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Original Research Article

A study on menstrual hygiene practices and problems amongst adolescent girls in Udaipur, Rajasthan, 2018

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ABSTRACT

Background: Adolescence in girls has been recognized as a special period in life cycle. This period is marked with onset of menarche. It is linked with several perceptions and practices, which sometimes results in adverse health outcomes. So, this study was carried out to assess practices of menstruation in adolescent girls, to find out its related problems and socio-cultural beliefs.
Methods: A cross sectional study was carried out during January-February 2018 in two schools of Udaipur using convenient sampling method with 440 sample size. Participants were adolescent girls of 9 to 12 standard. Girls were asked to fill a pre formed, pre tested semi-structured questionnaire.
Results: Here 68.41% girls gave history of abdominal pain as premenstrual symptoms (PMS). School absenteeism was found 44.54% due to menstruation related problems. Sanitary Napkins were used by 50.22% girls. And 66.54% girls were using water to clean genitals during menstruation. Restriction from attending religious functions was high (91.59%). Associations of absorbents used by participants with absorbents used by their mothers and sisters were statistically significant.
Conclusions: Abdominal pain was main PMS. Restrictions due to menstruation were very highly imposed. There were all chances that same types of the adsorbent were used by the adolescent girls, which were used by their mothers and sisters.

Keywords: Adolescent, Menstruation, Menarche, Premenstrual symptom, Sanitary Napkin, Absenteeism

INTRODUCTION

The menstrual period is a physiological process that occurs throughout the reproductive years of every woman. This period is marked with onset of menarche. The process of menstruation is associated with various mental as well as physical morbidities like premenstrual syndrome. Menstruation can also predispose women to life threatening RTI (Reproductive Tract Infection) if hygiene is not maintained throughout menstruation.[1]

Menstruating girls are forced to be isolated. They are restricted to do certain routine activities. Usually adolescent girls are guided by their mother, elder sister or other family members regarding menstrual hygiene practices. So, knowledge and beliefs of mother as well as other female family members regarding the menstrual hygiene in adolescents are important determinants. Due to lake of proper information, adolescents have to face various health problems and complications.[2] Menarche has so much impact on physical and psychological development of an adolescent girl. Most girls are unaware about proper menstrual practices at the age of menarche. Many adolescent girls become nervous due to non-preparedness prior to the onset of menarche. In India, its taboo to discuss all these publicly.[3]

For girls between age-group of 6-11years, the Gross Enrolment Ratio is 107.1, and it falls to 81.4 for girls of 11-14years in our country.[4] Lack of adequate toilet facilities at schools and lack of access to modern menstrual hygiene are making the situation more difficult to combat.[5]

Therefore there is a need for implementation of appropriate public health measures at various levels to generate awareness about safe menstrual hygiene practices among adolescent girls for the prevention of RTI and future complications.

So, this study was intended to provide details on practices of menstruation and its related problems faced by adolescent girls with the socio-cultural beliefs prevailing in that region. The data of the study can be used for the planning of programs, making new policies for improving the level of information.

METHODS

A cross sectional study was carried out by Community Medicine Department, American International Institute of Medical Sciences, Udaipur. Permissions from Ethical committee and District Education Officer were taken to conduct the study. Informed consent was taken from the Principal in case study at school. Oral consents were taken from girls to take participate in study.

Study period

January and February 2018.

Sample size calculation

It was calculated by the formula $4pq/l^2$, where p is taken 0.5, assuming that 50% of the adolescent girls were having correct practice regarding menstruation. 400 samples were derived after assuming 50% prevalence rate of practices (p is 0.5, q is 0.5 and l is 0.05). Expected non response rate: 5% (20 adolescent girls). Thus, Total Sample size = 400+20=420

To overcome recall bias and sampling error, current study have taken final sample size of 440.

Sampling technique

Convenient sampling method

Study tool

A pre formed, pre tested semi-structured questionnaire was used in this study.

Data collection

Two schools were selected randomly. From each school, 220 girls were taken. From each standard (9 to 12), 55 girls were selected by lottery method. A questionnaire was distributed to girls in school and asked to fill the Performa.

The data entry and data analysis was done in Microsoft Office Excel 2007 and Epi info 7.0.

RESULTS

In our study, 26.59%, 23.86%, 18.64%, 18.41%, 10% and 02.50% participants were from 16, 15, 17, 14, 13 and 18 years of age group respectively. In this study, 63.86%, 27.5% and 08.63% participants were from nuclear, three generation and joint family respectively (Table 1).

