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Research Article

Menstrual hygiene practices among slum adolescent girls

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ABSTRACT

Background: Menstruation, though natural process, still regarded as something unclean or dirty in Indian society and linked with several misconceptions and practices which results in adverse health outcomes. Objectives of the study was to assess the menstrual hygiene practices and utilization of health care services by adolescent girls residing in slum dwellings.
Methods: A community based cross sectional study was conducted in adolescent girls residing in slum area of Karad city in year 2014. A total of 230 girls were interviewed by using pre- tested structured questionnaire, elicits information relating to demographic features, menarche age and menstrual hygiene practices. Data were statistically analyzed into frequency percentage distribution and chi-square test was used to determine the statistical association.
Results: Maximum, 70.4% girls were in age group 14 to 16 years with mean age 14.8 years. Maternal illiteracy reported was 73% with max, 77.8% families belonged to economic class V. The mean age at menarche was 12.8 years with maximum, 70% had history of regular menstrual cycle. Out of 230 girls, 12.6% were practiced disposable adsorbent sanitary napkins whereas 87.3% practiced reusable cloth materials. Higher percentages of girls, 77.3% were practiced an insanitary method of disposal of materials and practices of personal hygiene including bath during menstruation and cleaning of external genital parts followed by 95.2% girls respectively. The rate of utilization of ICDS and sub-center services was 16.9% and 27.2% respectively. Advanced age and education of girls, mother's education and economic class are significantly associated with use of sanitary napkins ($p<0.05$).
Conclusions: Present study showed overall poor practices of menstrual hygiene in slum adolescent girls. Formal as well as informal channels of communication need to be emphasized for the delivery of information pertained to menstrual hygiene through organized community efforts. Institutions and organizations at community level should be strengthened for effective delivery of health and nutrition care services for overall better health of community beneficiaries.

Keywords: Menstrual hygiene, Practices, Adolescent girls, Slum habitants

INTRODUCTION

Menstruation is a natural part of women's reproductive cycle. However, in most parts of the world, it remains a taboo and is rarely talked. Cultural practices and taboos around menstruation negatively impact the lives of adolescent girls and women, and also reinforce gender inequities and exclusion.[1] Adolescent girls constitute a vulnerable group, particularly in India where female child is neglected as indicated by sex ratio. Menstruation, though natural process, still regarded as something unclean or dirty in Indian society and linked with several misconceptions and practices which results in adverse health outcomes. Moreover, studies have proved a direct link between poor menstrual hygiene and urinary or reproductive tract infections and other illnesses.[2]

Women and girls of reproductive age need access to clean and soft absorbent sanitary products and practice of cleaning of genital area during menstruation. Poor personal hygiene during menses, use of unclean napkins or cloth napkins results in harboring of micro -organisms causing reproductive and urinary tract infections. Menstrual hygiene and management is an issue that is insufficiently acknowledged and has not received adequate attention. Very few studies have included the aspects of menstrual practices prevalent among young girls. Hence, in recent years menstrual hygiene has got the attention of researchers.[3,4]

Good hygienic practices such as the use of sanitary pads and adequate washing of the genital area are essential during menstruation. Women and girls of the reproductive age need access to clean and soft, absorbent sanitary products which can in the long run, protect their health.[5]

The United Nations millennium development goal 2 and 3 directly focused on menstrual hygiene and management for universal education, and on gender equality and women empowerment.[6] However, less attention was paid on said issues in developing countries and even the literature on gender mainstreaming in the sanitary section is of silent.[7] It is a right of women and girls to have necessary knowledge, facilities and environment to manage menstruation hygienically with dignity. In Indian context, there are scare data on menstrual practices among adolescent girls due to population diversity and cultural practices.

It was therefore considered as relevant to investigate the menstruation hygiene practices and utilization of health care services by adolescent girls residing in slum area. The data obtained are beneficial for planning a program for improving the awareness and hygienic practices during menstruation for promoting quality of life in slum women and girls populations.

METHODS

A community based cross sectional study was conducted among adolescent girls residing in Slum area of Karad city under the field practice area of Krishna Institute of Medical Sciences Karad, India in year 2014. The study subjects were all the adolescent girls in age group of 12 to 19 years who attained menarche.

