



Assessing The Awareness Regarding Menstrual Cycle And Menstrual Hygiene Among Adolescents Girls / Women

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ABSTRACT: The menstrual cycle is a vital physiological process regulated by complex hormonal interactions, notably the hypothalamic-pituitary-ovarian (HPO) axis, which governs reproductive health in individuals with female reproductive systems. Despite being a natural biological function, menstruation is still surrounded by social stigma, cultural taboos and a significant lack of awareness, especially among adolescent girls and women in developing countries. Menstrual hygiene management (MHM) plays a critical role in ensuring health, education and dignity; however, challenges such as inadequate access to sanitary products, poor sanitation facilities and insufficient menstrual education persist.

This research aims to assess the level of awareness regarding the menstrual cycle and menstrual hygiene among adolescent girls and women. The objectives include identifying sources of information, understanding menstrual hygiene practices, and evaluating the effectiveness of educational interventions. An observational and randomized survey involving 127 participants aged 10–55 years was conducted using structured questionnaires. Basic statistical tools such as mean, percentage and frequency distribution were employed for data analysis.

The study underscores the urgent need for menstrual health education, improved access to hygiene products and supportive infrastructure in schools and communities. The findings aim to inform policy development

and contribute to breaking the silence around menstruation, thereby empowering girls and women to manage their menstrual health with dignity and confidence.

KEY WORDS: Menstrual Cycle, Menstrual Hygiene, Adolescent Girls, Women's Health, Reproductive Health, Menstrual Hygiene Management (MHM), Hygiene Practices, Awareness, Health Education, Cultural Taboos.

INTRODUCTION:

The menstrual cycle is a monthly process where a woman's body prepares for potential pregnancy, marked by hormonal changes that lead to the shedding of the uterine lining if fertilization doesn't occur. The menstrual cycle is a natural, recurring process in individuals with female reproductive systems, regulated by hormones. It prepares the body for possible pregnancy and typically lasts around 28 days (though cycles between 21–35 days are normal) The menstrual cycle is a fundamental physiological process in individuals with female reproductive systems, playing a crucial role in reproductive health, hormonal balance, and overall wellbeing.(1) It is regulated by a complex interplay of endocrine signals, primarily involving the hypothalamic pituitary ovarian (HPO) axis, which orchestrates cyclic changes in ovarian activity and endometrial function. While menstrual cycle tracking has been practiced for centuries using subjective methods such as calendar tracking and symptom recording, recent advancements in medical technology and biomarker assessment have paved the way for a more precise, quantitative approach. Establishing a gold standard for menstrual cycle monitoring is essential to ensure accuracy, reproducibility, and reliability in both clinical and research settings.

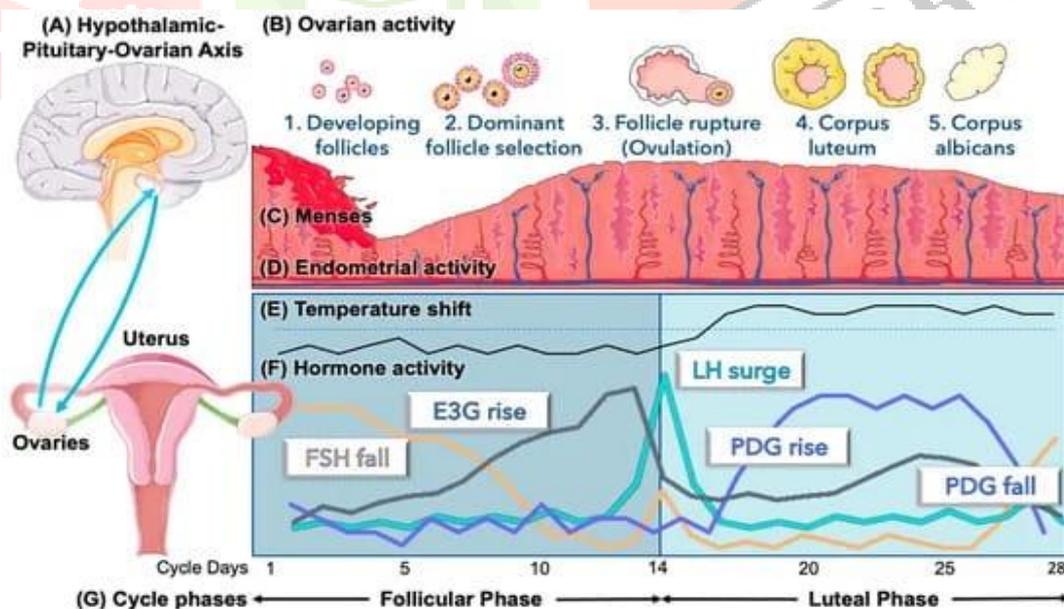


Figure 1. Ovarian-uterine (menstrual) cycle.

What is the Menstrual Cycle?