Table 1: Socio-demographic profile of studied participants.

Socio-demographic variables	Frequency (n=440)	Percentage (%)
Age in years		
13	44	10.00
14	81	18.41
15	105	23.86
16	117	26.59
17	82	18.64
18	11	02.50
Family type		
Joint	38	08.63
Nuclear	281	63.86
Three generation	121	27.50

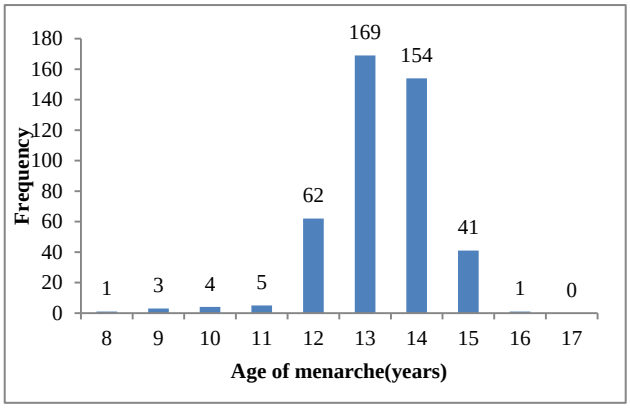

Figure 1: Age of menarche of studied participants.

Here the age of menarche was 13 years in 169 participants followed by 14, 12, 15, 11, 10, 9, 8 and 16 years in 154, 62, 41, 05, 04, 03, 01 and 01 participants respectively. Mean age of menarche was 13.31±1.03 in our study (Figure 1).

Current study find out that 76.43%, 39.33%, and 24% participants had problems of abdominal pain, joint pain and acne respectively as premenstrual symptoms. Where as, 29.51% participants had other symptoms like constipation, fever, bodyache etc (Figure 2).

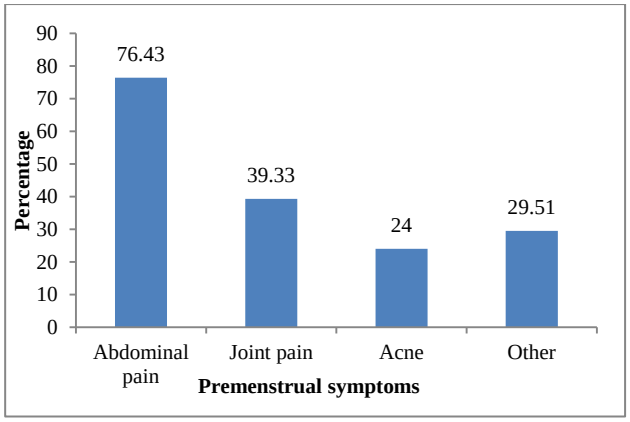

Figure 2: Premenstrual symptoms.

Table 2: Details of problems faced during last three menstruations.

Variables	Frequency	Percentage (%)
Problems		
Irregular menstruation	136	30.91
Flow of bleeding		
Heavy (menorrhagia)	51	11.59
Less (hypomenorrhoea)	23	05.23
Medium (normal)	366	83.18
C/o Abdominal pain	301	68.41
Treatment taken for abdominal pain	74	24.58
Type of treatment taken for abdominal pain (n=74)		
Medicine	49	66.22
Home remedy	21	28.38
Other	04	05.40
Source of treatment (n=74)		
Mother	44	59.46
Doctor	04	05.40
Sister	08	10.81
Friend	01	01.35
School	09	12.16
Health workers	06	08.12
Pharmacist	02	02.70
Problem in daily activities (n=440)	124	28.18
Problem in specific activities (n=440)	164	37.27
School absenteeism due to menstruation		
Yes	196	44.54

We observed that 68.41%, 30.91%, 11.59% and 05.23% participants had problems of abdominal pain, irregular menstruation, heavy bleeding and less bleeding during last three cycles. For relieving of abdominal pain 24.58% participants preferred to take treatment. Types of treatment were medicine (66.22%) and home remedy (28.38%). Source of treatment were mother (59.46%), school (12.16%), sister (10.81%), health worker (08.12%), doctor (05.40%), pharmacist (02.70%) and friend (01.35%). In this study 28.18% participants had problem in daily activities and 37.27% had problem in specific activities. Forty five percentage were not able to go school due to their menstruation related problems (Table 2).

