Original article:

A Cross-sectional Observational study of Menstrual Hygiene and Menstrual Irregularities among Adolescent Girls attending Gynaecology OPD of Burdwan Medical College

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Abstract

Introduction: Menstruation is a physiological cyclical process which starts from menarche and ends in menopause. Adolescence is the stage of reproductive development to adulthood and menstruation in adolescents is surrounded by various psychological and religious barriers. Menstrual health and hygiene (MHH) encompasses menstrual health management (MHM) as well as imparting education and knowledge, availability of safe and affordable sanitary materials, safe and hygienic disposal, access to washing facilities and ensuring positive social norms.

Material and Methods: An OPD based cross-sectional study was conducted in adolescent girls who have attained menarche. A semi-structured preformed questionnaire was explained in their own language. Girls suffering from any serious gynaecological issue were excluded.

Observation and results: After tabulating the information collected from the interview, we found most of our study subjects are of rural origin, one fourth do not have access to sanitary pads and one fifth to sanitary latrine or washroom. Most of them had no awareness or knowledge about adolescent health and menstruation before menarche. Almost hundred percent of the subjects had suffered one or the other social taboos.

Conclusion: Access to safe and dignified menstruation without shame or barriers is a need of the day for girls. This study shows that many girls are not able to manage their menstrual health and hygiene with ease and dignity at home or at school due to a combination of lack of knowledge and awareness, inaccurate information, and poor facilities to access and dispose absorbent materials. In addition, myths and taboos often contribute. Conclusion: It is very important to educate girls about the physiological facts of menstruation, wipe off false taboos, and lead them to proper hygienic practices to safeguard themselves against reproductive tract infections. Different Flagship programmes have already been started by Government

agencies. Various schools, anganwadi health centers, social welfare foundations, and nongovernment organizations should stand to disseminate awareness about menstrual hygiene and easy access to absorbent dispenser and disposer.
Key Words: Menstruation, Adolescent, Menstrual Health and Hygiene (MHH), Menstrual Hygiene Management (MHM).

Introduction

Menstruation, also termed period or bleeding is the process in a woman of discharging blood and other materials from the lining of the uterus through the vagina at about one monthly interval from puberty until menopause except during pregnancy.The average age for a girl to get her first period is 12, but the range of age is about 8 to 15 years. Women usually have periods until about ages 45 to 55. Most periods vary somewhat, the flow may be light, moderate or heavy and can vary in length from about 2 to 7 days. With age, the cycle usually shortens and becomes more regular. Some women get symptoms leading up to and during menstruation, for example abdominal cramps, pain, bloating or swelling in abdomen, constipation before period, diarrhoea during period, acne, tiredness, breast swelling & tenderness and mood changes.

Adolescence is the stage of physical, psychological, and reproductive development that generally occurs during the period from puberty to adulthood. The World Health Organization defines adolescence as individuals between 10 and 19 years of age.[1]. Adolescence in girls has been recognized as a special period in their life cycle that requires specific and special attention. This period is marked with onset of menarche.[2]

Menstruation is surrounded by various psychological and religious barriers due to lack of knowledge about the scientific process of menstruation. Many girls are unaware of what actually happens during menstrual cycle and it is linked with several preoccupations, perceptions and practices within the community, which result in adverse health outcomes.[3]

Menstrual hygiene management (MHM) refers to management of hygiene associated with the menstrual process. WHO and UNICEF Joint Monitoring Programme (JMP) for drinking water, sanitation, and hygiene has used the following definition of MHM: '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.[4]

Menstrual health and hygiene (MHH) encompasses 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 summarised by UNESCO as accurate and timely knowledge; available, safe and affordable materials; informed by comfortable professionals; referral and access to health services; sanitation and washing facilities; positive social norms; safe and hygienic disposal and advocacy policy.

Parents at homeand teachers at school can leave a positive impact to influence the minds of children regarding scientific basis of menstruation and maintenance of hygiene during menstruation. But the issue of menstrual hygiene is seldom being discussed either by parents or in the school curriculum although it is included in Millennium Development Goals. Therefore, it is important to study the current practices of MHM among adolescent girls to understand the current situation of menstrual hygiene practices, so that future interventions can be planned accordingly.[5]

With this preamble, we conducted a study among adolescent girls attending Gynaecology OPD of Burdwan Medical College during April to December, 2019 to assess the knowledge, attitude and practices of menstrual hygiene, menstrual pattern and problems the restrictions practiced by adolescent girls during menstruation.

