

## A community based cross sectional study on menstrual hygiene awareness and practices among females of reproductive age group.

Nitin Lodha\*

Assistant Professor, Department of Community Medicine, GMERS Medical College, Vadnagar, Gujarat, India

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### Abstract

**Background:** Good menstrual hygiene is essential for the health and dignity of women. Discussions on menstrual hygiene are important for women to clarify existing myths and misconceptions around menstruation. In developing countries it is reported that many women/girls do not follow healthy measures for maintaining the menstrual hygiene. **Objectives:** To study awareness regarding menstrual hygiene among the women of reproductive age and find out practice related to maintenance of menstrual hygiene. **Material & Methods:** It was a community based cross sectional study; 200 women of reproductive age were interviewed over a period of four months (March to June 2019). Data obtained was entered and analyzed statistically using Excel Windows 2007 and Epi info version6. **Results:** 162(81%) had regular menstrual cycle pattern, 14(7%) participant mostly from rural area, believe that menstruation is a disease, 140(70%) get the information regarding menstruation from mother. 188(94%) were aware about sanitary pads but 150(75%) uses sanitary pads. 86.5% participants change sanitary pads 2-3 times a day. All participants were taking regular about bath. 197(98.5%) were regularly cleaned their external genitals. 153(76.5%) study participants throwing the sanitary material in dustbin. **Conclusion:** Majority of the participants use sanitary pads and were aware about menstrual hygiene, but in rural area majority of participants still use clothes instead of sanitary material and they had lack awareness about hygiene practice and majority of them didn't follow menstrual hygiene practices. Menstrual hygiene can be promoted in community and in schools particularly in Rural area. **Keywords:** Menstrual hygiene, awareness, reproductive age.

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### Introduction

Menstruation is a natural, normal biological process experienced by all adolescent girls and women; yet it is not spoken about openly causing unnecessary embarrassment and shame. India's 113 million adolescent girls are particularly vulnerable at the onset of menarche. At this time they need a safe environment that offers protection and guidance to ensure their basic health, well-being and educational opportunity is realised. Yet a recent survey found that in 14,724 government schools only 53% had a separate and usable girl's toilet. At home the situation also needs to improve as 132 million households do not have a toilet (2015), leaving adolescent girls and women to face the indignity of open defecation. However, safe and effective menstrual hygiene management, or 'MHM' is a trigger for better and stronger development for adolescent girls and women [1]. Menstrual hygiene deals with the special health-care needs and requirements of women during monthly menstruation or menstrual cycle. Menstruation Hygiene Management focuses on practical strategies for coping with monthly periods. Menstruation Hygiene Management refers to ways women themselves keep clean and healthy during menstruation and how they acquire, use, and dispose of blood-absorbing materials [2]. Maintaining proper menstrual hygiene is important for one's own wellbeing and development. It requires access to adequate water for washing clothes, privacy to change their absorbents, clean & safe absorbents, facilities to dispose the used absorbents. If any of these are not accessible, it leads to

unhygienic practices. The areas of special concern include choice of the best female hygiene products, how often and when to change the feminine hygiene products, bathing care of the vulva and vagina as well as the supposed benefit of vaginal douching at the end of each menstrual period [3]. Menstrual hygiene is a taboo subject, a topic that many women in South Asia are uncomfortable discussing in public. Naturally, topics that are excluded from public talks are most likely to be discarded without giving much importance [4]. Social prohibition and negative attitude of parents in discussing the related issues openly have blocked the access of adolescent girls to right kind of information, especially in the rural and tribal communities [5]. In developing countries like India and other third world countries it is reported that many of the menstruating women do not follow healthy measures for maintaining the menstrual hygiene. Women belonging to lower socio-economic strata, who cannot afford to buy sanitary napkin, use a cotton cloth which is usually a torn piece of cloth from their old sarees or other dresses and use them throughout their periods with infrequent changing. Sometimes scarcity of water adds up to them depriving them of washing the cloth. Such unhealthy menstrual practice is associated with many complications of recurrent reproductive tract infections like premature births, stillbirths, miscarriages, infertility problems, carcinoma of cervix, etc [6]. Because of the lack of knowledge, they end up with repeated use of unclean menstrual absorbents, resulting in harboring of microorganisms that increase susceptibility to urinary, perineal, vaginal and pelvic infections [7]. If these infections are left untreated that will lead to several consequences like infertility, ectopic pregnancy, fetal wastage and prenatal infections, low birth weight babies and toxic shock syndrome [8]. Good menstrual hygiene is essential for the health and dignity of girls and women. Discussions on menstrual hygiene are important for adolescent girls to clarify existing myths and misconceptions about menstruation. Improving

