Original Research Article

# A community based study on menstrual hygiene among adolescent girls in an urban slum of Patna

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**Abstract**

**Aim:** To study the menstrual hygiene practices of adolescent girls residing in urban slums of Patna .**Material and Methods**: A community based cross sectional study of 65 adolescent(10-19 years) girls available with Anganwadi workers from ICDS centres were interviewed on a pre -designed semi structured and pre-validated questionnaire to collect data on menstrual hygiene over a period of 3 months(January to March 2017). **Result**: Out of 65 adolescent enrolled girls 58.8% girls consulted their mother for menstruation related issues and 47% faced social restriction during menstruation. 61% girls were using sanitary pads. Only 7% girls had safe and hygienic practice of throwing used clothes after single use. Use of sanitary napkins and religion were not significantly ($p>0.05$) associated while monthly family income and educational status were significantly associated**. Conclusion:** The menstrual hygiene practices were poor among girls with social restriction and taboos. Education about proper menstruation hygiene practices is essential to overcome these barriers.

**Key words:** Adolescent, menstrual hygiene, sanitary napkins, social restriction.



## Introduction

Adolescent belongs to vital age group not only because they are the entrant population to parenthood but also because they are threshold between childhood and adulthood. During puberty, the physical changes occurs which transform the body of child into that of an adult, changes in body size, and changes in body proportion. Menstruation is the first indication of puberty[1]. Menstruation Hygiene Management (MHM), practices related to menstrual hygiene during periods is a serious problem for adolescent girl in low and middle income countries (LMIC)[4]. Menstruation is still regarded as something unclean or dirty in Indian society[1].MHM is a serious problem for school going adolescent due to limited access to products (adsorbents) for sanitary facilities.

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This leads to girls dropping out of school as there is a lack of these basic facilities provided which make it difficult to manage their menstruation[5].The taboo and socio-cultural practices related to menstruation, such as not being allowed to visit holy places and entering the kitchen among other restriction make them feel socially ostracized.Some of the common tradition and unhygienic practices includes use of old clothes as pads after recycling and use of ash or straw endangering menstrual hygiene which has long term implication for their reproductive health[6]. Maintaining good hygiene of women during menstruation is of considerable importance, especially in term of increased vulnerability to reproductive tract infection (RTI)[7] India is a country of contrast, with extreme wealth, poverty and gender related disparities, which result in significant variation in health and social indicators among girls and women[8]. There is a empirical evidence that of the 113 million adolescent girls, 68 million attend about 1.4 million school, with poor MHM practices and cultural taboos considered to be impediments to their school

attendance[9-11]. Government of India now making efforts in this direction, the menstrual hygiene scheme was launches in 2011[12] in 107 selected district in 17 states wherein a pack of six sanitary napkin called "Freedays" was provided to rural adolescent girl for Rs.6 for a pack of 6 napkins. The ASHA will continue to be responsible for distribution, receiving an incentive at the rate of Rs. 1 per pack sold and a free pack of napkin every month for her own personal use[2]. In Bihar under Mukhyamantri Nari Shakti Yojna (MNSY), women of Phulwarisarif in Patna district are successfully running the sanitary napkin products unit under the brand name "Bharti"[3].To understand the consequences and importance of menstrual hygiene practices among adolescent girls, it is important to study the current practices, so that the future intervention can be planned accordingly. Therefore, the aim of our study was to assess the menstrual hygiene practices of adolescent girls residing in urban slum of Patna.

**Material and Methods**

A Community based cross-sectional study was conducted among adolescent girl in an urban slum of Patna. A list of all adolescent girls available with Anganwadi (ICDS) worker from ICDS centre was prepared and then the visit was made to the residence of each participant. A pre –designed, semi- structured and pre-validated questionnaire was used to collect data on menstrual hygiene of girls. A verbal consent was obtained from the parents or the legal guardian of the girls before the interview was concluded. The objective of the interview and its implication were explained to them and they were assured that confidentiality would be maintained throughout this research. A total of 65 adolescent girls (10-19 years) were interviewed by the investigator over a period of 3 months (January to March 2017). There were 7 adolescent girls that didn't participate because their homes were found locked or they didn't give consent to participate or unavailability at the time of visit.

**Statistical analysis**

All data wasentered in MS excel spreadsheet.Analysis was done by using SPSS latest version. Level of significance was set at $P<0.05$. Categorical variable was expressed as frequency and percentage.Proportion and means (Standard Deviation) were used for analysis. Groups were compared by the Chi-square test.