The menstrual cycle is a series of hormonal changes that occur in a woman's body each month, preparing the uterus for a potential pregnancy.

- It begins with the first day of menstruation (period) and ends with the first day of the next period.
- The average menstrual cycle lasts around 28 days, but can vary from 21 to 35 days.
- The cycle is controlled by hormones, primarily estrogen and progesterone, which are produced by the ovaries and influence the uterus and other reproductive organs. (3)

MENSTRUAL HYGINE the practices of maintaining cleanliness and comfort during menstruation, including using absorbent materials, washing the (4)

Menstrual hygiene is a problem for adolescent girls in several developing countries, particularly when attending schools. Until now, poor menstrual hygiene in developing countries has been an insufficiently acknowledged problem. In several cultures, there are cultural and or religious taboos concerning blood menstruating girls and women. Menstruation is a particularly salient issue because it has a more pronounced effect on the quality and enjoyment of education than do other aspects of puberty. It involves a learning component as well as elements affected by the school environment and infrastructure. These include access to menstrual hygiene materials, latrines and places to change, safe water and sanitation, and good hygiene practices like hand washing with soap. Without these, the school environment is unhealthy, gender discriminatory and inadequate. For girls, puberty means the onset of menstruation. In many contexts, menstruation is considered a private issue, making it difficult to speak about it in public, for instance in a classroom. Many girls are not properly prepared. Numerous studies, particularly from low-income countries, show that a very high number of girls start menstruating without having any idea what is happening to them or why. (6) Since parents can find it difficult to speak of sensitive and sexual issues with their children, even while admitting it is also their responsibility. (7)



Figure. 3 Menstrual Hygiene Product

Importance of Menstrual Hygiene

Menstrual Hygiene Management (MHM) is critical for the health, well-being, education, and dignity of girls and women. Proper MHM includes:

- Using clean menstrual management materials to absorb or collect menstrual blood.
- Having access to private spaces for changing menstrual materials as often as necessary.
- Availability of soap and water for washing the body as required.
- Safe and dignified disposal of used menstrual products.
- Having access to clean menstrual absorbents that can be changed as often as necessary.
- Access to safe and private spaces for changing.
- Availability of soap and water for washing.
- Safe disposal of menstrual materials.(8)

METHODOLOGY:

An Observational and Randomized survey

Estimated Sample Size: 100 Participants

Basic Statistical tools as: Mean, percentage and frequency distribution are proposed to be used in this study.

INCLUSION CRITERIA

- Participants Maintain Awareness and Hygiene In Menstrual Cycle
- Adolescent girls (aged 10–19 years) and women (aged 20–55 years).
- Participants able to understand and respond to the survey questionnaire.

EXCLUSION CRITERIA

- Participant Below age 10
- Participants providing incomplete or inconsistent responses.

EXPERIMENTAL WORK:

Participants data collection form: The Participant Data Collection Form is a structured tool designed to collect relevant demographic and Study Specific Data, Health Related information from individuals participating in the study. The form ensures consistency and completeness of data while maintaining participant confidentiality.

RESULT AND DISCUSSION:

Parameters Analysed for This Study:

- AGE
- EDUCATION
- OCCUPATION
- URBAN/RURAL RESIDENCE
- KNOWLEDGE ABOUT THE MENSTRUAL CYCLE
- SOURCE OF INFORMATION
- TYPE OF ABSORBENTS USED
- FREQUENCY OF CHANGING ABSORBENTS
- EMBARRASSMENT OR SHAME IN DISCUSSING MENSTRUATION

- DISPOSAL METHODS OF MENSTRUAL PRODUCTS
- ACCESS TO CLEAN WATER AND TOILETS
- MENSTRUAL DISORDERS

STUDY POPULATION: 127 Participants with Menstrual Cycle

1. AGE GROUP

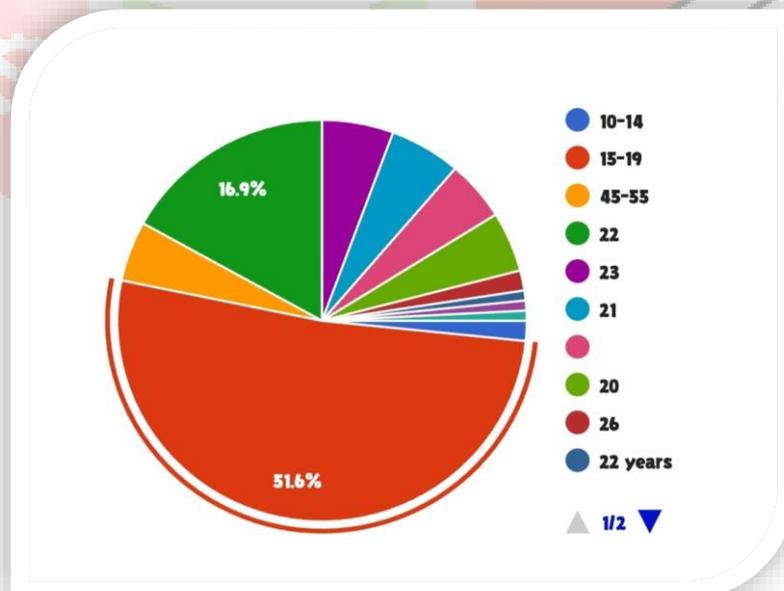
AGE: All the participants included in this study were divided into 9 different age categories as shown in the table below:

Table No 1. Age Group

Age Group	Frequency	percentage
10-14	2	1.6%
15-19	64	51.6%
20-44	40	32.9%
45-55	6	4.8%

The table presents the distribution of participants across different age groups in the study on awareness and Hygiene among Adolescent Girls/Women. The majority of participants (51.6%) fall within the 15-19 age group, indicating that young adults form the primary demographic of this study. The 20-44 age group constitutes 32.9%, followed by the 45-55 age group with 4.8%. Only a small fraction (1.6%) of participants belong to the 10-14 age group. This data highlights that the younger population is the most represented, which may influence the patterns of awareness analyzed in the study.

Fig 1. Age Group



2. EDUCATION

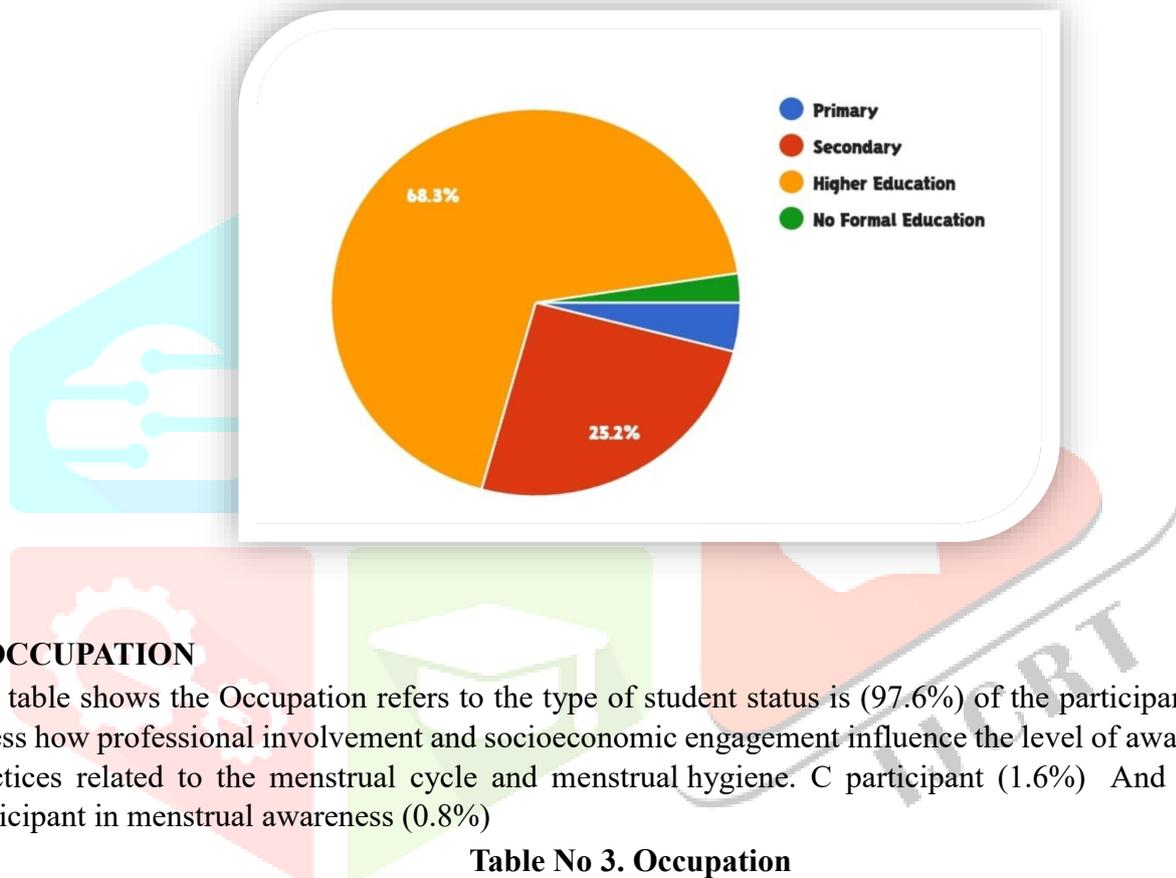
The table shows the educational background of participants in the study on menstrual cycle awareness and hygiene among Adolescent Girls/Women. The majority of respondents (68.3%) have an Higher education, followed by (25.2%) with Secondary education. Participants with primary education account for (4.1%), and no formal education (2.4%) of the total. This distribution reflects a significant representation of

participants with higher education, which may influence their understanding and awareness of menstrual cycle.