\*Correspondence

Dr. Nitin Lodha

Assistant Professor, Department of Community Medicine, GMERS Medical College, Vadnagar, Gujarat, India

E-mail: [nitinlodha17@yahoo.in](mailto:nitinlodha17@yahoo.in)

menstrual hygiene is important from the point of view of personal comfort and increased mobility. It also reduces the likelihood of infections resulting from poor hygienic practices during menstruation. Providing girls with the knowledge and skills on maintaining menstrual hygiene improves school attendance among girls who may not attend school on those days or even drop out of school altogether [9]. To understand the consequences and importance of menstrual hygiene practices among women of reproductive age group, it is important to study the current knowledge and practices among them, so that the future intervention can be planned accordingly. Women with correct knowledge about menstrual hygiene and safe practices are less vulnerable to problems related with bad hygienic practices. Therefore, this study was carried out among the women of reproductive age group residing in urban as well as rural area of Junagadh to assess the awareness regarding menstrual hygiene and safe practices. Objectives of present study is to elicit the awareness regarding menstruation and menstrual hygiene among the women of reproductive age group and to find out the practice related to maintenance of menstrual hygiene among them.

**Material and methods**

A Community based cross-sectional study was conducted among women of reproductive age group residing in urban as well as rural area of Jungadh. A pre-designed, pre-tested semi-structured questionnaire with both closed-ended and open-ended questions consisted topics relating to awareness about menstruation, menstrual pattern, source of information regarding menstruation, hygiene practiced during menstruation, restricted activities practiced during menstruation, and awareness regarding symptoms of RTIs which were used for data collection. After pretesting, necessary modifications were made in the schedule. Sample size was calculated by using formula,  $N = (Z_{1-\alpha/2})^2 PQ / L^2$  at 95% confidence level. Based on a previous community based study done by Palak et al considering the prevalence of satisfactory menstrual hygiene as 90% and allowable error of 5%, the minimum calculated sample size was around 139 [10-11]. A total of 200 women of reproductive age group were interviewed by the investigator over a period of four months

(March 2019 to June 2019) for this study. Simple random sampling method was used to select the study participants. All the girls who had not attained menarche and all the women those had attained menopause were excluded from study. The data were collected by house to house survey in the community. The objective of the interview and its implication were explained to them and they were assured that confidentiality would be maintained throughout this research. Briefing was done to the participants regarding the questionnaire provided to them. Care was taken to ensure privacy and confidentiality and a verbal informed consent was obtained from each of them before initiating the interview. During the interview, efforts were made for building a rapport with the study subjects. This was followed by collection of data by interviewing study participants regarding socio demographic variables, awareness about menstruation, source of information regarding menstruation, practices followed related to maintenance of menstrual hygiene, etc. At the end of the interview, the participants were educated regarding facts of menstruation and explained about cleanliness during menses and in addition, all their queries were answered satisfactorily.

**Inclusion Criteria:** All Females Who Have Attained Menarche and Females of Reproductive Age Group

**Exclusion Criteria:** Women not willing to give consent, Any Women who underwent Hysterectomy, Menopause Women

**Statistics**

Data obtained was entered in MS excel and analyzed statistically by simple proportions. Data were analyzed using Excel Windows 2007 and Epi info version 6 and the descriptive analysis including proportions, percentages, frequency distribution, and measures of central tendency was done.

