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A study to assess the menstrual hygiene practices and use of menstrual cups among school going girls at a selected urban school in Mumbai

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Abstract

Background: Among adolescent age groups, poor menstrual hygiene and insufficient self-care are significant predictors of morbidity and other consequences. Many young girls lack the necessary information on menstrual hygiene because of the silence that is prevalent regarding the topic of menstruation and related difficulties. Menstruation cups are a sustainable replacement for sanitary napkins which are user friendly and ecofriendly. Adolescent girls need to learn about menstrual hygiene and best available products for menstrual hygiene.

Objectives: The objectives of this study were to assess the knowledge of students about menstrual hygiene, to assess the menstrual hygiene practices among the adolescent girls and to identify the use of menstrual cups among adolescent girls.

Materials and Methods: A cross-sectional study, carried out in 2023 among 211 adolescent school going girl students of age group 12 to 17 years of an urban school of Mumbai. The study population was assessed with a questionnaire after taking informed consent from each study participants. The study was followed by a video assisted health education program of 30 minutes on menstrual hygiene.

Results: Out of the 211 adolescent girls, majority, 90.5% of the girls attained menarche and 9.5% did not attain menarche. Out of the 20 who did not attain menarche, 19 were of age 12 to 13 years and 01 was of age 14 years. Of the 90.5% of girls who attained menarche 80% had regular periods and 20% had irregular periods. Of the total participants, 96% were aware about menstruation prior and 4% did not have any prior knowledge on menstruation. Among 191 students who attained menarche, 94% used sanitary pads, 4% used tampons and 2% used menstrual cups regularly during menstruation.

Conclusion: The study revealed that the knowledge on menstrual hygiene is good among participants but the hygiene practiced is suboptimal in some aspects. Menstrual cups being one of the safe, economical as well as eco-friendly product, the regular usage is very less. Awareness among adolescent girls regarding menstruation has increased in recent times, but lot more can be done to improve menstrual health management awareness among adolescent girls for addressing these problems.

Keywords: Adolescent, menstrual hygiene, sanitary pads, menstrual cups, menarche

1. Introduction

Adolescents make up a sizable and expanding portion of the global population. The majority of people on the planet are under 25 years old, make up one in every two young individuals worldwide ^[1]. According to UNICEF, with 253 million people between the ages of 10 and 19, India is home to the biggest teenage population in the world. 250.8 million Indians, or almost one-fifth of the nation's total population are teenagers as of 2023. This indicates that children aged 0–17 make up 18.6% of the population ^[2].

Menstruation is a key event that signifies the transition from girlhood to femininity in adolescents ^[3]. Girls begin to menstruate between the ages of 9 and 16 and do so until they are in their late forties or early fifties. It adds up to 3500 menstrual days and 10 years of life for women on average. Even if it's a natural procedure, it is connected to a number of myths ^[4]. Many girls and women engage in risky sanitary practices due to the social stigma, such as not urinating during their periods, not cleaning genitalia, not changing pads or utilizing any form of material that is available as an absorbent during menstruation.

2. Background

In India, 77.6% of women employ hygienic menstruation protection techniques, according to UNICEF 2023 report [2]. According to the fifth National Family Health Survey 2019-2021, Ninety percent of women in seventeen states and union territories with twelve or more years of education reported using safe period products [5].

Addressing Menstrual Health and Hygiene (MHH) is essential to accomplish the Sustainable Development Goals of the United Nations [6]. While each Indian state has its unique program, the distribution of sanitary napkins continues to be the fundamental goal of service delivery. Menstruation cups are a sustainable replacement for sanitary napkins that are being distributed by the governments of Kerala and Karnataka. While there are many obstacles to equity, these activities have contributed to the national promotion of MHH. The proper disposal of sanitary napkins along with the associated challenges and myths, is another aspect of MHH that is often disregarded. Despite being inexpensive and accessible, authorities have also observed problems with quality. Menstrual cups are a cheap, sustainable, and eco-friendly alternative to sanitary napkins, but they are still treated with skepticism [7].