Material and Methods

A hospital OPD based cross-sectional study was conducted in adolescent girls who have started menstruation, between 10 -19 years from different location of Burdwan, West Bengal. The purpose of the study was clearly explained to each subject attending Gynaecology outpatient section and after that who were willing to participate, were selected for further study. The girls were asked to sign a consent form before participating in the study. A semi-structured self-prepared preformed questionnaire was explained in their own language, which dealt with different parameters such as demographic parameters, menstrual patterns and irregularities, knowledge and practices of hygiene during periods and taboos in relation to menstruation. Patients, who were suffering from any serious gynaecological issues, were excluded from the study. This cross sectional observational study was conducted among 104 adolescent girls by systemic random sampling during the period between April to December, 2019. General ethical principles were followed.

Observation and Results

Most of the subjects were from rural area (76.9%), rest are from semi urban and urban areas (15.38% and 7.69%, respectively). More than two third of them were from hindu religion (76%). 82% of our study subjects are from lower socio economic strata. More than 52% of the girls have gone to higher school, about 37% to lower school and the rest had no schooling. Seventy out of total number of subjects had sanitary latrine and washroom in their household, twenty had no sanitary latrine and there were fourteen girls who were not habituated to use sanitary latrine. (Table-1)

Regarding menstrual pattern, 67.3% had menarche after the age of twelve years, and the rest had below twelve years. According to their history, slightly above fifty percent had grossly abnormal pattern of cycle (52.9%) yet the rest experienced it more or less normal (47.1%). Seventy nine out of hundred and four regularly used sanitary napkins and the rest unfortunately used to use household cotton pads. Practice of Vaginal douching was found to be quite uncommon i.e. in twenty nine out of total subjects (27.9%) but at the same time, knowledge as well as practice of washing external genitalia with water or soap is quite common among them, i.e. ninetyfive out of hundred and four (91.3%). Only 8.6% are unaware or ignorant about the cleanliness and washing genitals (Table-2)

Surprisingly 81.7% of the girls stated that they had no awareness or knowledge of menses before menarche. Only nineteen girls had the awareness which was imparted by their parents (in twelve girls) and by thei teacher (in seven girls). 42.3% admitted that they had topics on normal menstruation in their school curriculum but the maximum accepted that they had no idea about it. (Table-3)

Eightyfive girls had free access to sanitary napkin dispenser, either at school (seventyfive) or other place i.e. community health centre. From the interview it was also found that 76.9% had knowledge and also access to proper disposal of sanitary napkins and the rest dispose it unhygienecally (23.1%). Another thing we found to be very distressing was that, 91.3% of girls admitted a lot of false belief, and fear about menses (Table-3)

While tabulating the interview questionnaire we found that most of the girls agreed about taboos and stigmas in relation to menstruation, for example restrictions to attend school or outdoor game (52.8%), to attend religious

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facilities and ceremonies (96.1%), to wash body or shower or bathe (8.65%), to sleep with family members (25%), to access to certain foods (11.5%) etc. which make the society quite hostile for them. (Table-4)

From the clinical history we have found a lot of irregularities in relation to cycle length, duration of flow, amount of blood loss, pain during menses etc., tabulated in Table 5.

Table: 1 Demography

Residence	Rural	80(76.9%)	Semiurban	16(15.38%)	Urban	08(7.69%)
Religion	Hindu	76(73.1%)	Muslim	20(19.2%)	Others	08(7.69%)
Sanitary Latrine/ Washroom	Available	70(67.3%)	Not available	20(19.23%)	Do not use	14 (13.46%)
Socio economic status	Upper	05(4.8%)	Middle	17(16.3%)	Lower	82(78.8%)
Education	Higher school	55(52.9%)	Lower school	37(35.6%)	No schooling	12(11.54%)

Table :2 Menstrual Practices

Age of Menarche	<12 yr	34(32.7%)	>12 yr	70 (67.3%)
Menstrual Pattern	Grossly normal	49(47.1%)	Grossly abnormal	55 (52.9%)
Practice of Absorbent material	Sanitary Napkin	79 (75.96%)	Household Cotton Pads	25(24.04%)
Practice of Vaginal Douching	Yes	29 (27.9%)	No	75(72.1%)
	Medicated Douch	04 (13.8%)		
	Indegenous Douche	25(86.2%)		
Washing external genital	Yes	95(91.3%)	No	09(8.6%)
	Soap-water	30 (31.6%)		
	Plain water	65 (68.4%)		