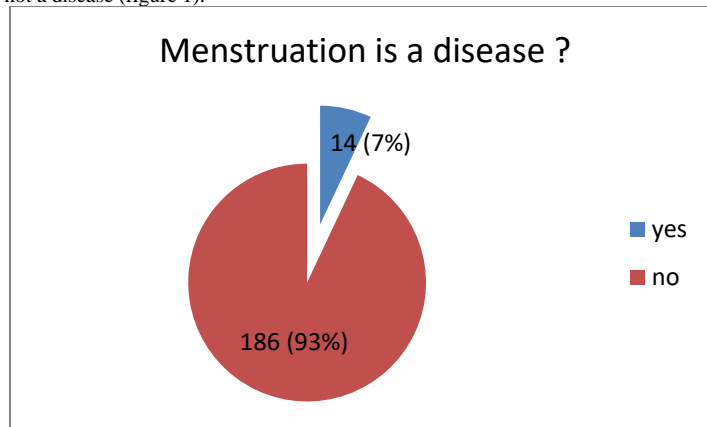
**Results**

This study was conducted among 200 women of reproductive age group and salient findings of this study were as follow. Table 1 show that, out of 200 study participants 162 (81%) had their regular menstrual cycle pattern and 38 (19%) had irregular menstrual cycle (Table 1).

**Table 1: Distribution of study subjects according to menstrual cycle pattern**

Menstrual cycle	Number of study subjects	Percentage (%) N=200
Regular	162	81
Irregular	38	19
Total	200	100

Out of total study participant, 14 (7%) participant mostly from rural area, believe that menstruation is a disease, while remaining 186 (93%) participants correctly said it is not a disease (figure 1).



**Fig 1: Distribution of study participant according to their belief regarding menstruation**

On asking the questions regarding sources of information about menstrual hygiene and with whom they had talk about menstruation, it was seen that, 140 (70%) study participants get the information regarding menstruation or having a talk about menstruation with their mother, 118 (59%) participants gets the information from their sister, 131 (65.5%) participants gets information from their friends, 32 (16%) participants gets information from their teachers and around 21 (10.5%) gets the information from husband (table 2).

**Table 2: Distribution of study subjects according to source of information regarding menstruation**

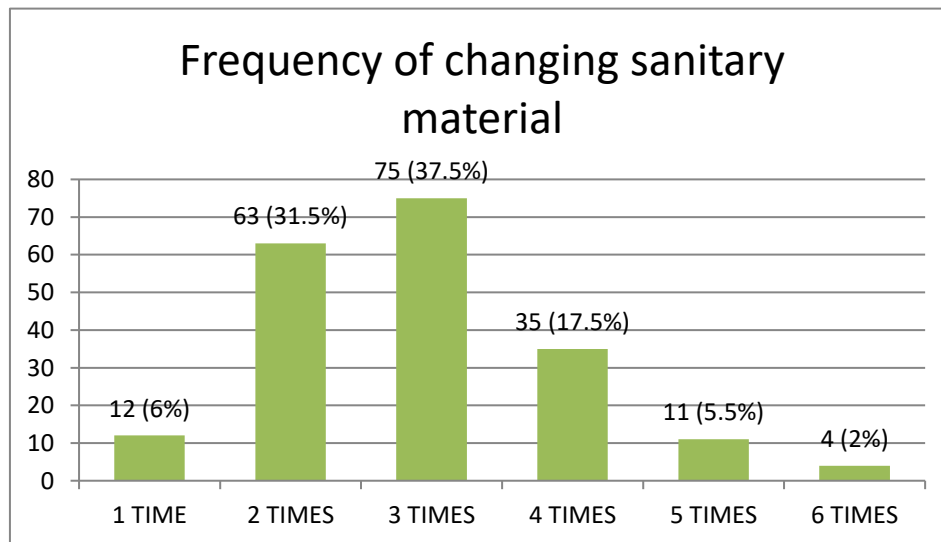
Source of information	Frequency of study participants	Percentage
Mother	140	70
Sister	118	59
Friend	131	65.5
Teacher	32	16
Husband	21	10.5