**Result**

Table 1 shows socio-demographic characteristics of study subjects. Out of 65 girls studied, majority were in age between 15 to 19 years. Among all these girls, 62 (95.3%) wereHindu's and 3 (4.7%) were Muslims. Most of the girls were educated above high school (44; 67.7%). In 51(78.4%) out of 65 adolescent girls studied, the menstruation had already started. The mean (±SD) age of menarche in the study subject was 11.4±5.3 years. 44 (86.2%) out of 51 girls reported regular periods and 40 (78.4%) out of 51 had average flow (each period lasting 3-5 days) during periods.

**Table 1: Socio- demographic characterstics of study subjects**

| Socio-semographic characterstics | Frequency (%) n=65 |
|---|---|
| **Age** | |
| Early adolescence( 10-14 years) | 16 (24.6) |
| Late adolescence (15-19 years) | 49 (75.3) |
| **Religion** | |
| Hindu | 62 (95.3) |
| Muslim | 3 (4.7) |
| **Caste** | |
| General | 41 (63) |
| Scheduled caste | 21 (32.3) |
| Other backward class | 3 (4.7) |
| **Educational status** | |
| Illiterate | 3 (4.6) |
| Middle level | 18 (27.7) |
| High school | 16 (24.6) |
| Secondary level | 19 (29.2) |
| Graduation | 9 (13.9) |
| **Type of family** | |
| Nuclear | 45 (69.2) |

| | |
|---|---|
| Joint | 20 (30.8) |

In table: 2 it's shown that more than half (30; 58.8%) of the girls used to consult their mothers for menstruation related issues and 47.1% girls practiced restriction during menstruation.

**Table 2: Distribution of adolescent girls according to restriction imposed during menstruation.**

| **Restriction** | **Frequency (%)** |
|---|---|
| Was not restricted (N=51) | 27 (52.9) |
| Restricted for | 24 (47.1) |
| Praying or Going to temple/religious places (n=24) | 20 (83.3) |
| Cooking/going and working in kitchen | 7 (29.1) |
| Eat certain food items | 2 (8.3) |
| Playing or doing exercise | 6 (25) |
| Routine household work | 5 (20.8) |
| **Whom did you consult for menstrual related issues** | |
| Mother | 32 (62.7) |
| Doctor | 4 (7.8) |
| ANMs | 1 (1.9) |
| School Teacher | 1 (1.9)) |
| Friends | 1 (1.9) |
| None | 12 (23.5) |

Table: 3. it can be seen that 38 out of 51 girls used sanitary pads during menstruation. A majority 41 (80.3%) out of 51 girls threw absorbent in routine waste after use. Out of 13 girls who reused cloth, 76.9% reported that washroom facilities were available at home for cleaning cloths used as absorbent. In case of reused cloth, the place of its drying which were observed was outside the house in sunlight 1(7.7%), 10 (76.9%) dried them inside the house and 2 (15.4%) girls dried them outside in dark places.

**Table 3 : Distribution of adolescent girls according to their hygienic practices during menstruation**

| **Hygienic practices during menstruation** | **Frequency (%)** |
|---|---|
| **Type of absorbent (n=51)** | |
| Sanitary pad only | 31 (60.7) |
| Cloth only | 13 (25.4) |
| Both (Sanitary pad + Cloth) | 7 (13.7) |
| **Change of the cloth during a period (n=20)** | |
| Washed the cloth and reuse | 13(65) |
| Disposed off after single use | 7(35) |
| **Method of disposal of pad or cloth (n=51)** | |
| Burn it | 10 (19.6) |
| Throw it in routine waste | 41(80.3) |
| **Wash room facilities for cleaning cloth used as absorbent at home (n=13)** | |
| Yes | 10 (76.9) |
| No | 3 (23.1) |
| **Places of drying (n=13)** | |
| Outside house in the sunlight | 1 (7.7) |
| Inside house | 10 (76.9) |
| Outside house without sunlight | 2 (15.4) |
| **Daily bath during menstruation (n=51)** | |
| Yes | 46 (90.1) |
| No | 5 (9.8) |

Table 4 shows that use of sanitary napkins and religion were not significantly (p>0.05) associated with each other while monthly family income, educational status was significantly associated with use of sanitary napkins.

