrhea. Secondary dysmenorrhea is menstrual-related pain that accompanies another medical or physical condition, such as endometriosis or uterine fibroids. Menorrhagia (Heavy Bleeding) is menstrual flow that lasts longer and is heavier than normal. The bleeding occurs at regular intervals (during periods). It usually lasts more than 7 days and women lose an excessive (more than 80 mL) amount of blood. Menorrhagia is often accompanied by dysmenorrhea because passing large clots can cause painful cramping. Amenorrhea (Absence of Menstruation) Amenorrhea is the absence of menstruation. There are two categories: primary amenorrhea and secondary amenorrhea. These terms refer to the time when menstruation stops:

C) Primary amenorrhea occurs when a girl does not begin to menstruate by age 16. Girls who show no signs of sexual development (breast development and pubic hair) by age 13 should be examined by a doctor. Any girl who does not have her period by age 15 should be examined for primary amenorrhea.

D) Secondary amenorrhea occurs when periods that were previously regular stop for at least 3 months. Oligomenorrhea (Light or Infrequent Menstruation) is a condition in which menstrual cycles are infrequent, greater than 35 days apart. It is very common in early adolescence and does not usually indicate a medical problem. Premenstrual Syndrome (PMS) Premenstrual syndrome (PMS) is a set of physical, emotional, and behavioral symptoms that occur during the last week of the luteal phase (a week before menstruation) in most cycles. The symptoms typically do not start until at least day 13 in the cycle, and resolve within 4 days after bleeding begins. Women may begin to have premenstrual syndrome symptoms at any time during their reproductive years, but it usually occurs when they are in their late 20s to early 40s. Causes of Painful Menstrual Cramps There could be some factors that lead to menstrual cramps. A few of the health conditions that have been known to cause severe menstrual pain and cramps: A) Hormonal imbalance is one of the most common causes for menstrual cramps. The prostaglandins, which are hormone-like substances, trigger off contractions in the uterine muscles, which also leads to pain. The higher the level of prostaglandin, the more severe the menstrual cramps are likely to be occurred B) Pelvic Inflammatory Disease (PID), which is a disease or rather an infection, affecting the female reproductive organs. PID is one of the most serious complications of a sexually transmitted disease in women: It can lead to irreversible damage to the uterus, ovaries, fallopian tubes, or other parts of the female reproductive system, and is the cause of cramps and also primary preventable cause of infertility in women. (Begum et al, 2016)

Research indicates that the menstrual hygiene practices coupled with poor knowledge is responsible for a significant proportion of school absenteeism, seclusion from social activities, illness, infection

associated with female reproductive health. (Kumari and Sujatha, 2016)

Products that can be used during menstruation:

- a) Menstrual cloth- Cloths are reusable pieces of fabric which is worn externally to the body, in underwear or tied to the waist to absorb menstrual flow. They are made from either newly purchased pieces of fabric (mostly cotton) or old fabric repurposed from clothing or another use. There is no guidance on how long cloths can be reused, but it is generally agreed that this should be for no longer than 1 year. They are consumables and require regular assessment, supply, availability and affordability.
- b) Reusable Pad- Reusable pads are worn externally to the body in the underwear, to absorb menstrual flow and held in place usually by snaps. They are made from a variety of natural or synthetic materials. After use, they are washed, dried and re-used for approximately one year.
- c) Disposable sanitary Pad- Disposable pads are worn externally to the body in the underwear to absorb menstrual flow. They are disposed of.
- d) Tampons – Tampons are absorbent products made from cotton and/or rayon, designed to be inserted into the vagina to absorb menstrual flow. They expand upon contact with moisture, effectively preventing leakage. Tampons can be worn for up to 8 hours, after which they should be removed using the attached string and disposed of properly.
- e) Menstrual cups – Menstrual cups are non-absorbent, bell-shaped devices made from medical-grade silicone, inserted into the vagina to collect menstrual flow. They create a seal and are held in place by the vaginal walls. Menstrual cups can hold up to three times more blood than pads or tampons and need to be emptied every 6-12 hours, depending on flow. After emptying, the cup should be rinsed and reinserted if facilities allow. Reusable for 5-10 years, menstrual cups are also an environmentally friendly option. (UNICEF, 2019).

The plastic used in sanitary napkins is not only harmful to health but also has significant environmental consequences. The toxic chemicals in disposable sanitary napkins can be absorbed by the vaginal and labial walls, as the skin in these areas is highly absorbent. Additionally, being non-biodegradable, soiled napkins remain in landfills for up to 800 years.

Furthermore, while the WHO recommends incinerating sanitary waste at temperatures above 800 degrees Celsius, India lacks proper mechanisms to monitor emissions from incinerators, leading to potential environmental hazards. (Hindustan Times)

Healthy habits that should be followed during menstruation in order to maintain proper hygiene.

- a) The genital area must be washed with plain water after using toilet.
- b) Any type of cleaning agent like soap or deodorant must not be used inside the vagina.
- c) Sanitary napkins must be changed at least once in 6 hours or more often if needed to prevent the leak. Wearing sanitary napkins for longer hours leads to conditions like urinary tract infection, vaginal infections and skin rashes.
- d) It is also necessary to wear clean undergarments and change them regularly.
- e) Taking shower at least once a day is also essential.
- f) The used sanitary napkins must be disposed properly. It is important to wrap the used sanitary napkin in the newspaper or waste paper and throw it in the garbage bin. It is also good if the bin have a lid, so that the foul smell can be prevented from spreading and it also helps to prevent the spread of diseases by flies or other insects. Used sanitary napkins should never be flushed down the toilet as it can clog the drainage and is also unhygienic. Sometimes an outer wrap is also available. In that case,

while disposing the soiled napkin must be wrapped in it and disposed of properly. Also Sanitary napkins should not be mixed with wet household garbage.

g) Washing hands after changing or disposing sanitary napkin is essential. (Gupta and Paul, 2018)

Myths and Taboos

There are various myths and misconceptions in Indian society regarding menstruation (Gupta and Paul, 2014). Some of the most common myths and taboos identified (Moon Time, 2018) are as follows:

i) Menstruating girls are considered to be cursed or sick.

This belief dates back to a time when the underlying causes of premenstrual syndrome (PMS) and hormonal changes during menstruation were not understood. Consequently, any physical, emotional, or behavioral changes were often attributed to the influence of evil spirits. However, it is now scientifically established that the menstrual cycle is governed by hormones, which cause a variety of physical sensations and emotional shifts that can occur in the days leading up to menstruation and sometimes during the first few days of menstrual flow.

ii) It is believed that eating pickles or spicy/sour foods worsens menstrual cramps.