Merely 0.3% of Indian women between the ages of 15 and 24 who participated in the 2019–21 National Family Health Survey (NFHS-5) reported ever using menstrual cups. By comparison, 77% of women in this age bracket use tampons and other disposable period products [8]. Merely 1% of participants in research on menstrual hygiene among schoolgirls in three Indian states used menstruation cups. Only 3% of respondents to Youth Ki Awaaz survey said they used menstrual cups, compared to 71% who said they protected their periods with sanitary pads [9]. Ignorance, discomfort, leakage, fear of insertion, and poor accessibility are some of the factors contributing to the low use of menstruation cups [10].

3. Objectives of the study

- a. To assess the knowledge of adolescent girls about menstrual hygiene
- b. To assess the menstrual hygiene practices among the

adolescent girls.

- c. To identify the practice of menstrual cup use among adolescent girls.
- d. To educate and motivate the urban adolescent girls for menstrual hygiene and promote the use of menstrual cup.

4. Methodology

A cross-sectional descriptive study was conducted in the year 2023 among adolescent school going girls of an Urban School of Mumbai. Out of 230 adolescent girls selected for the study, 211 participated. The participants for the study were selected by purposive sampling method. The age group of the study participants were 12 to 17 years. Informed consent was taken from each participant, and also official permission taken from school authorities. On behalf of researchers, school authorities took consent from the parents for their ward’s participation in the study and also attending the education program on menstrual hygiene and use of menstrual cups. Institutional ethical clearance taken for conducting the study. Knowledge and practice questionnaire on menstrual hygiene with 30 questions was the tool used for the study. The questionnaire comprised of 05 sections: Demography, Use of menstrual cups, Knowledge on menstrual hygiene and Practice of menstrual hygiene. The tool validation was done by experts from the field of obstetric and gynaecological nursing. Pilot study was conducted on 20 adolescent girls from a different urban setup and the tool modifications were done based on the pilot study. The study was followed by a video assisted health education program of 30 minutes on menstrual hygiene and use of menstrual cups. The data was analysed by excel and descriptive statistics.

5. Results

Out of the 211 participants majority (45%) were in the age group 12 to 13 years and 90.50% of the study participants attained menarche. Whereas 9.50% of the study group not attained menarche and in that 01 adolescent was of the age 14 years and rest were in 12 to 13 age group. (Table 1)

Table 1: Distribution of participants as per selected demographic variables (n = 211)

S. No.	Demographic variables	Category	Frequency	Percentage%
1.	Age	12 to 13 years	95	45%
		14 to 15 years	88	41.8%
		16 to 17 years	28	13.2%
2.	Menarche	Attained	191	90.50%
		Not attained	20	9.50%
3.	Regular periods	Regular	152	80%
		Not regular	39	20%
4.	Products used regularly	Sanitary pads	182	95.2%
		Clothes	0	0%
		Tampons	6	3.2%
		Menstrual cup	3	1.6%
5.	Genital Rash/Itching during or after menstruation	Yes	67 (all were using pads)	35%
		No	124	65%

Of the total participants, 96% were aware about menstruation and 4% did not have any prior knowledge on menstruation. The main source knowledge was parents

(75%) and 11% learnt about menstruation from school. None of the participants opted relatives as the source of knowledge on menstruation. (Fig 1)

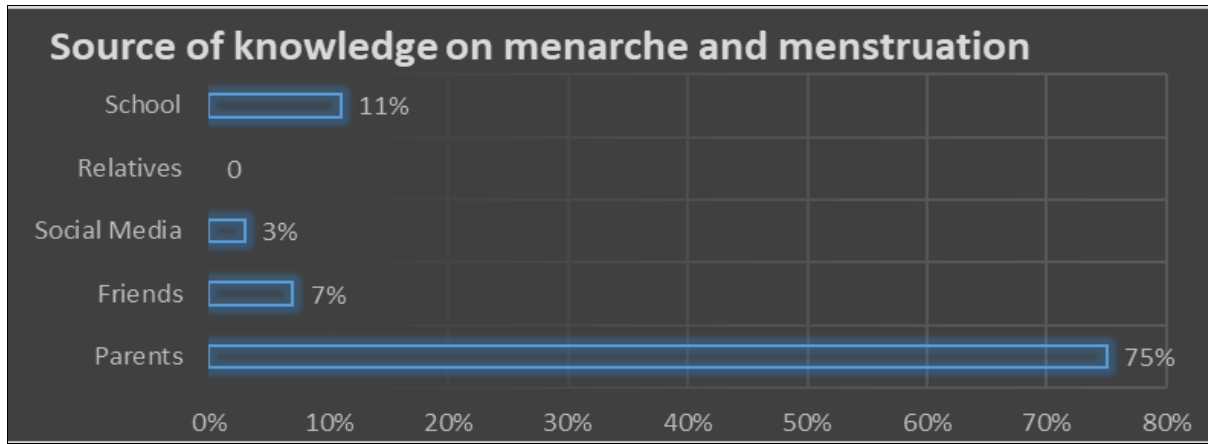


Fig 1: Distribution of participants based on Source of knowledge (n=211)