Sample size includes a total of 230 adolescent girls out of a total 246, according to inclusion criteria of study and they were interviewed by using pre- tested structured questionnaire.

The study tool elicits information relating to demographic features, menarche age and menstrual hygiene and practices etc. The data was collected by researcher with the help of supporting staff from Urban Health Training Centre (UHTC). House to house survey was carried out and information was obtained from study subject in the presence of staff nurse and mother. If mother was not available during interview then a family female member was considered.

Inclusion criteria

Resident of Karad urban slum area, attained menarche, unmarried, present during study survey, ready to participate and absence of any other health problems (superseding or antecedent).

Ethical consideration

Study design was approved by institutional ethical committee and all participants gave informed consent.

Data analysis

Data so collected were compiled in MS Excel and analyzed into frequency percentage distribution in tabular form. Chi-square test was used to assess the statistical association between menstrual hygiene practices and demographic factors.

RESULTS

Table 1: Demographic distribution of adolescent girls (n= 230).

Demographic distribution	Frequency (%)
Age (years)	
<13: (Early Adolescent)	27 (11.7%)
14 - 16: (Adolescent)	162 (70.4%)
>16: (Late Adolescent)	41 (17.8%)
Education	
No schooling	36 (15.6%)
Primary	75 (32.7%)
Secondary	110 (47.6%)
Higher secondary	09 (3.9%)
Mother's Education	
Illiterate	148 (64.3%)
Primary	64 (27.8%)
Secondary	15 (6.5%)
Higher secondary	3 (1.3%)
Family Income (Rs.)/month (BG Prasad Modified)	
Class V	179 (77.8%),
Class IV	51 (22.1%)
Class III	Nil
Class II	Nil
Class I	Nil

A total of 230 adolescent girls were interviewed in present study were in age group ranges from 11 to 19 years with mean age of 14.8 years.

Table 1 depicts that maximum, 70.4% girls were in age group 14 to 16 years with mean age 14.8 years. Out of

total 230 girls, 15.6% were not enrolled into the school, whereas high illiteracy, 73% was found among mothers. Maximum, 77.8% families were belonged to Socio-Economic Class V i.e. BPL category according to modified BG Prasad classification (March 2014 AICPI).

By recall method, low and high age at attainment of menarche was 11.6 and 16 years respectively with mean age at menarche 12.8 years. All the girls attained menarche by the age of 16 years and of which maximum, 66.9% attained menarche by the age of 13 years. Out of total 230 girls, 70% had history of regular menstrual cycle; however 63.9% had menstrual flow of less than three days of duration (Table 2).

Table 2: Age at menarche and pattern of menstrual cycle.

Menstrual variables	Frequency (%)
Age at menarche (years)	
≤13	154 (66.9%)
14-16	67 (29.1%)
≥16	9 (3.9%)
Menstrual cycle	
Regular	173 (75.2%)
Irregular	57 (24.7%)
Duration of menstrual flow (days)	
≤3	147 (63.9%)
4-5	58 (25.2%)
≥5	25 (10.8%)

According to table 3, it is evident that out of total 230 interviewed girls, only 12.6% were practicing disposable adsorbent sanitary napkins; however maximum, 87.3% were using household non-disposable, non-adsorbent cloth (linen) materials. Higher percentage of girls, 55.6% was used 2 - 3 pads / day during their menstrual period.

The reuse of material was practiced by maximum, 87.3% girls and of which only 18.4% were use soap (detergent) and water to clean the cloth material, 88% girls were dried it in sunlight. Higher percentages of girls, 77.3% were practiced an insanitary method of disposal of materials. The practices of personal hygiene including bath during menstruation and cleaning of external genital parts were followed by 95.2% girls respectively.

Out of a total 230 girls, 14.3% were utilized health care services for menstruation related problems and of which maximum, 51.5% followed private health care services. The rate of utilization of ICDS and sub-centre services was 16.9% and 27.2% respectively (Table 4).

Table 5 shows that age, education, mother's education and economic class 4 are significantly associated with use of sanitary napkins in slum adolescent girls as indicated by chi-square test and p value as 9.2 and 0.009*, 10.2 and 0.01*, 30.6 and 0.001*, 4.7 and 0.02* respectively. Practices of sanitary disposal of materials are significantly associated with age, mother's education and economic class 4 as p values are < 0.05 at 95% confidence interval as 9.9 and 0.006*, 14.4 and 0.002*, 5.8, 0.01* respectively. The girls educational status alone has been significantly associated (21.1, and 0.001*) with practice of personal hygiene among slum adolescents.