In reality there is no connection between eating such food and menstrual cramps.

iii) It is also considered that during menstruation girls should not offer prayers, take part in religious ceremonies, should not touch sacred objects or enter a place of worship.

Such belief may have been developed due to unawareness of menstrual hygiene and development of advanced products like sanitary napkins or menstrual cups. All these were not available. Since, there was no solution myths and misconceptions developed as a result. But, to eradicate such belief, it is essential to understand that girls are not impure during periods as it happens due to a natural occurring biological process.

iv) It is a belief that after menarche any kind of physical contact with a boy can get result in the girl being pregnant.

This is a myth because according to science, a woman cannot get pregnant because of a mere physical contact like touching, hugging or kissing, but only because of unprotected sexual intercourse.

v) In some cultures, menstruating women are not allowed to enter kitchen or cook. They are not even allowed to touch pickles or stored food. This belief has been also originated from the conception that menstruating women are impure. But if proper hygienic care is taken there is no difficulty for them in touching anything in kitchen and even preparing food. Any contact with men is forbidden because it can make men sick.

This belief is also not correct because menstruation is a biological process and it cannot make anyone sick just by any contact.

vi) It is also taught that menstruating girls or women must not wash their hair or take bath.

This belief comes from earlier days when people used to take bath in lakes, rivers and ponds or in any water body. But now this is not proper as people can bathe in the privacy of their own bathroom. Even during a menstruating woman can use swimming tampons and menstrual cups.

vii) One should not do exercise or strenuous activities while menstruating.

It is to be noted that menstruation is not a physical disability. Rather It has even been proved that doing regular exercise can even decrease painful menstrual cramps. Only in cases of excessive bleeding or any other physical discomfort, medical help can be sorted easily. (Bora, 2018).

Research Design

The present study is descriptive in nature, employing a descriptive research design. The study describes various social phenomena, including social events, systems, and structures. It particularly explores the socio-economic background of the respondents, their hygiene practices, and the myths and taboos associated with menstruation among adolescents in the city of North 24 Parganas District.

The study adopts the both qualitative and quantitative research approach, utilizing statistical analysis and quantitative measurements to assess the findings. This approach is particularly suitable for understanding the phenomena that can be expressed both ways through the describing the situation and with the help of numerical terms, ensuring accuracy and reliability in the analysis.

Selection of Sample

Sampling refers to the process of selecting a subset from a larger population to represent the entire group. Non-probability sampling is a technique in which not all individuals in the population have an equal chance of being selected. This study employs purposive sampling, a type of non-probability sampling where participants are deliberately chosen based on their relevance and suitability to the research topic.

The sample size for this research consists of 100 respondents, all of whom are adolescent school girls aged 12 to 17 years.

In this study, the units of analysis are the same as the units of observation. In social research, the units of analysis refer to the primary entities being studied, whether individuals, groups, or organizations. Here, the units of analysis are adolescent school girls (ages 12 to 17) from North 24 Parganas.

Tools for Data Collection:

The tools for data collection used by the researcher are both the interview schedule and the questionnaire. Face to face interview was taken and also questionnaire schedule was distributed among the adolescents to collect the detail data for this study. To some extent the face-to-face interview played the major role to understand the in-depth knowledge regarding the researcher data.

Objectives of the study

The main objective of the present study is to understand the socio-economic background of the respondents, their hygiene practices, myths and taboos associated with menstruation among the adolescent school girls of Kolkata. (Between age 12 to 17).

Specific Objectives

1. To understand the socio-cultural and economic background of the respondents.
2. To study the practices of menstrual hygiene among the respondents.
3. To understand the myths and taboos regarding menstruation.

Data Analysis and Interpretation:

The entire analysis has been done in three parts in the following sections. Firstly to understand socio-economic background, which forms the basis of concept and practice of menstrual hygiene, secondly to observe variation of practices among the respondents and thirdly to gain an insight into the concept of the respondents regarding different myths and taboos about menstruation within the set of respondents considered in this study. This may help gain an insight into the concept of different aspects on

menstruation existing in the respondents belonging to a particular socio-economic standard of the society prevailing in West Bengal, India.

Socio-economic Background of the respondents

Socio-economic background of the respondents has been studied in respect of age, educational status, religion, parents' income, profession of their parents and the like, which are the relevant parameters influencing the background.

Age and Educational Qualification of the Respondents

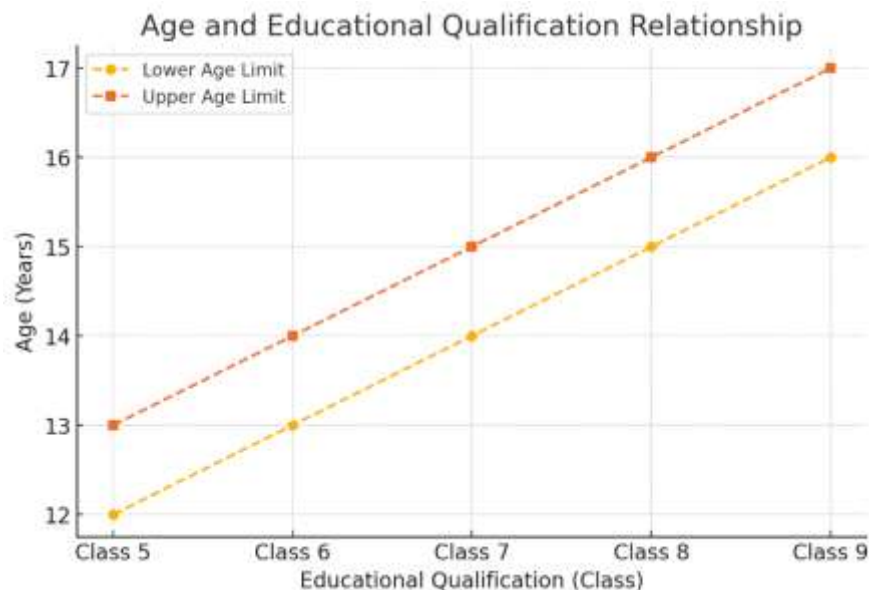


Figure No. 1 Age and Educational Qualification

The above line graph visualizes the relationship between educational qualification (Class 5–9) and the corresponding age range (12–17 years). It is noted that the age range increases consistently with each class, indicating a standard academic progression. Students typically grow one year older as they advance from Class 5 to Class 9.