Table No 2. Education

Education	Frequency	Percentage
Primary	84	68.3%
Secondary	31	25.2
Higher education	5	4.1%
No formal education	3	2.4%

Fig 2. Education



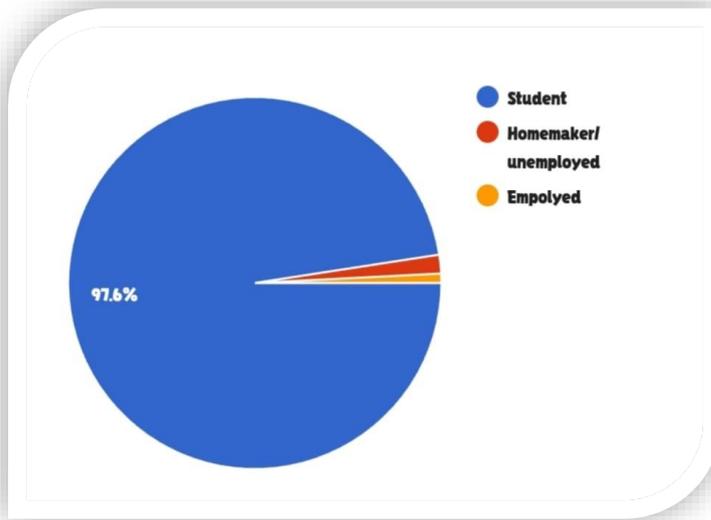
3. OCCUPATION

The table shows the Occupation refers to the type of student status is (97.6%) of the participant. It helps assess how professional involvement and socioeconomic engagement influence the level of awareness and practices related to the menstrual cycle and menstrual hygiene. C participant (1.6%) And Employed participant in menstrual awareness (0.8%)

Table No 3. Occupation

Occupation	Frequency	Percentage
Student	120	97.6%
homemaker/unemployed	2	1.6%
Employed	1	0.8%

Fig 3. Occupation



4. URBAN/RURAL RESIDENCE

This parameter categorizes the respondents based on their place of residence urban (cities and towns) and rural (villages and remote areas). This distinction helps in understanding the influence of geographical, infrastructural, cultural and educational differences on menstrual health awareness.

Relevance to the Study:

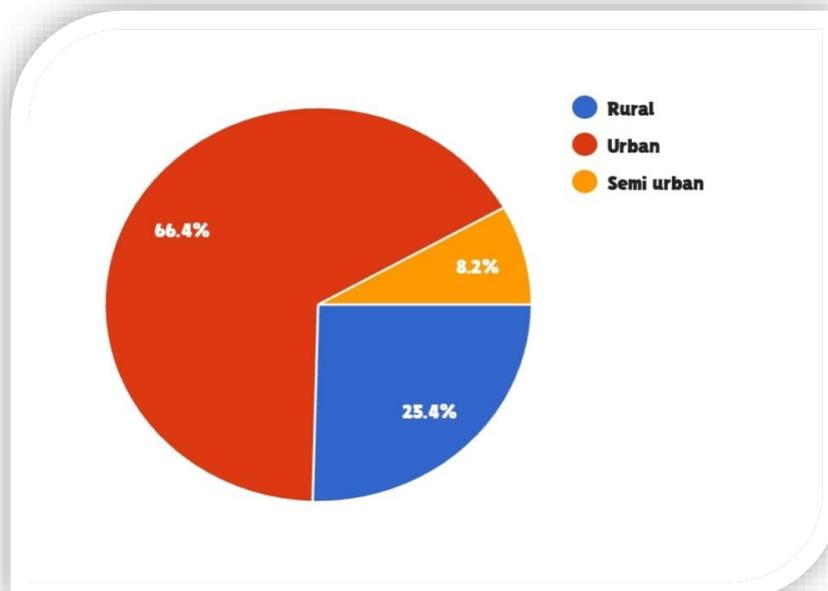
Urban areas often have better access to healthcare facilities, education, sanitary products and awareness programs. Media exposure is also higher, which may contribute to better knowledge and practices.

Rural areas may face challenges such as limited access to menstrual hygiene products, fewer educational opportunities and stronger cultural taboos or myths surrounding menstruation.

Table No 4. RESIDENCE

Urban/rural residence	Frequency	Percentage
Rural	31	25.4%
Urban	81	66.4%
Semi Urban	10	8.2%

Fig 4. RESIDENCE



5.KNOWLEDGE

This parameter assesses the respondent's understanding of the biological and physiological aspects of the menstrual cycle. It helps in determining how well adolescent girls and women are informed about menstruation as a natural and regular process in the female reproductive system.