**Table 4:Distribution of usage of sanitary napkins among different variables**

| VARIABLES | SANIARY NAPKIN (N=51) | | |
|---|---|---|---|
| | **Using N=38(%)** | **Not using N=18 (%)** | **P value** |
| **Religion** | | | |
| Hindu | 37 (35.0) | 10(11.9) | 0.17 |
| Muslim | 1 (2.9) | 3 (1.0) | |
| **Monthly Family income** | | | |
| > 7700Rs | 11(14.6) | 8(4.8) | 0.035 |
| <7700 Rs | 27(23.8) | 5(8.1) | |
| **Problem during menstruation** | | | |
| No problem | 19 (20.1) | 8 (6.8) | 0.47 |
| Dysmenorrhea present | 19 (17.8) | 5( 6.1) | |
| **Educational status** | | | |
| Illiterate | 1 (1.6) | 1 (0.3) | 0.01 |
| Primary | 5 (8.0) | 5 (1.9) | |
| High School | 10(11.2) | 4 (2.7) | |
| Secondary | 16 (14.4) | 2 (3.5) | |
| Graduation level | 21 (17.8) | 1 (4.3) | |

**Discussion**

In the present study, the mean age of menarche in girls was 11.4±5.3 years. This was lesser than that reported in earlier studies. A study by Patavegar et al among school going adolescent girls in urban Delhi in 2014 reported mean age of menarche 12.7±1 years[13]. Similar study by Dinesh Kumar et al reported it as 13.02 years and Nair et al from Delhi reported it to be as 13.6 years[14,15].It was established that menarche is also influenced by factors such as socio-economic class and genetic factor[16].44(86.2%) out of 51 reported regular periods (3-5 days). The result are similar to a study by Juyal et al[18] conducted in Dehradun in 2014 among unmarried adolescent girl in which 74.6% reported having an average flow of 3-5 days and around two third having normal bleeding. The present study highlighted the medical problem faced by adolescent girl during menstruation. It was observed that dysmenorrhea was experienced by 47% of the girls. But other studies have reported higher prevelance of dysmenorrhoea among adolescent girl. In a study by Juyal R et al it was observed among 64.9% girls whereas 63.7% prevalence was reported in a study by Nair et al among rural unmarried adolescent girls in East Delhi[15,17].62.7%of the girls consulted mother's first for any of their menstrual related health issue whereas doctor's was consulted by only 7.8%.This is in contrast to observation from a study by Paul et al from 5 districts each from 5 states of India (Delhi, Karnataka, Assam, Madhya Pradesh and Uttar Pradesh) in which doctor's were approached by maximum (78%) girls for their menstrual related morbidity[18]. Different restriction where imposed on girls during menstruation period. About 47.1% girls were imposed with different restrictions during menstruation.83.3% girls were not allowed to pray or visit temple, 29.1% girls were not allowed to stay in kitchen or cook food and 8.3% were not allowed to eat certain food items like curd, pickles ,etc. The finding were consistent with other studies[13,19-21]. The consideration menstruation as social taboo is so strong that even literate females find it difficult to go against the restrictions. Majority (60.7%) of the girls were using sanitary pads while cloths were used by 25.4% and cloths and pads both were used by 13.7% girls. The practice of using pads is less than that reported from study by Patavegar et al from Delhi (85.92%) and Shamima et al (82.2%) from Bengal but similar to a study done by SubashThakre (60.58%) in northern India[13,19-21].Reusing the cloth after wash was practiced by 65% girls more than what has been reported by Patavegar et al (11.82%)[13].A safe and hygienic practice of throwing the used cloth after single use was done by only 7% girls. Regarding drying of washed cloth, 76.9% dried the cloth inside the house

after washing which is not a good practice since exposure to sun kills germs and prevent infections. This practice as observed in the current study was poor than that reported by Patavegar et al where a lesser number of girls (44.25%) used to dry cloth inside the house and rest of the girls dried it outside in the sun[13]. Approximately 80.3% girl enrolled in the study reported to throw used pads and cloths along routine waste. The link between socioeconomic status and reproductive health has been established before, and it is plausible that increased wealth is associated with overall better hygiene resulting in lower susceptibility to genital infection[22]similar to current study where association between good menstrual hygiene practices and socioeconomic status has been established ($p<0.05$).

**Conclusion**

The overall results from our study conclude that though the prevalence of dysmenorrhea was less but the menstrual hygiene practices were poor among girls, they had to face restrictions and social taboos related to menstruation. .Education to girls about the facts of menstruation, physiological implications, significance and proper hygienic practices during menstruation is the need of the hour. It is also required to bring them out of traditional beliefs, taboos, misconceptions and restrictions. Focus group discussions, mass media campaigns, and inclusion of sex education in schools are required to overcome taboo aspect of menstruation. All mothers should be encouraged to break their inhibitions about discussing with their daughters regarding menstruation and menstrual hygiene. Menstrual hygiene scheme run by Government of India should be implemented effectively and regular evaluation of the same is required.

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