The upper limit of one class overlaps slightly with the lower limit of the next. This suggests flexibility in enrollment, where students may be younger or older depending on their academic performance and personal circumstances.

By Class 9, students are generally 16 years or older, which is a crucial stage in education, often linked to dropout risks due to socio-economic challenges.

Religion : People often act according to their religion, performing both good and bad deeds in its name. The majority of Indian families follow one religion or another, and religious myths and taboos are deeply ingrained in many of them. Myths surrounding menstruation, in particular, are largely influenced by the religious practices and customs of Hindu families.

Religion of the Respondents

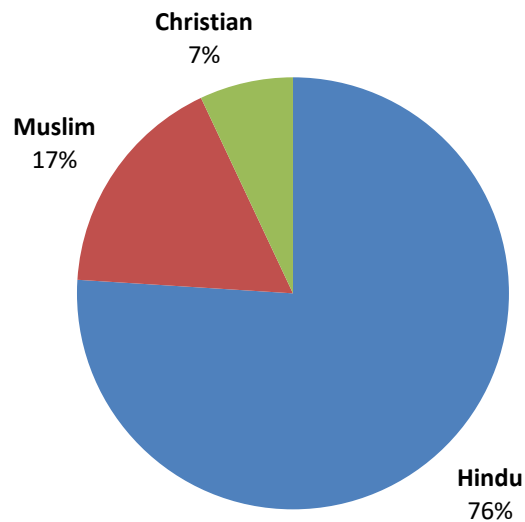


Fig. No.2 Distribution of religion

It is observed from the figure no.2 that majority number of respondents i.e. 76% belong to Hinduism, whereas 17% are the Muslims and only 7% are Christians. There are no other religious groups are being noticed. It is therefore seen that this study reflects on the myths of various cultural practices adopted by the Hindus predominantly.

Family Income:

The family income of the respondents is being analyzed in order to understand the respondents 'economic background and its relation to maintain hygienic living habit.

Monthly Income of the Family

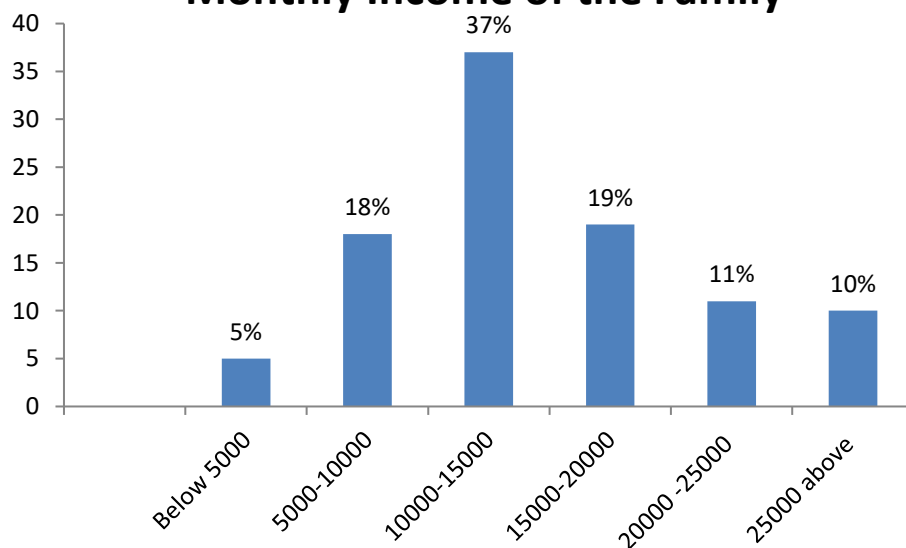


Fig. No. 3 Monthly Income of the family

It is observed from the above figure no.3 that the maximum monthly income of the family is between Rs

10000-Rs.15000 i.e. 37 percent respondents have answered with the consent from their parents. It is identified that only 19 percent respondents' estimates that their monthly income of their family is Rs. 15,000 to 20,000 and only 10 percent respondents said that their family income is above 25000 per month. Still there are families who earn below Rs.5000 per month as their income for their survival.

The above figure clearly indicates that the majority of respondents come from low-income families. As a result, they are unable to ask their parents for additional money to purchase essential materials for their health needs, including maintaining proper menstrual hygiene.

Personal interviews revealed that a few students receive financial assistance from school teachers and social contacts to purchase books and cover minimal annual school fees. However, it is evident that they do not receive any additional financial support for personal health needs, particularly for purchasing sanitary napkins during menstruation.

Menstrual hygiene practice among respondents

Age of starting menstruation

Age of menarche reflects the health status of a population. This marks the beginning of sexual maturation and is affected by nutritional status and prevailing environmental conditions. The age of starting menstruation has been studied to find their mean age during menarche. The distribution of the age of starting menstruation among the respondents has been presented below.

Age of Menstruation Onset

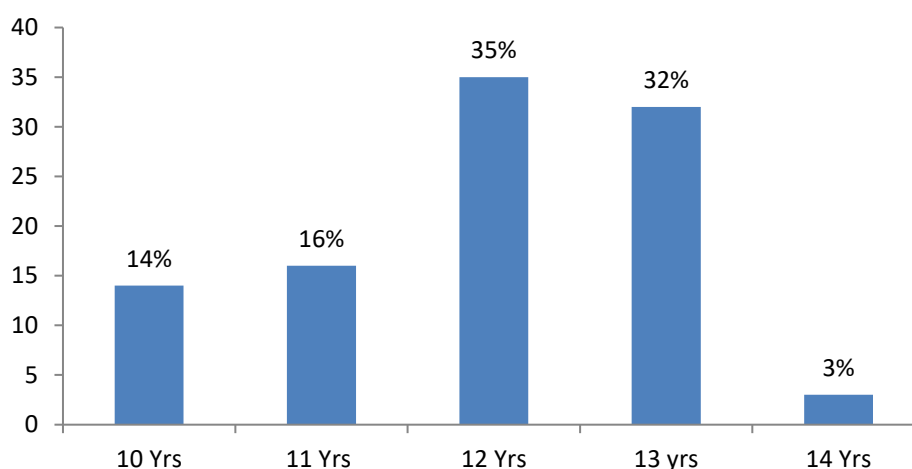


Fig. No. 4 Distribution of Age at Menstruation Onset

It is observed from the above figure no. 4 that the age of starting menstruation is 10 years for 14%; 11years for 16%; 12 years for 35%; 13 years for 32% and only 3% respondents said that their menstruation started only at the age of 14 yrs. Hence, it may be noted that majority of the respondents experienced menstruation at an age of 12 years to 13 years. The weighted average age of starting of menstruation works out to 12 years.