The knowledge on menstrual hygiene was assessed using with an 8 items knowledge questionnaire. On assessment, 78% of the participants had good knowledge on menstrual hygiene, 13% had average knowledge and 9% were with poor knowledge on menstrual hygiene. The mean knowledge score was 6.2 and 71% of the adolescent girls were with a knowledge score above mean knowledge.

The study revealed that the participants were also practicing menstrual hygiene. Out of the total adolescent who attained menarche (191), 53% bathe twice a day and 47% were bathing daily. 87% were washing genitalia after every sanitary pad change out of this 67% were washing using plain water and rest 33% were using soap and other products for washing genitalia. 65% did not suffer from any rashes or itching during menstrual time where as 35% of the participants complained of genital rashes/ itching during menstruation. All the adolescents who suffered itching/ rashes during menstruation were using sanitary pads. The study also revealed that 100% of the participants using sanitary napkin were disposing the napkins in dustbins.

Out of the total participants, 103 (49%) are aware about menstrual cups where as 51% were not aware about menstrual cup. Out of 191 participants who attained menarche, 57 (30%) used menstrual cup at least once but are not regularly using menstrual cup. Only 2% are using menstrual cup regularly (Fig 2). The reasons for not using menstrual cups are identified are as not aware about how to use, not comfortable on application, no facilities for emptying, cleaning and reinsertion.



Fig 2: Distribution of participants based on use of sanitary products (n = 191)

6. Discussion

The present study aimed at assessing the knowledge and practice of menstrual hygiene among urban adolescent girls.

The present study revealed that 96% of the participants were aware about menarche and menstruation and we aim at 100% awareness about menarche. In a study conducted by Santra S in the year 2017 reveals that only 20% of the women were aware about menstruation prior to menarche [11]. In the same study the author explains about 40.8% with vaginal itching during menstruation. The present study also reveals that there is genital rashes/ itching present in 37% of the participants and the alarming fact is all those 37% were using sanitary pads. Adolescents using tampons or menstrual cups did not complaint about rashes or itching during or after menstruation.

Source of information about menarche is parents for 75% of the participants in this study and 11% told school as the source of information. During informal interaction it was found that teachers and school authorities conduct educational programs on menstruation and menstrual hygiene at school which is contrary to the study conducted by Ramachandra K *et al.* in 2017 which reports that teachers were not considered as a good source of information [12].

The present study also aimed to identify the use of menstrual cups among adolescent girls. The study revealed that only 50% of the urban adolescent girls were aware about menstrual cup and merely 2% used menstrual cup regularly.

In a study conducted by Patel *et al* in 2022 reports that menstrual cups were more economical, safe, convenient, and environment friendly compared to sanitary pads by the study participants and they used this due to the detrimental experiences of using sanitary pad. The concerns explained are about the lack of easy accessibility to cups, availability of appropriate size cup and support system for guidance and awareness [7]. In the present study also reveals that 30% used or tried to use menstrual cup at least once and only 2% used it regularly. The reasons for not using are listed as lack of awareness, not skilled for application and lack of facilities for emptying, cleaning and reinsertion.

7. Conclusion

Accurate and adequate information about menstruation among girls, families and schools are the need of the hour to improve on menstrual health and hygiene. School education programs and regular counselling of adolescent girls will help in achieving this. The results of the study were discussed with the school authorities. Video based education program was conducted by the researchers for the adolescent girls of the urban school and planned to conduct

the education twice a year. The study identifies the needs for support group or platform to motivate the adolescents for menstrual hygiene practices and promote the use of menstrual cup which can be achieved by improving awareness. The authors acknowledge the school authorities, faculty and adolescent students for their active participation and support in this study.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee.

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