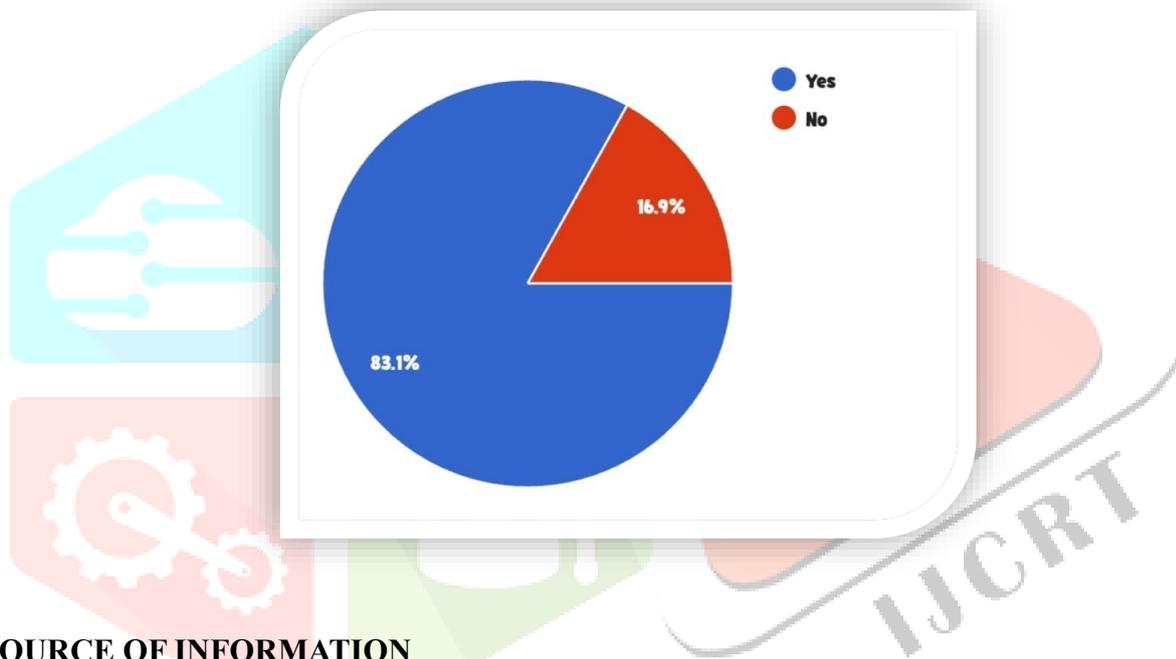
Understanding the menstrual cycle is crucial for recognizing normal and abnormal patterns, maintaining reproductive health, and debunking myths or misconceptions.

Proper knowledge can empower girls and women to manage their menstrual health effectively and seek medical help when necessary.

Table No 5. KNOWLEDGE

Knowledge	Frequency	Percentage
Yes	103	83.1%
No	21	16.9%

Fig 5. KNOWLEDGE



6. SOURCE OF INFORMATION

This parameter identifies the primary sources through which adolescent girls and women learn about menstruation and menstrual hygiene. It highlights the role of formal and informal channels in shaping menstrual awareness and practices.

Understanding the sources of menstrual information helps determine whether girls and women are receiving accurate, age-appropriate, and science-based education.

It also reveals who influences their beliefs and practices which may include myths, cultural taboos, or medically sound advice.

This parameter guides efforts to improve menstrual health education by strengthening reliable information channels.

Table No 6. SOURCE OF INFORMATION

Source of information	Frequency	Percentage
Mother	107	87.7%
Teacher	5	4.1%
Internet /TV	3	2.5%
Doctor/ Nruse	1	0.8%
School/Friends	6	4.9%

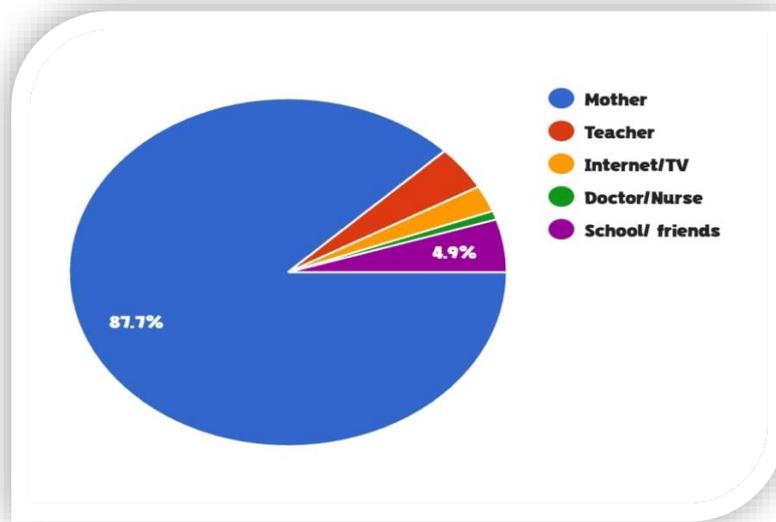


Fig 6. SOURCE OF INFORMATION

7. TYPE OF ABSORBENTS USED

This parameter identifies the kind of menstrual absorbents used by adolescent girls and women during their menstrual cycle. Absorbents refer to the materials or products used to manage menstrual bleeding.