Furthermore, respondents were found to be very shy about sharing information regarding menstrual health. Even within same-gender groups, many hesitated to discuss the topic. Several girls revealed that they preferred not to disclose their experiences, fearing they might be perceived as older than their peers

in class or, conversely, as too young within their family. This reluctance reflects their hesitation or psychological unpreparedness to accept the physical changes associated with puberty.

Knowledge of Puberty Before Menstruation

Researches have proved that the knowledge gap, misconceptions and low level of awareness regarding menstruation results unpreparedness which leads to fear and anxiety. The Knowledge of the respondents about puberty prior to menstruation has been studied to gain an idea about their awareness in respect of menstruation when they are going to encounter it in their lives. The distribution of having the awareness and not having it has been plotted in the form of a bar chart below.

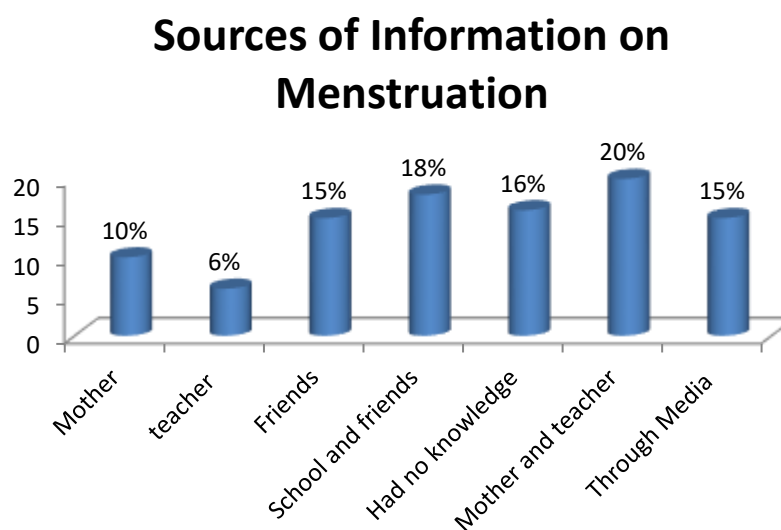


Fig. No. 5 Sources of Information on Menstruation

It is observed from the above figure no.6 that while being asked about the sources to get information regarding menstruation, the total 20 percent respondents said their sources are mother and teacher. Still the 16 percent school girls answered that they had no knowledge about menstruation. Altogether 15 percent school students said that they got the information through different mediums of media like T.V, Movies, Phone etc. Only 18 percent respondents agreed that school friends are their main source of information.

Feelings of the girls on their first menstruation

The first experience of menstruation among the respondents has been studied to gain an idea about their reaction when they came across it first time in their lives.. The distribution of their feeling has been plotted in the form of a bar chart.

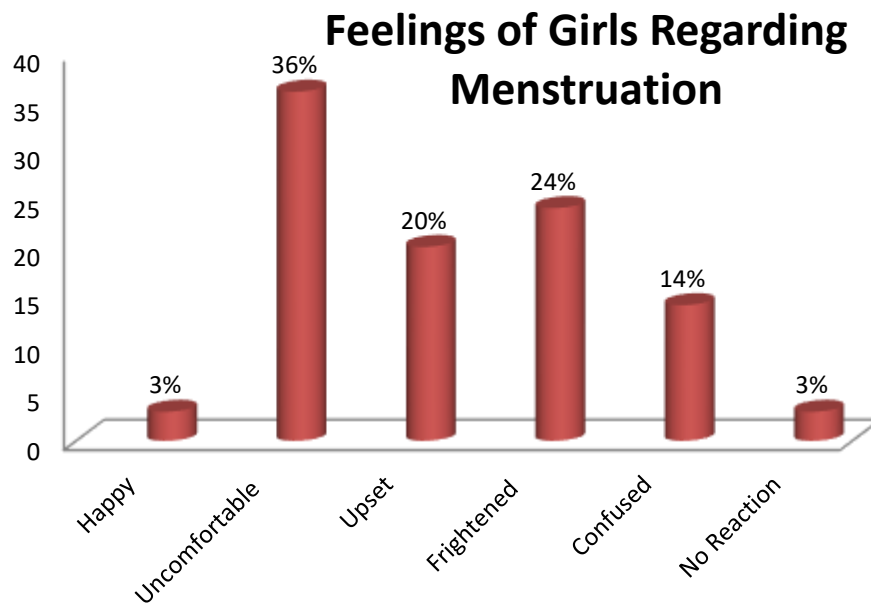


Fig. No 6 Feelings of Girls Regarding Menstruation

It is observed from the figure that 36% of the respondents expressed their uncomfortable when they first experienced menstruation whereas 24% got frightened, 20% were upset and 14% were confused only 3% felt happy and 3% had no reaction. Further analysis has been done to investigate reasons for feeling confused.

Product used during menstruation

The product used by the respondents during menstruation, as absorbents, has been studied to gain an idea about their sense of menstrual hygiene. The distribution of the products, used by the respondents is being highlighted in the given Fig. No 7. below.

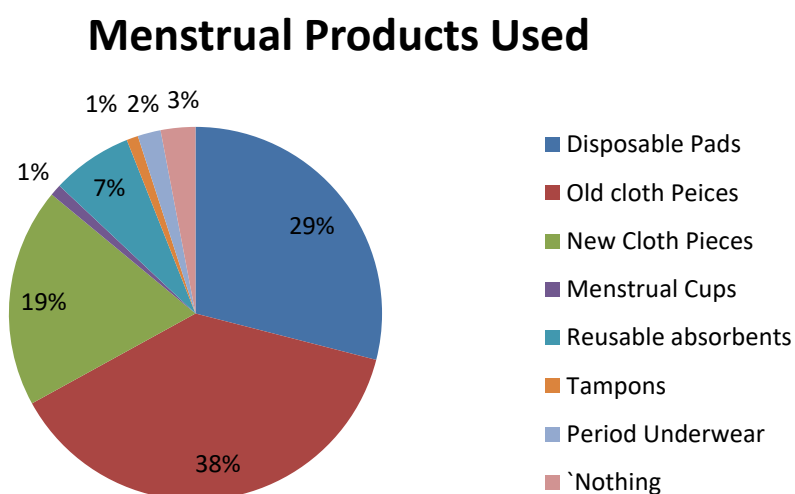


Fig. No. 7 Distribution of Menstrual Products Used

It is observed from the above figure that 29% of the respondents used sanitary napkins i.e disposable

pads, because girls are well aware about the products which are advertised through various media. It is also noted that still 38% of the respondents are using old clothes, which has been an age-old practice among the women from both rural and urban families, the reason can be both the high cost of sanitary napkin or those who are unaware of their hygiene. 19% use new cloth as sanitary napkins 7% use reusable absorbents and very few respondents are aware about tampons, period underwear, menstrual cup and still there are girls who are not using anything except their underwear. Due to very less flow some of the respondents said that they are not using anything other than their thick underwear. It is known that most of the respondents do not know the hygienic reasons for using sanitary napkin and uses it only because they are taught to.