Table: 3 Awareness and Knowledge

Awareness/ Knowledge of menses before menarche	Yes19 (18.3%)		No	85 (81.7%)
	By Parents	12 (63.1%)		
	By Teacher	07 (36.8%)		
Normal/ abnormal menstruation in school curriculun	Yes	44 (42.3%)	No	60 (57.7%)
Access to sanitary napkin dispensor	Yes	85 (81.7%)	No	19 (18.3%)
	School	75 (88.2%)		
	Other places	10 (11.8%)		
False belief/ fear/ social stigma about menses	Yes 95 (91.3%)		No	09 (8.65%)
	False belief	70 (73.7%)		
	Fear	10 (10.5%)		
	Stigma	15 (15.8%)		
Proper disposal of Sanitary Napkins	Yes	80 (76.9%)	No	24 (23.1%)

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Table 4: Taboos in relation to Menstruation

Restrictions to attend School or Outdoor game	55 (52.8%)
Restrictions to attend Religious facilities/ Ceremonies	100 (96.1%)
Restrictions to wash body/ shower/ bathe	09 (8.65%)
Restrictions to sleeping with family members	26 (25%)
Restrictions to access to certain foods	12 (11.5%)

Table 5: Irregularities of Menstruation

Cycle Length (days)	<21	20 (19.2%)
	21 – 27	15 (14.4%)
	28 – 35	31 (29.8%)
	>35	38 (36.5%)
Duration of flow (days)	<4	20 (19.2%)
	5 -6	70 (67.3%)
	>7	14 (13.4%)
Menstrual Blood Loss	Scanty	20 (19.2%)
	Average	59 (56.7%)
	Heavy	25 (24%)
Dysmenorrhoea	No	39 (37.5%)
	Mild	55 (52.88%)
	Severe	10 (9.61%)
Regularities of periods	Regular	49 (47.1%)
	Irregular	55 (52.9%)

Discussion

Access to safe and dignified menstruation without experiencing stress, shame or unnecessary barriers to information or supplies is a fundamental need for women and girls. This study shows that many girls are not able to manage their menses and associated hygiene with ease and dignity. Many cannot practice good menstrual health and hygiene at home or at school due to discriminatory social environments, inaccurate information, poor facilities, and limited choices of absorbent materials. In addition, myths and taboos often promote a high level of secrecy about the basic menstruation facts – leading to shame and exclusion. The WHO (World Health Organization) and UNICEF (United Nations International Children's Emergency Fund) advice WASH (water, sanitation, and hygiene) facilities at school [6]. In India, the Swachh Bharat: Swachh Vidyalaya campaign has been launched in every school to provide WASH facilities, which includes soap and water for sanitation and private space for changing and disposal of menstrual absorbents. MHM has been made an integral part of the Swachh Bharath guidelines. Efforts are being made to provide low-cost sanitary napkin vending machines and incinerators to dispose MHM products at schools [7].

In our study we have found 70% of our study population who are menstruating regularly are above the age of 12 years. In a study from urban slum area in Maharashtra in 2017, 72% found between the age group of late

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adolescents (15–19 years) which was similarly observed in a study in Kolkata in 2012 where 57% girls belonged to 15–19 years age group [8]. A significant number of girls were school dropouts(11.54%). In their cases, their mothers were the person responsible for delivering knowledge. Therefore, educational status of the mother played a crucial role in influencing the adolescent girl in the family, in a study conducted among school-going adolescent girls in Nagpur only 7.49% of the mothers were illiterate[9]

Unhygienic practices during menstruation can lead to RTI (reproductive tract infection), UTI (urinary tract infection), and STD (sexually transmitted diseases), PID (pelvic inflammatory disease), Vulvo-vaginitis and even Cervical cancer later in life. In our study we have found 75.96% are habituated with the use of sanitary napkins whereas 24.04% used house hold fabric. Similarly, in a study in Delhi, 63.3% of the girls used sanitary pads, whereas cloth was used by 25.3%. The practice of using pads was found less than that reported from a study by Patavegar *et al*. in which 85.92% used sanitary pads[10**]**. Many of the girls preferred cloth pieces and the usual practice was washing the cloth pieces and then drying them in the sun in a private area so that nobody can see them. Among those who used cloth pieces, the frequency of washing or reusing the cloth is an important contributor to reproductive tract infections. In a study conducted among girls in Kenya, cotton wool, plastic bags, mattresses, dried leaves, cow dung, and paper from school classrooms were used.[11]

Personal hygiene practices such as washing hand and external genitalia, bathing, and cleaning private parts regularly play a vital role in preventing RTI. In our study, 91.3% practiced genital washing , 31.6% of them with soap water and 68.4% with plain water which was found to be similar to a study in which 28.5% girls used only water and 71.5% used both soap and water for washing.[12] In another study by Patle and Kubde, 43.75% of the urban girls and 61.96% of the rural girls used water and 56.25% of urban girls and 38.04% of rural girls used both soap and water to wash hands.[13]. We also found 27.9% used vaginal douch, most of them are indigenous (86.2%) and rest medicated.