Regarding various products available in market, it was seen that out of 200 study participants, 188 (94%) were aware about disposable sanitary pads, 71 (35.5%) have heard of Tampons, 71 (35.5%) have heard of reusable pads and 53 (26.5%) have heard of menstrual cup. It was also seen that awareness regarding these sanitary products is very poor in rural participants as compared to participants from urban area. For usage of various product, it was seen that, 150 (75%) participants uses sanitary pads during period, around 63 (31.5%) participants uses cloth or towel but sometimes some of the these participant also use sanitary pads during period, 1 (0.5%) participant use tampon, 1 (0.5%) use toilet paper and 1 (0.5%) use mattress during menstruation. None of the study participants uses menstrual cup, cotton or any other natural materials during menstruation (table 3).

**Table 3: Distribution of study participant according to their awareness and practices regarding various products available in market for menstrual hygiene**

	Products available in market for menstrual hygiene	Frequency of study participants	Percentage
Awareness about product available for menstrual hygiene	Disposable Sanitary Pads	188	94
	Tampons	71	35.5
	Reusable Pads	71	35.5
	Menstrual cup	53	26.5
Practice of using product for menstrual hygiene	Sanitary pads	150	75
	Cloth/towel	63	31.5
	Tampon	1	0.5
	Toilet paper	1	0.5
	Mattress	1	0.5
	Menstrual cup	0	0
	Cotton	0	0
	Natural materials	0	0

Regarding frequency of change of usage product during menstruation, it was seen that out of 200 study participants, 12 (6%) changes their sanitary pads once a day, 63 (31.5%) changes their sanitary pads twice a day, 75 (37.5%) changes their sanitary pads thrice a day, 35 (17.5%) changes their sanitary pads four times a day, 11 (5.5%) changes their sanitary pads five times a day and 4 (2%) changes their sanitary pads six times a day. Majority of participants change the material 2-4 times in a day depending upon bleeding and first three days of menstruation (figure 2).



**Fig 2: Distribution of study participant according to frequency of changing of product use for menstrual hygiene**

Out of total participants, 26 (13%) participants faced problem due to their current method of sanitation. Around 160 (80%) didn't had any

problem of water facility, remaining participants had some problem with facility because of that they were not able to follow menstrual

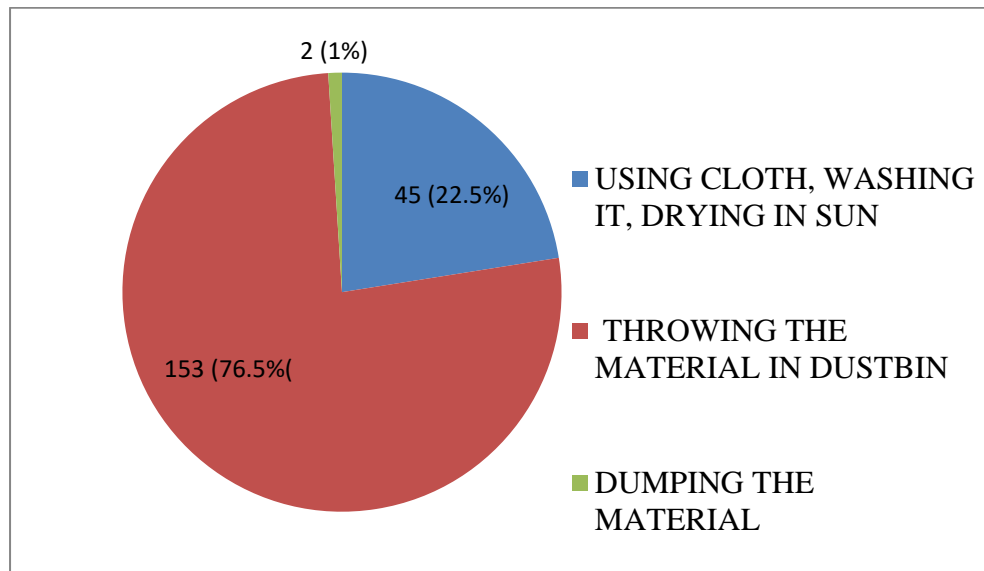
hygiene practices. Around 28 (14%) of participants faced problems during washing their clothes. Facility of separate bathroom was present in 149 (74.5%) cases while rest 51 (25.5%) didn't have separate bathroom facility. All participants were regular about taking bath and washing hands, but 190 (95%) study subjects used soap and water in washing hands while remaining 10 (5%) used only water for