The data also indicates that most respondents are aware of the various menstrual products and resources available, primarily due to media exposure and their urban environment. However, financial constraints remain a significant barrier to accessing these resources comfortably.

The economic divide between the haves and have-nots continues to widen. Despite the implementation of policies aimed at improving the well-being of grassroots communities, long-standing socio-economic challenges persist, even in urban areas.

Personal hygiene

Personal hygiene of the respondents are being analyzed to study their personal hygiene practices. There were several questions were framed about their habit or frequency of washing their genitalia, and the products they use for cleaning or washing their hand and genitalia etc.

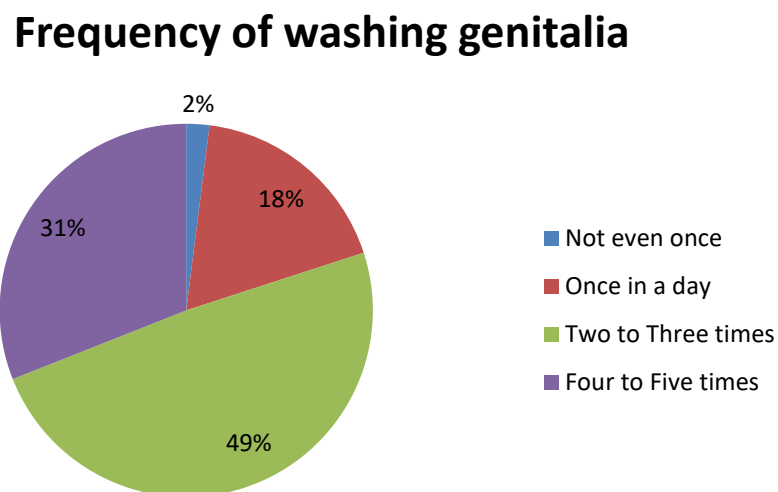


Fig. No 8 Frequency of washing genitalia

From the above figure it is observed that 49% respondents have the habit to wash their genitalia two to three times in a day during menstruation time. Altogether 31% respondents said that they wash their genitalia four to five times in a day during menstruation time, and 18% respondents said they clean only once in a day and 2% respondents said that they don't even get time to clean at all in a day.

The above figure also reveals that most girls do not attend school during menstruation due to a lack of privacy and inadequate water availability. Additionally, individual responses varied when asked separately. The key observation is that while most girls stay at home during menstruation, they often pay

little attention to maintaining proper hygiene even in their own homes.

Product used to clean genitalia

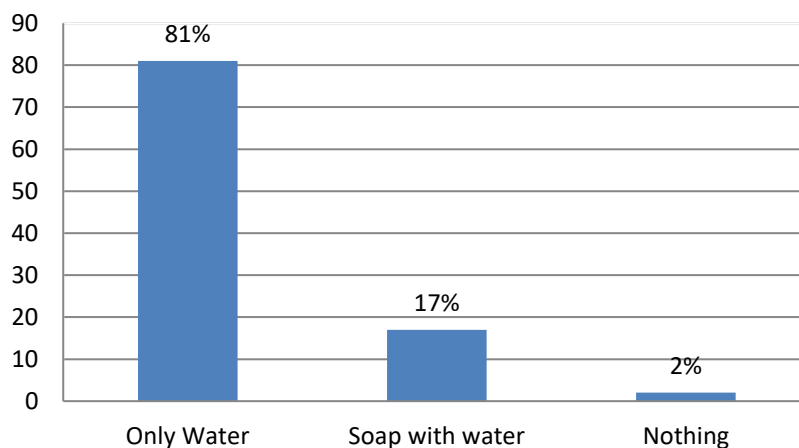


Fig. No. 9 Product used to clean genitalia

Most of the respondents i.e 81% said that they clean or wash their genitalia only using water. Altogether 17% respondents said they use soap to clean their genitalia during menstruation time. There are some respondents that they don't use neither water nor soap to clean their genitalia, It is noted that they only change their underwear or sanitary napkins if it is required during daytime. From the above figure it is clear that most of the students don't get that facility to use soap to clean their genitalia in the school whereas they get water. Some of the respondents said that they don't clean as they feel discomfort to clean themselves in the school.

It is therefore understood that germs and genital infections are prevalent among many school-going girls, as they disclosed experiencing discomfort and rashes in their private areas during personal interviews.

Interval of changing menstrual absorbents

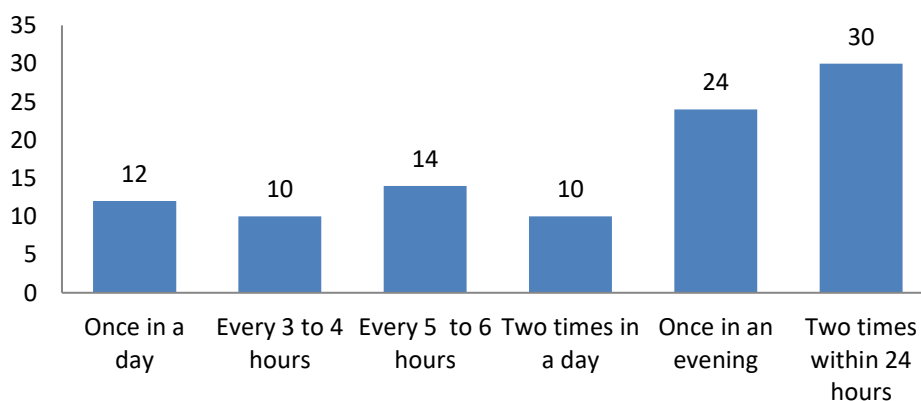


Fig. No.10 Interval of changing menstrual absorbents

From the above figure it is clear that 30% respondents have the habit to change their sanitary napkins at least twice within 24 hours. Altogether 24 % respondents said that they change only once in the evening. 14% respondents said that they have a habit to change frequently i.e. every 5 to 6 hours gap they change their sanitary napkins during their menstrual time. The other 10% respondents said two times and every 3 to 4 hours gap they keep changing their sanitary napkins. 12 % respondents said that they have the habit to change the sanitary napkins only once is a day during menstruating time. Although this should depend from person to person according to quantity of bleeding, but health experts recommend an interval of 6 hours. In respect of this guideline it may be said that only 14% of the respondents have proper hygienic sense.