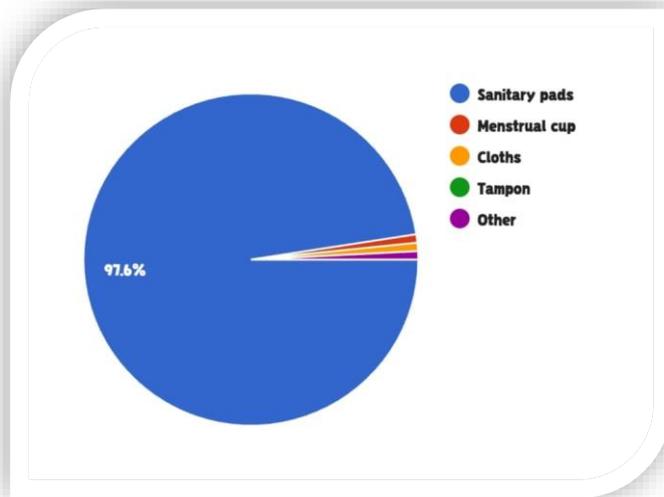
Common Types of Absorbents:

1. Commercial Sanitary Pads – Disposable and widely used.
2. Cloth Pads – Reusable, either homemade or specially designed.
3. Tampons – Less common in some areas due to lack of awareness or cultural restrictions.
4. Menstrual Cups – Eco-friendly and reusable, usage still limited.
5. Tissues, Rags, or Other Unhygienic Materials – Often used in rural or low-income settings due to lack of access or affordability.

Table No 7. TYPE OF ABSORBENTS USED

Type of Absorbents Use	Frequency	Percentage
Sanitary Pads	120	97.6%
Menstrual Cup	1	0.8%
Cloths	1	0.8%
Tampons	0	0
Other	1	0.8%

Fig 7. TYPE OF ABSORBENTS USED



8.FREQUENCY OF CHANGING ABSORBENTS

This parameter measures how often adolescent girls and women change their menstrual absorbents (e.g., pads, cloth, tampons) during their menstrual cycle. Regular changing is essential for maintaining hygiene and preventing infections.

Infrequent changing of absorbents increases the risk of reproductive tract infections (RTIs), skin irritation and bad odour. Frequency can reflect levels of awareness, accessibility of products and socio-economic conditions. It also indicates hygiene behaviour, especially in settings with limited water, privacy, or sanitation facilities.

Assessment Criteria:

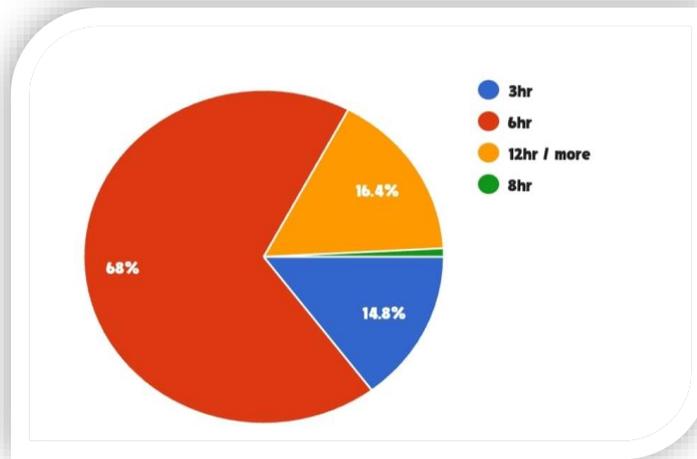
Number of times absorbents are changed per day (e.g., every 4–6 hours is recommended).

Variation in frequency based on type of absorbent used (disposable vs. reusable).

Awareness of the health risks related to infrequent changing.

Table No 8. FREQUENCY OF CHANGING ABSORBENTS

Frequency of Changing Absorbents	Frequency	Percentage
3Hr	18	14.8%
6Hr	83	68%
8Hr	1	0.8%
12Hr/ More	20	16.4%

Fig 8. FREQUENCY OF CHANGING ABSORBENTS

9. EMBARRASSMENT OR SHAME IN DISCUSSING MENSTRUATION

This parameter assesses whether adolescent girls and women feel embarrassed, shy, or ashamed when discussing menstruation, either with family, peers, teachers, or healthcare providers. It reflects social stigma, cultural taboos and the level of openness in their environment.