After tabulation we have found 18.3% of our study population have acquired awareness and knowledge of menses before menarche and 42.3% stated that they had normal or abnormal menstruation in school curriculum. Patavegar BN et al found in most (41%) cases the first informant about menstruation was the girls' teacher. Majority (66%) of the girls reported that they are most comfortable receiving information on menstrual hygiene from their mothers. 44 % felt discomfort in menarche. Only 66.82% girls knew it to be a physiological process, 34% knew that path of urination and menstruation is separate, in the study by Patavegar BN et al.[10].

In our study, 81.7% of girls stated that they have access to sanitary napkin dispenser at school or other places. The Ministry of Health and Family Welfare, Government of India, introduced a scheme for promotion of menstrual hygiene among adolescent girls in the age group of 10-19 year in rural areas. The scheme was initially implemented in 2011 in 107 selected districts in 17 States wherein a pack of six sanitary napkins called "Freedays" was provided to rural adolescent girls for Rs.6. From 2014 onwards, funds are now being provided to States/UTs under National Health Mission for decentralized procurement of sanitary napkins packs for provision to rural adolescent girls at a subsidized rate of Rs 6 for a pack of 6 napkins. The ASHA will continue to be responsible for distribution, receiving an incentive @ Rs 1 per pack sold and a free pack of napkins every month for her own personal use.[14]

The adolescent girls should have proper knowledge and information about method of disposal of sanitary pads. In our study, only 76.9% of the girls used proper disposal technique of wrapping them into a dustbin. Dasgupta Aet al found 57.5% of girls in their study disposed the pad properly.[15]

Different restrictions due to social taboos were practiced by most of the girls in this study. Traditional practices and superstitions are followed due to lack of knowledge among adolescent girls and their families. Multiple restrictions were followed by every girl which included not attending school or outdoor games, not visiting temples, religious facilities and ceremonies, not entering kitchen, not to wash body, shower or bathe etc. Restrictions such as separation from the family during menstrual bleeding, not touching anyone in the family, and sleeping outside the house were also found to be practiced. Almost every girl followed some or the other restrictions. In another study carried out in slum and non-slum areas by Rokade and Kumavat, 77% of girls from slum area and 76.61% of girls from non-slum area practiced various types of restrictions, and the commonest restriction reported in both the groups was related to religious activity – 68% in slum and 70.16% in non-slum girls.[16]

Heavy menstrual bleeding (HMB) has been observed in 24% and duration of period more than seven days in 13.4%. Severe Dysmenorrhoea was found in 9.61% and mild in 52.88%. In a study by Rajasri G. Yaliwal et al in Karnataka, 12.2% of the respondents reported HMB.[17]. Other studies conducted in India show that HMB may be experienced in 4 to 22% of the respondents [18]. Painful Menstruation has been a common symptom experienced by almost 62.3% and 61.6% of the urban and rural girls, respectively in the above mentioned study [17].

Conclusion

Three broad reasons for poor menstrual hygiene among women in rural India are Economic– technical constraints like no access to affordable hygienic absorbent materials, poor access to privacy and hygienic sanitation facilities at school and home; Cultural factors like taboo, false belief and social stigma and Lack of knowledge, awareness and attitude toward healthy and hygienic practices. Flagship programmes have been initiated for adolescent hygiene under National Rural Health Mission (NRHM) for easy access to sanitary pads involving ASHA (Accredited Social Health Activists) workers and SABLA programme of Ministry of Women and Child Development to improve their nutrition and health status and to improve Adolescent Reproductive and Sexual Health (ARSH) and family and child care. MHM has been made an integral part of the Swachh Bharath guidelines. Efforts are being made to provide low-cost sanitary napkin vending machines and incinerators to dispose MHM products at schools [19]. However, the extent to which all these guidelines percolate down to the ground level has yet to be seen.This study revealed that MHM was not fully satisfactory among adolescent girls in the study groups although larger number of samples in different rural urban areas and slums in different districts need to be assessed to conclude further. But it is imperative to educate girls about the physiological facts of menstruation, wipe off false taboos, and lead them to proper hygienic practices to safeguard themselves against reproductive tract infections. Various schools, Anganwadi health centers, social welfare foundations, and nongovernment organizations should stand to disseminate awareness about menstrual hygiene, pattern, and problems

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