Proper Disposal System:

Educating students about proper disposal system or waste management is crucial, especially concerning menstrual hygiene products. As per government policies and regulations, waste management is an integral part of the school curriculum. However, beyond theoretical knowledge, students should be made aware of safe and hygienic disposal practices, particularly for sanitary products, to prevent environmental pollution and health hazards.

Many students, especially in low-income communities, lack awareness of proper disposal methods, leading to issues such as improper disposal in open spaces, flushing pads down toilets, or burning waste materials, all of which contribute to environmental and sanitation concerns. Schools must implement structured awareness programs, install sanitary bins, and promote eco-friendly disposal solutions to ensure responsible waste management practices among students.

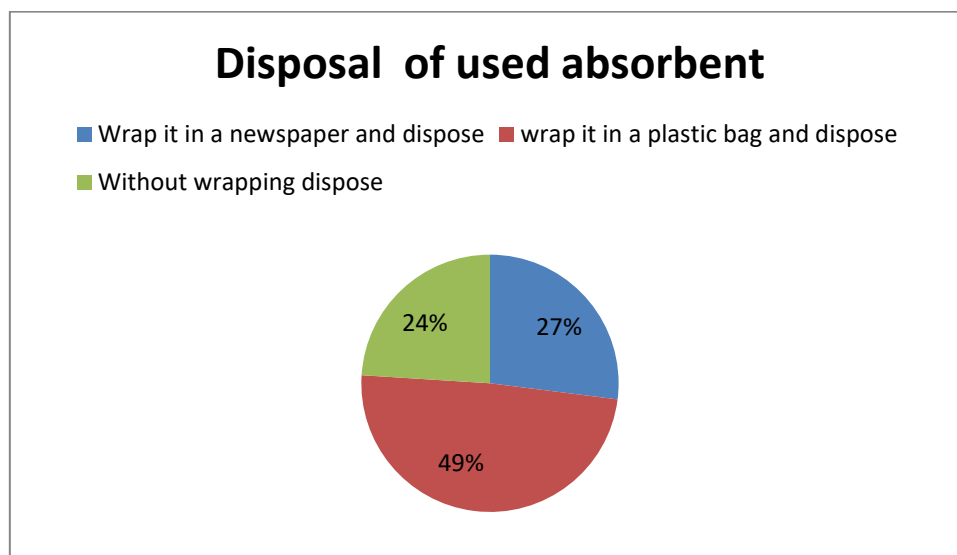


Fig No. 11 Distribution of disposal of used absorbents

From the above figure it is clear that majority of the respondents 49% have the habit to wrap the used absorbents in a plastic bag and dispose. 27 % respondents have the habit to wrap it in the newspaper and dispose of, and only 24 % respondents have the habit to throw as it is used.

It has been observed that among low-income community members, plastic bags are more readily available than newspapers. Personal interviews revealed that most household consumable products come in plastic packaging, making plastic bags an easily accessible and discreet option for disposal. As a

result, many prefer using plastic bags for waste disposal, prioritizing convenience and privacy over proper waste management.

However, there is little awareness or concern about the environmental impact of plastic waste, including its harmful effects on animals and public spaces when improperly discarded. The emphasis on hiding waste rather than following a proper disposal system highlights the need for increased education on sustainable waste management practices in these communities.

Sanitation facility

In order to study sanitation facility at home and school of the respondents, they were asked about those facilities which are available to them at home and about cleanliness of school toilets. This was required to understand how, in spite of awareness of hygiene, the respondents can get the facilities to practice the hygienic way.

Place of disposal of used absorbent

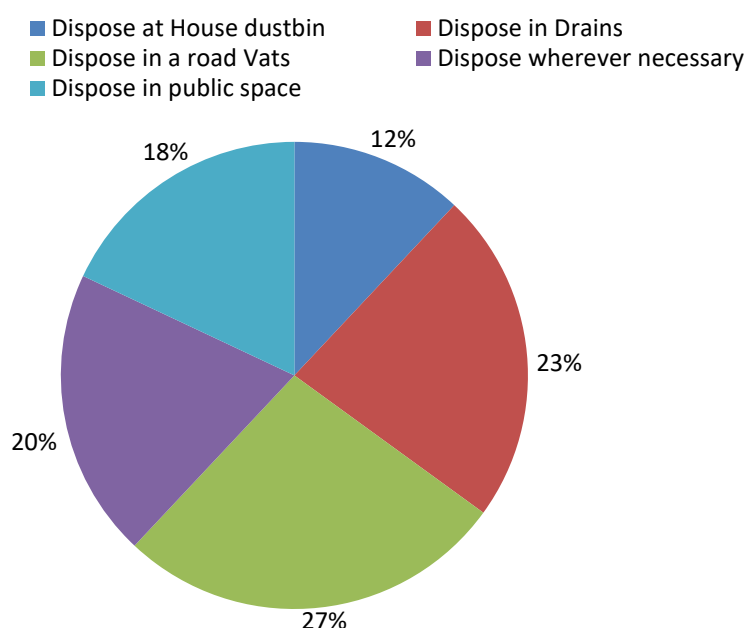


Fig. No.12 Disposal system of used absorbent

The above figure shows that, 27% of the respondents said that they have the habits to dispose the used absorbent in a road vats, 23% respondents dispose their used absorbent in drains. Altogether 20% respondents dispose wherever necessary and 18% respondents said that they dispose in public space. The rest 12% respondents said that they dispose at house dustbin only. Although degree of cleanliness depends on the nature of a particular person. However, it is seen that majority reported that their school sanitation facility need to be clean.