Table 3: Hygienic practices during menstruation.

Hygienic Practices	Frequency (%)
Material used	
Sanitary napkins	29 (12.6%)
Non-disposable linen	201 (87.3%)
No. of pads / day	
1	73 (31.7%)
2-3	128 (55.6%)
>3	29 (12.6%)
Re-use of pads	
Yes	201 (87.3%)
No	29 (12.6%)
Washed with material	
Water and detergent	37 (18.4%)
Water only	164 (81.5%)
Other methods	Nil
Drying	
Outside house in sunlight	177 (88.0%)
Inside house	24 (11.9%)
Disposal of pads / clothes	
Indiscriminate through	178 (77.3%)
Throw in public dust bin	45 (19.5%)
Flush it	7 (3.15%)
Bath during Menstrual period	
Yes	219 (95.2%)
No	11 (4.7%)
Cleaning of external genital	
Yes	219 (95.2%)
No	11 (4.7%)

Table 4: Utilization health care and ICDS facilities.

Facilities	Frequency (%)
Health care services	
Yes	33 (14.34%)
No	197 (85.65%)
Type of health care services	
Public	09 (27.27%)
Private	17 (51.51%)
Traditional	07 (21.21%)
ICDS scheme	
Yes	39 (16.95%)
No	191 (83.04%)

Table 5: Association between socio-demographics and menstrual hygiene practices.

Variables	Use of Sanitary adsorbent napkins	Sanitary disposal of materials	Personal hygiene
Age:			
<13	3 (10.34%)	6 (13.33%)	25 (11.41%)
14-16	15 (51.72%)	24 (53.33%)	157 (71.68%)
>16	11 (37.93%)	15 (33.33%)	37 (16.89%)
χ^2, p value	9.2, 0.009*	9.9, 0.006*	3.6, 0.16
Education:			
No schooling	2 (6.89%)	7 (15.55%)	29 (13.24%)
Primary	8 (27.58%)	13 (28.88%)	72 (32.87%)
Secondary	15 (51.72%)	22 (48.88%)	109 (49.77%)
Higher sec	4 (13.79%)	3 (6.66%)	9 (4.10%)
χ^2, p value	10.2, 0.01*	1.3, 0.7	21.1, 0.001*
Mothers Education:			
Illiterate	9 (31.03%)	18 (40.0%)	143 (65.29%)
Primary	11 (37.93%)	21 (46.66%)	59 (26.94%)
Secondary	7 (24.13%)	5 (11.11%)	14 (6.39%)
Higher secondary	2 (6.89%)	1 (2.22%)	3 (1.36%)
χ^2, p value	30.6, 0.001*	14.4, 0.002*	2.1, 0.5’
Income:			
Class IV	11 (37.93%)	16 (35.35%)	49 (22.37%)
Class V	18 (62.06%)	29 (64.64%)	170 (77.62%)
χ^2, p value	4.7, 0.02*	5.8, 0.01*	0.1, 0.7

*= p value is less than 0.05 at 95% confidence interval.

DISCUSSION

We have done this study in the slum habitants of karad town of Maharashtra, India. Hygiene related practices of girls during menstruation are of considerable importance as it affects health by increasing the vulnerability to infections viz. Urinary tract, perineum and reproductive tract. The type of absorbent material used during menstruation is of primary concerned, since reusable material could be cause infection if improperly cleaned and poorly stored.