washing hands during menstruation. Around 197 (98.5%) study subjects were regular in cleaning their external genitals while other 3 (1.5 %) was not and 167 (83.5%) participant cleaned their external genitals with soap and water while remaining 33 (16.5%) participant clean their external genitals with only water.

**Table 4: Distribution of respondents according to their hygienic practice during menstruation**

Hygienic practice during menstruation		Frequency (%)
Daily bath	Yes	200 (100)
	No	0 (0)
Facility for separate bathroom available	Yes	149 (74.5)
	No	51 (25.5)
Hand washing	Regular	200 (100)
	Irregular	0 (0)
Hand washing with	Water only	10 (5)
	Soap and water	190 (95)
Cleaning of external gentiles	Regular	197 (98.5)
	Irregular	3 (1.5)
Cleaning of external gentiles with	Water only	33 (16.5)
	Soap and water	167 (83.5)

On asking practices regarding disposal of used sanitary product, it was seen that 153 (76.5%) study participants throwing the sanitary material in dustbin, while 45 (22.5%) participants who use cloth during menstruation washed it and dried it in sunlight while only 2 (1%) participant dumping the used sanitary material (figure 3).



**Fig 3: Distribution of study participant according to practice of disposing used sanitary product**

**Discussion**

In present study, it was seen that majority of participants i.e. 81% had regular menstrual cycle pattern and 19% had irregular menstrual cycle. Study done by Vijayakeerthi et al found similar finding, 84% participants had their periods every month regularly while 16% had irregular pattern of menstruation [12]. Similar finding was also observed in study by Sahithi et al, 85% had regular menstrual cycle [13]. Around 7% participants mostly from rural area believe that menstruation is a disease, while remaining 93% participants correctly said menstruation is not a disease. Nair et al in their study showed 11% participants had similar belief [14]. Similar finding was also observed in study by Kailasraj et al, 7.6% believe menstruation is a disease[15]. More than two third participants(70%) get the information regarding menstruation or having a talk about

menstruation with their mother, around 59% participants gets the information from their sister, 65.5% participants gets information from their friends, 16% participants gets information from their teachers and around 10.5% gets the information from husband. Nair et al in their study showed 57.5% of participants obtained the information regarding menstrual hygiene from their mothers, while around 20% obtained information from peers and 7% obtained information from teachers [14]. Sinha et al also found similar finding, majority of participants 62.7% get information from their mother, 1.9% from their friends and 1.9% from teachers [16]. Similar finding also observed by Santra et al, in majority of cases 53.1% source of information were mother [17]. Neelkanth et al also found similar finding, 77.7% girls obtained the information regarding menstrual hygiene from their mothers [18]. 94% participants in our