Physical Discomfort During menstruation

In many women physical discomforts occur during menstruation, which comes in the form of excessive

bleeding, abdominal pain, and back pain, bleeding with clots, nausea, and giddiness, and drowsiness, weakness in body and mood disturbances. Those discomforts may affect the quality of life. Hence this aspect was studied among the respondents. The distribution of different physical discomforts has been highlighted through Figure No. 14 below.

Physical discomfort during the time of menstruation

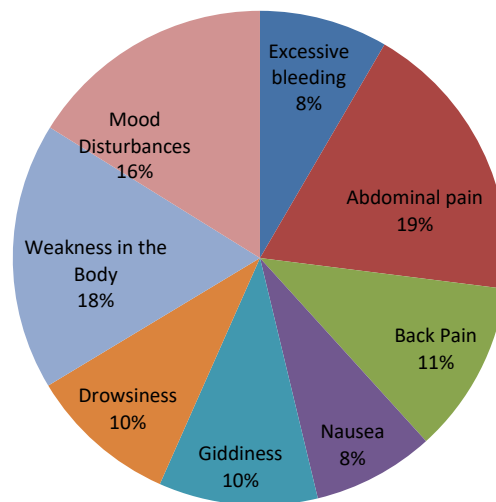


Fig No. 13 Distribution of physical discomfort during menstruation

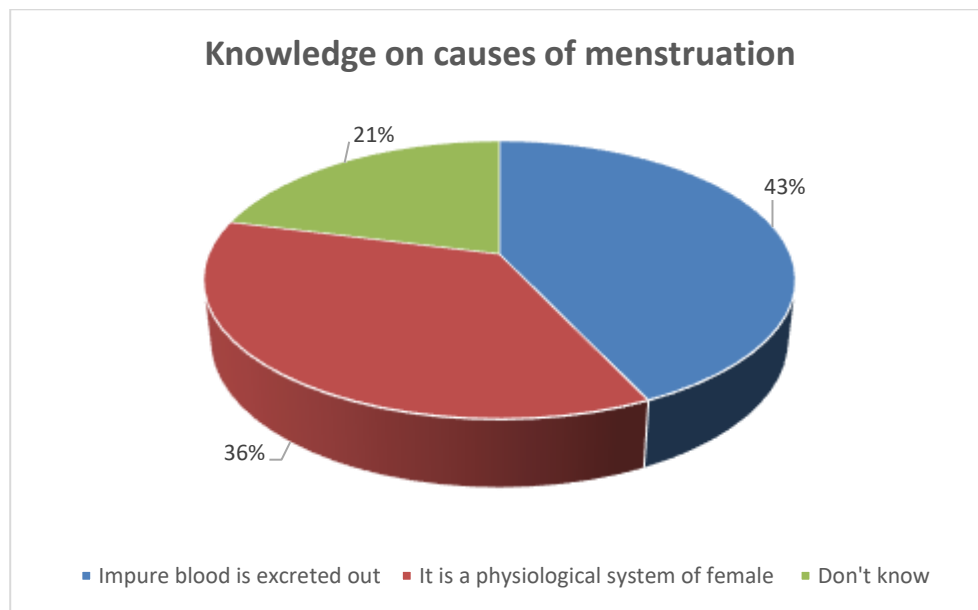
From the above figure, it appears that 8% of the respondents experience excessive bleeding during menstruation. Majority 19% respondents feel abdominal pain and 18 % respondents feel weakness in the body, 16 % respondents feel mood disturbances 11 % respondents said that they go through bad back pain 10% drowsiness 10% giddiness and 8% respondents expressed that they get the feeling of nausea during menstruating time.

Knowledge on causes behind Menstruation

The subject of menstruation is often surrounded by secrecy, and many girls are not informed about the bodily changes they experience during puberty or the reasons for menstruation. Educating girls about menstruation enhances their self-esteem, awareness, and helps break the cycle of misinformation passed through generations.

Menstruation is a biological process. During puberty, hormones released by the pituitary gland stimulate the ovaries to mature and release an egg, a process called ovulation. Each month, one ovary releases an egg, which travels through the fallopian tube to the uterus. Meanwhile, a thick lining of blood and tissue (endometrium) forms in the uterus to support a potential pregnancy. If fertilization does not occur, this lining, along with the unfertilized egg, is shed through the vagina as menstruation.

The respondents' knowledge about menstruation and their understanding of its causes were explored, as shown in Fig. No. 14 below.



Knowledge on Reasons for Menstruation

It appears from the above figure that 43% of the respondents said that impure blood is excreted out from the body, 36% respondents said that it is the physiological system of female and 21% respondents said that they do not know anything about the reasons behind menstruation. It is therefore seen that none of the respondents were aware of the actual reason of menstruation but only a small section had a vague understanding about it and could relate it to childbirth.

The Myths and Taboos

The myths associated with menstruation are generally rooted in some ideas. This leads to keeping the women or girls away from active participation in certain social and cultural ceremonies during menstruation, although this may differ religion wise to some extent. In the given Fig. No. 15 below the distribution of opinion of the respondents regarding these myths and taboos are being highlighted.