Present study revealed mean age of participants was 14.8 years and 73.8% families belonged to economic class 5 (BPL). A study conducted by Bhattacherjee S from siliguri slum of west bengal has also observed similar findings of 14.6 years and 2/3 families were belonged to BPL categories respectively. This study depicts, mean age at menarche by recall method was 12.8 years, comparable to study by Mohite R from karad slum area of western maharashtra and Bhattacherjee S of west bengal as 12.8 and 12.6 years respectively.[8,9] However, study from nagpur slum 10 and meerut, utter pradesh 11 have observed mean age at menarche of 13.15 and 13.16 years respectively. These differences could be due to differences in geographical, environmental, nutritional, socio-economic factors and general health status of the study subjects.[12] The age of menarche is determined by general health, genetic factors, socioeconomic and nutritional status but with improvement in the nutritional status and general health, it has declined in many populations. In our study, 70% girls had history of regular menstrual cycle. Similar finding have also been reported by Jogdand K from guntur, andra pradesh and Mohite Rv from Maharashtra as 66.5% and 63.9% respectively.[9,13]

This study depicted the proportion of practices of disposable adsorbent sanitary napkins and household non-disposable; non-adsorbent cloth (linen) materials among girls were 12.6% and 87.3% respectively. Similar finding has also been reported from delhi study conducted by baridalyne and reddaiah, as less than of one-third of the study subjects used sanitary absorbents pads. However, study conducted by authors viz. Arumugam B, Bhattacherjee S and Jogdand K reported; 82.5%, 71.3% and 53.7% girls were practiced sanitary adsorbent napkins during menstruation respectively.[8,13,15] The reuse of material was practiced by 87.3% girls in present study whereas finding in study conducted by Bhattacherjee S was about 40%.[8] This indicates that the awareness about menstrual hygiene is poor could be due to unauthorized habitations, low literacy, negative attitude of community as well as poor establishment and access of health care services. The practices of personal hygiene including bath during menstruation and cleaning of external genital parts were followed by 95.2% girls respectively. Study conducted by Arumugam B from reported, almost all girls were practiced similar personal hygiene during menstruation.[15] However, Bhattacherjee S from west bengal observed, less than one third of girls were practiced good personal hygiene whereas little

higher proportion, 45% was reported by Devi K from andra pradesh.[8,16] This difference could be due to provision of ample safe and wholesome water on 24 hours × 7 days water supply scheme by local self-government free of cost to beneficiaries irrespective of cast, religion and economic status as a social responsibility towards neglected section of community.

The present study revealed, 18.4% girls were used soap (detergent) and water to clean the cloth material. Similar finding has been also noted by Bhattacherjee S from siliguri, west bengal as 15.2%. The study showed, 77.3% girls practiced an insanitary method of disposal of materials whereas Bhattacherjee S from west bengal observed little higher proportion i.e. 84.6% girls were practiced similar method of disposal of material used during menstruation.[8] However, Arumugam B noted, 14.1% girls were practiced unsanitary method of disposal.[15] This difference in reports could be due to poverty, illiteracy both in girls as well mothers, poor awareness, dominance of cultural, religious and traditional practices, poor access of services from public as well as private sector.

This study revealed, 14.3% adolescent girls from slum area were utilized health care services for menstruation related problems and of which, 51.5% followed private health care services. Krishna institute of medical sciences, a private medical college render health care services free of cost to the slum habitants as social responsibility to improve the health status of slum community. The local self-government also established anganwadi (ICDS) and sub-center but the rate of utilization of icds and sub-center services was 16.9% and 27.2% respectively. Treatment seeking behaviour about common menstrual problems has been 25.73% of which 59.01% have sought the treatment from physician reported by Mohite R from maharashtra. However, only 6% girls from dhaka, bangladesh seek the treatment from physician.[9,17] Poor treatment seeking behaviour may be due to lack of awareness, habit of tolerance of problems, ignorance, or due to wrong advice by mother as well as family members, low level of education and lack of adequate health care services in slum area.

In the present study, age and education of girls, mother's education and economic status are significantly influences the hygienic practices of sanitary napkins during menstruation ($p<0.05$). The advanced age, mother's education and economic class iv often associated with practices of sanitary disposal of materials ($p<0.05$) whereas girls age was a single factor significantly associated with practice of good personal hygiene among slum adolescent girls. Similar findings have also been reported by Bhattacherjee S in study from siliguri slum of west bengal, Bobhate P in slum area of mumbai and by Nair M among adolescent girls from thiruvananthapuram.[8,18,19]

CONCLUSION

Present study showed overall poor practices of menstrual hygiene in slum adolescent girls. Formal as well as informal channels of communication need to be emphasized for the delivery of information pertained to menstrual hygiene through organized community efforts. Institutions and organizations at community level should be strengthened for effective delivery of health and nutrition care services for overall better health of community beneficiaries.

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