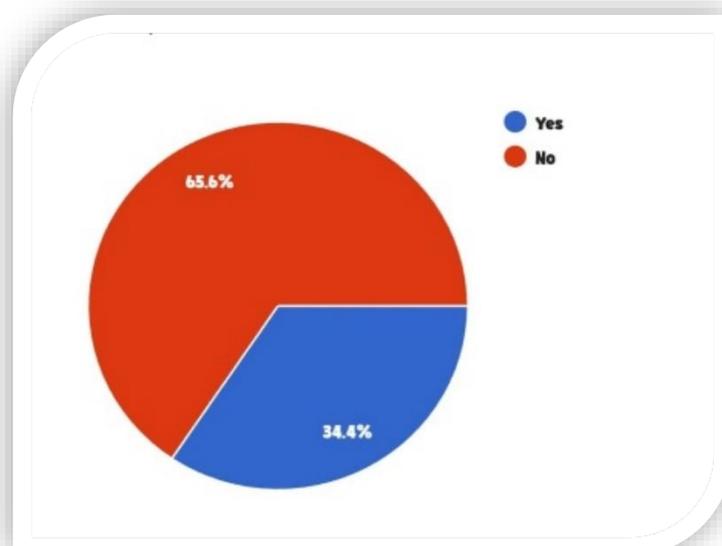
Menstruation is often considered a taboo topic in many communities, especially in rural or conservative settings.

Feelings of embarrassment can prevent girls from asking questions, seeking help, or sharing concerns, leading to poor menstrual hygiene management and mental stress.

Understanding this parameter helps identify the emotional and cultural barriers to menstrual health awareness.

Table No 9. EMBARRASSMENT IN DISCUSSING MENSTRUATION

Embarrassment In Discussing Menstruation	Frequency	Percentage
Yes	42	34.4%
No	80	65.6%

Fig 9. EMBARRASSMENT IN DISCUSSING MENSTRUATION

10.DISPOSAL METHODS OF MENSTRUAL PRODUCT

This parameter examines how adolescent girls and women dispose of used menstrual products, such as sanitary pads, tampons, and cloth. Safe and hygienic disposal is crucial for both personal health and environmental cleanliness.

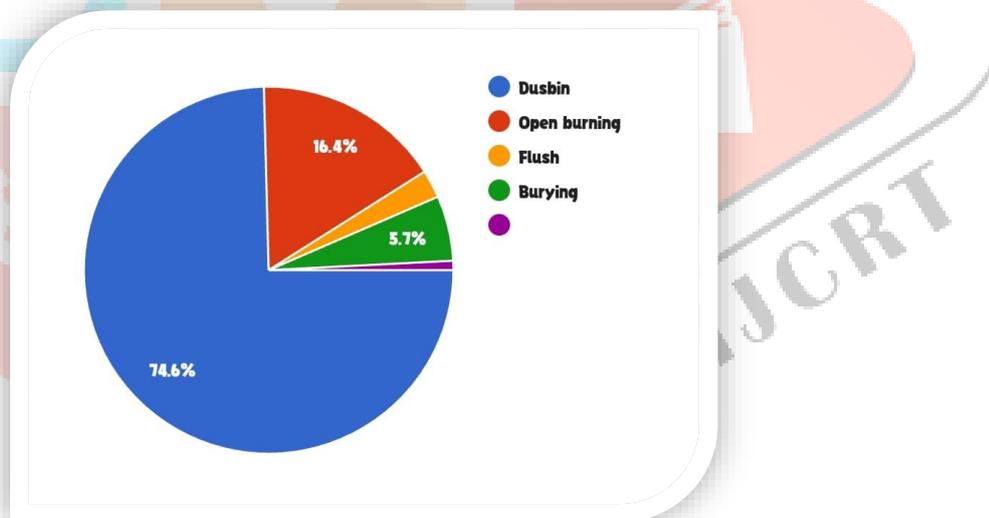
Improper disposal (e.g., open dumping, flushing, or burning plastic pads in open air) can lead to environmental pollution, blockages in drainage systems, and spread of infections.

Awareness about eco-friendly and hygienic disposal methods is often limited, especially in rural or resource-poor areas.

Table No 10. DISPOSAL METHODS

Disposal Methods	Frequency	Percentage
Dustbin	91	74.6%
Open Burning	20	16.4%
Flush	3	2.5%
Burying	7	5.7%
Other	1	0.8%

Fig 10. DISPOSAL METHODS



11.ACCESS TO CLEAN WATER AND TOILETS

This parameter evaluates whether adolescent girls and women have adequate access to clean water and functional toilets at home, school, or workplace—especially during menstruation. These are essential for maintaining menstrual hygiene and dignity.