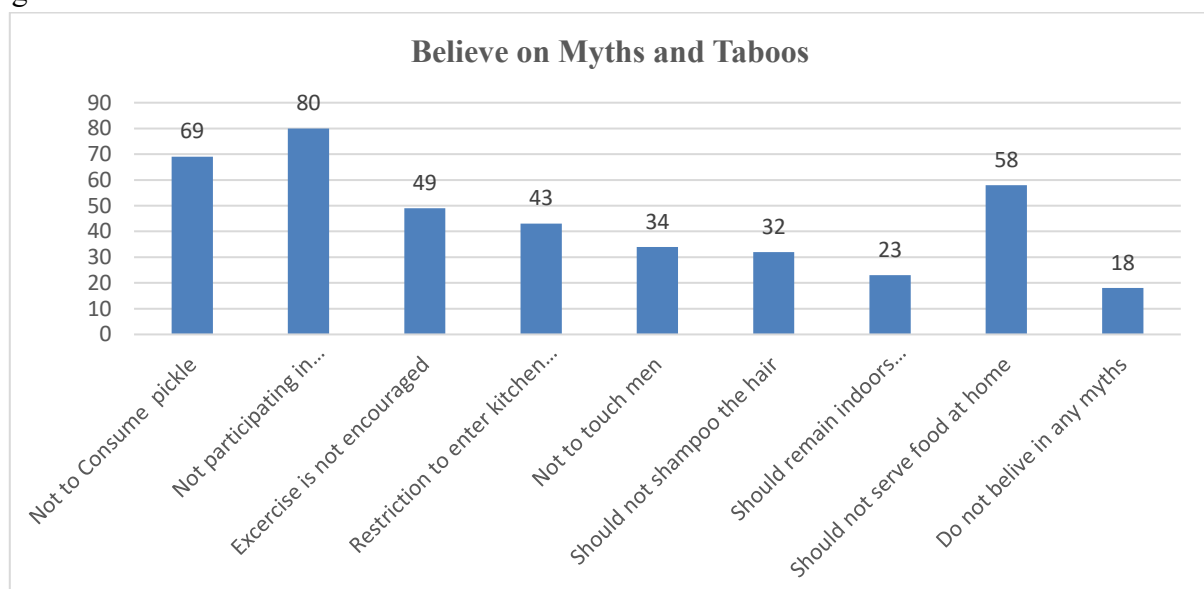


Fig. No.15 Believe on Myths and Taboos

Distribution of the opinion of the respondents on myths and taboos regarding menstruation.

According to the data, 69% of respondents believe that eating pickles can increase menstrual cramps and lead to other problems. Additionally, 80% strongly agreed that menstruating women should not attend prayers, participate in religious ceremonies, touch sacred objects, or enter places of worship. Around 49% of respondents strongly agreed that women should avoid exercising, practicing yoga, or engaging in strenuous activities during menstruation.

Furthermore, 43% strongly believed that menstruating women should not enter the kitchen or cook. About 34% strongly agreed with the notion that menstruating women should not touch men. Meanwhile, 58% of respondents believed that women should not serve food to elders, upper-caste individuals, or priests performing religious rituals.

Only 18% of respondents reported that they do not believe in any myths or taboos related to menstruation. However, 32% believed that girls should not shampoo their hair during menstruation, and 23% felt that menstruating women are impure and should remain indoors.

Conclusions

The menstrual knowledge and perceptions among the teenage girls are poor and unsatisfactory. The practices often are not optimal for proper hygiene neither are they environment friendly. The physical discomfort felt by the respondents are not abnormal or serious a medical intervention is needed as it is difficult to conclude whether the girls are suffering from anemia or some other health issues. Schools, home, and society at large need to make an effort towards making menstrual hygiene and management better for the adolescence. In this modern era there are still many adolescent girls are observed that they strongly believed in social myths and taboos and follow what they listen from their mentors or guardians. Both the Girls and boys should be educated so that they understand the normal biology of the menstruation and that is not a shame. Social belief system, myths and taboos, practices, regarding menstruation should be eradicated with strong school curriculum and awareness programs in the schools. In order to combat this dissemination of knowledge about menstruation and the secondary sexual characteristics with the psychological changes during adolescence can significantly help them to come up with the situation that girls face at this time. Sometimes physical discomfort during menstruation needs medical intervention, if needed. This should be taken care of by guardians and seniors. Awareness should be made about the prevalent myths and taboos related to menstruation, which are not scientific and are followed as a part of socio-cultural practice. Therefore, education policy should be framed not only to impart sex education but also to arrange the necessary sanitary facilities in the school also as mandatory.

A majority of participants reported experiencing symptoms such as stomach aches, nausea, leg pain, loss of appetite, and headaches during menstruation. The sample group was socially and culturally bound by traditional practices surrounding menstruation, which were followed across generations with little questioning.

The study concluded that educating adolescents about menstruation can help safeguard them against infections and diseases, thereby promoting a healthier life. The findings of this study can inform program planning and policy development to improve awareness and knowledge about menstruation. Notably, friends were the most common source of menstrual information, while relatively few mothers engaged in open discussions about this essential aspect of life.

It was observed that certain practices were believed and followed across several generations. Many

social and religious restrictions were imposed on girls during menstruation, and these were passed down through mothers, elder sisters, and friends. These restrictions included prohibitions on visiting religious places, offering prayers, and observing fasts (Roza), as reported by all the girls in the study.

Additionally, various taboos and myths were prevalent. For instance, girls avoided going near water due to the belief that the reflection of water could disrupt their regular menstrual cycle. Activities such as looking into mirrors, taking regular baths, and visiting others' homes were also prohibited. All the girls reported adhering to these cultural prescriptions and prohibitions without questioning them.

Among Gujjar girls—a semi-nomadic tribal group in Jammu and Kashmir—there was a common belief that menstruation removes "bad blood" from the body, helping to eradicate infections. (Dhingra et al., 2009)

Research results of the study focused on females with no diagnosed with any pelvic pathology so primary dysmenorrhea was more concern and they found out that every single participant reported menstrual symptoms associated with PMS and dysmenorrhea that clearly indicate the high prevalence rate of PMS and dysmenorrhea among reproductive age females. Females reported with activities (like walking, sitting, standing for long and weight lifting) exert pressure enhancing their pain to get more worse to meet their routine professional and interpersonal activities. Thus significant correlation between physical stress with dysmenorrheal distress is established. Menstrual discomforts itself act as a recurrent chronic stress eventually can develop physical stress by disturbing the homeostasis with varying intensities. As the data establish a positive connection between the chronic negative stressors (dysmenorrhea and PMS) with physical stress as all pain perceiving females reported with quite a number of physical stress symptoms with high frequencies and varying intensities during their menstrual cycle. Representing the fact that dysmenorrhea and PMS symptoms can successfully establish symptoms associated with physical stress along with different physiological mechanisms.

Like fatigue which is commonly associated condition in females with HMB (heavy menstrual bleeding) and iron deficiency is one of the physical stress symptoms, as most highly reported by many females of the total population. Females can get more worsen episodes of these physical stress symptoms may lead to develop more severe physical stress. The study compliments the statement that menstrual stressors (dysmenorrhea & PMS) chronic, self-limiting, recurrent event leading to distress and having a negative impact on quality of life producing hurdles in personal and professional performances reported by a large number of females experiencing severe type of pain which reflect on their work abilities and root cause of high absenteeism rate with a sizeable proportion of population reported that they decrease their social activities due to pain. Our study demonstrate a very high prevalence rate of PMS and dysmenorrhea among reproductive age females as a significant proportion of population evaluated with characterizing symptoms of PMS and dysmenorrhea. They concluded that dysmenorrhea is a common condition affecting mostly females and that is a reason of pain related exhaustion, fatigue, mood fluctuations, anxiety and other discomforts that is leading a body towards stress & more particularly physical stress. They also evaluated that menstrual distress is one of the

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