study were aware about disposable sanitary pads, 35.5% have heard of Tampons, 35.5% have heard of reusable pads and only 26.5% have heard of menstrual cup. It was also seen that awareness regarding these sanitary products is very poor in rural participants as compared to participants from urban area. In a study by Gupta et al it is found that a majority of participants had knowledge about the use of sanitary pads [19]. 75% participants uses sanitary pads during period, around 31.5% participants uses cloth or towel but sometimes some of the these participant also use sanitary pads during period, only 0.5% participant use tampon, 0.5% use toilet paper and 0.5% use mattress during menstruation. None of the study participants uses menstrual cup, cotton or any other natural materials during menstruation. Vijayakeerthi et al in their study found that 68.8% of participants used disposable sanitary pads, 21.7% of the women used old cloth and 9.5% used both cloth and pad for managing menstruation [12]. Similar finding also observed by Santra et al, 65% used only sanitary pad and 30% used only cloth pieces and 5% used both sanitary pad and cloth piece during menstruation [17]. Sinha et al found 60.7% participants used sanitary pad, while 25.4% used cloth only and 13.7% used both [16]. Neelkanth et al found quite lower finding about sanitary pad usage 58.3%, 26.39% used cloth and 3% used both [18]. Regarding frequency of changing sanitary material, only 6% changes their sanitary pads once a day, 31.5% changes their sanitary pads twice a day, 37.5% changes their sanitary pads thrice a day, 17.5% changes their sanitary pads four times a day, 5.5% changes their sanitary pads five times a day and only 2% changes their sanitary pads six times a day. Majority of participants change the material 2-4 times in a day depending upon bleeding and first three days of menstruation. Vijayakeerthi et al in their study also found similar finding, majority of participants i.e. 88.4% of women had the habit of changing pad 2-3 times/day[12]. Santra et al found that more than half of the women (53.4 %) changed napkins  $\geq 3$  times per day in first 4 days of menstruation [17]. In present study it was seen that only 13% participants faced problem due to their current method of sanitation. Around 80% didn't have any problem of water facility; remaining participants had some problem with facility because of that they were not able to follow menstrual hygiene practices. Around 14% of participants faced problems during washing their clothes. Facility of separate bathroom was present in 74.5% cases while rest 25.5% didn't have separate bathroom facility. All participants were regular about taking bath and washing hands, but 95% study subjects used soap and water in washing hands while remaining 5% used only water for washing hands during menstruation. Around 98.5% study subjects were regular in cleaning their external genitals while other 1.5 % was not and 83.5% participant cleaned their external genitals with soap and water while remaining 16.5% participant clean their external genitals with only water. Vijayakeerthi et al in their study showed all the study participants had the habit of taking bath every day during menstruation, 53.7% had the practice of cleaning external genitalia frequently and 61.4% had the habit of washing their hand and genitalia only with water while 25.8% washed their hands with soap and water [12]. Kailashraj et al found 86.3% were taking bath daily, 74.4% used only water for washing external genital while 19.5% used soap and water and only 6.1% used water with antiseptic [15]. Study done by Gupta et al also found that > 80% of the subjects practiced cleaning of external genitalia daily [19]. Neelkanth et al found that only 41.11% participants were taking bath daily, 79.18% were washing genitals with water and soap and only 15.73% washing genitalia with plain water [18]. Santra et al also found similar finding only 4% individuals did not take regular bath during menstruation [17]. Regarding disposal of used sanitary product, it was seen that 76.5% study participants throwing the sanitary material in dustbin, while 22.5% participants who use cloth during menstruation washed it and dried it in sunlight while only 1% participant dumping the used sanitary material. Sinha et al also found similar finding, 80.3% threw absorbent in routine waste after use [16] while Vijayakeerthi et al

found 78.6% of respondents had the practice of burning or burying the absorbent and only 21.4% disposed in domestic waste [12]. Kailashraj et al also found that 41.8% participant throw in dustbin, 31.1% used burning method and 13.2% buried in soil [15].

#### Conclusion and recommendations

Based on the finding of present study, it can be concluded that the majority of the participants use sanitary pads and they have proper knowledge and awareness about menstrual hygiene. While in rural area majority of participants still use clothes instead of sanitary material and they had lack awareness about hygiene practice and majority of them didn't follow menstrual hygiene practices. Menstrual hygiene can be promoted in the community and in schools particularly in Rural area. It is best to start with adolescent girls although other women in the reproductive age group also benefit from the information and access to sanitary products. Health education must be given to all women to gain adequate knowledge about menstruation and its management. It is really important to educate females about correct menstrual hygiene practices, as well as getting rid of the taboos encircling the issues, from a tender age itself. All women must be encouraged to use the sanitary pads for which these pads should be affordable to every women of our society. Maintenance of clean sanitation facilities and regular cleaning of genitals is necessary to prevent diseases occurring due to poor menstrual hygiene.

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