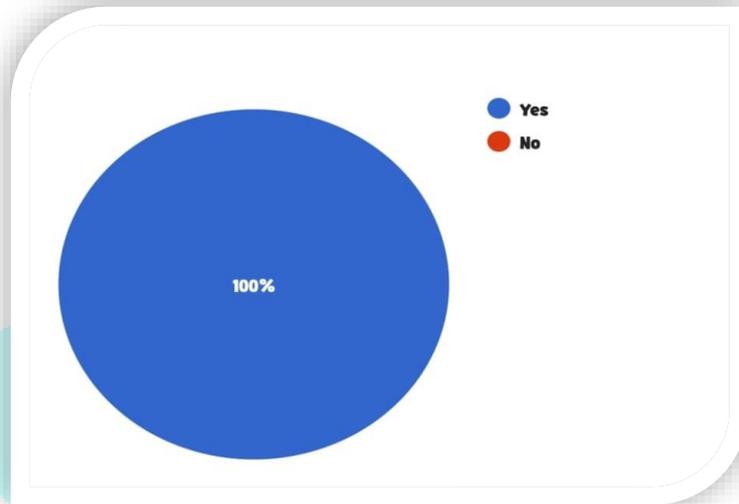
Lack of clean water and toilets can hinder proper genital hygiene, changing of absorbents and safe disposal of menstrual products.

Inadequate facilities may lead to school absenteeism, discomfort and poor hygiene practices during menstruation.

This parameter helps assess the infrastructure gap affecting menstrual health management.

Table No 11. ACCESS TO CLEAN WATER AND TOILETS

Access to Clean Water and Toilets	Frequency	Percentage
Yes	121	100%
No	0	0%

Fig 11. ACCESS TO CLEAN WATER AND TOILETS

12.MENSTRUAL DISORDERS

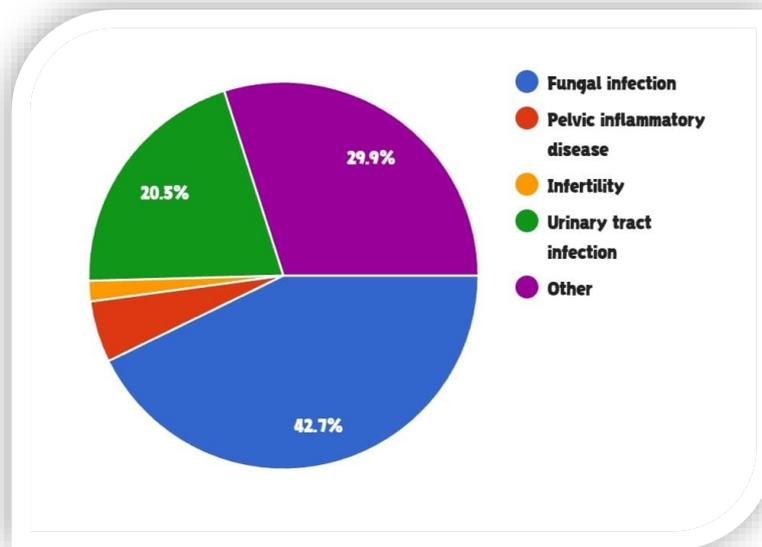
This parameter assesses the prevalence, awareness, and experience of menstrual disorders among adolescent girls and women. Menstrual disorders refer to irregularities or problems in the menstrual cycle that may affect physical and emotional health.

Understanding menstrual disorders is essential for identifying unmet health needs and encouraging timely medical attention. Many girls and women suffer in silence due to lack of awareness, social stigma, or limited access to healthcare. Evaluating this parameter helps uncover gaps in knowledge and health-seeking behaviour regarding menstrual health.

Table No 12. MENSTRUAL DISORDERS

Menstrual Disorder	Frequency	Percentage
Fungal Infection	50	42.7%
Pelvic Inflammatory Disease	6	5.1%
Infertility	2	1.7%
Urinary Tract Infection	24	20.5%
Other	35	29.9%

Fig 12. MENSTRUAL DISORDERS



CONCLUSION:

The assessment of awareness regarding the menstrual cycle and menstrual hygiene among adolescent girls and women in both urban and rural areas of Washim reveals significant disparities in knowledge, practices, and access to hygiene facilities. Based on the survey conducted among 127 adolescent girls and women in both urban and rural areas of Washim, it was observed that overall awareness regarding the menstrual cycle and menstrual hygiene is present in both groups. A significant number of urban participants demonstrated good knowledge and were actively following proper menstrual hygiene practices, including the use of sanitary pads, regular changing, and maintaining personal cleanliness.

Interestingly, rural participants also showed a fair level of awareness, indicating that menstrual education is gradually reaching even the less developed areas. However, despite awareness, some challenges such as limited access to sanitary products, privacy issues, and traditional taboos still exist in rural regions.

In conclusion, the study highlights a positive trend in awareness among both urban and rural adolescent girls and women in Washim. Continued efforts through education, access to hygiene products, and breaking societal taboos are essential to further improve menstrual health and hygiene practices across all communities.

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