Table 3: Practices regarding cleanliness during last three menstruation.

Variables	Frequency	Percentage (%)
Absorbent used (n=440)		
Cloth	219	49.77
Sanitary napkin	221	50.22
Number of participants switch over from cloth(at menarche) to SN (current)(n=396)	177	44.70
Reasons for shifting to sanitary napkin (n=63)		
Comfortable	24	38.09
Cleanliness	05	07.93
Didn't know about SN before	07	11.11
Advised by other	15	23.80
Easy to use	03	04.76
No any reason	09	14.28
Cleaning genitals	278	63.18
Method of cleaning genitals (n=278)		
Soap water	84	30.21
Water	185	66.54
Antiseptic	07	02.51
Other	02	00.71

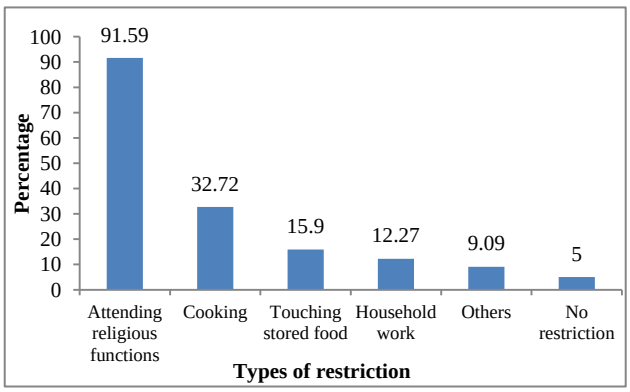

Figure 3: Types of restrictions to be imposed during menstruation (beliefs of participants).

According to the answers given by study participants, 50.22% were using sanitary napkins as absorbent during last three menstruations. Forty five percentage participants switched over from cloth (at menarche) to sanitary napkins (current). Reasons for shifting to Sanitary Napkin were comfortness (38.09%), advised by Other (23.80%), didn't know about SN before (11.11%), cleanliness (07.93%), easy to use(04.76%). Others

(14.28%) didn't had any reason to give for shifting. In this study 63.18% participants were cleaning genitals regularly by water (66.54%), soap water (30.21%), antiseptic (02.51%) and other (00.71%) (Table 3).

Here 91.59% participants were restricted from attending religious functions. Other restrictions were cooking, touching stored food and doing household work in 32.72%, 15.9% and 12.27% of participants respectively. In case of 9.09% participants, there were restrictions from using common room, doing pooja, sitting on chair or sofa etc. There were also participants (5%) who didn't have to face any restrictions during menstruation (Figure 3).

Cross table shows associations of absorbents used by participants with absorbents used by their mothers and sisters were statistically significant. It means that there were all chances that same types of the adsorbent were used by the adolescent girls, which were used by their mothers and sisters (Table 4).

Table 4: Association of absorbent used by participants with absorbent used by their mothers and sisters.

Variables			Chi square
	Absorbent used by mother (n=437*)		
Absorbent used by participant (n=437)	Cloth	Sanitary Napkin	
Cloth	213	04	X^2=304.0512 p<0.00001
Sanitary napkin	34	186	
	Absorbent used by sister (n=209#)		
Absorbent used by participant (n=209)	Cloth	Sanitary Napkin	
Cloth	99	06	X^2=143.6571 p<0.00001
Sanitary Napkin	12	92	

(*participant not having mother, #participant not having sister were excluded)

DISCUSSION

A study on menstrual hygiene practices and problems amongst adolescent girls was carried out in Udaipur, Rajasthan, 2018.

In our study, almost 50% of study participants were from age group of 15-16 years and after that nearly 40% were from age group of 14 and 17 years. Nearly two third of participants belonged to nuclear family. A study from Bangalore city reveled that nearly 60% of study participants were from age group of 14-15 years and almost 50% of participant belonged to nuclear family.[6] In a study carried out in rural West Bengal, the age of menstruating girls ranged from 14 to 17 years, maximum (76.25%) number of girls were between 14 and 15 years of age group.[7] In a study from Rural Puduchery, Priya et al showed that nearly 50% of participants were between age group of 14-16 years and nearly three forth of participants were belonged to nuclear family.[8]

Findings of this study showed that mean age of menarche was 13.31±1.03 years. Subhash et al in their study found mean age of menarche was 12.85±0.867 years.[9] The mean age at menarche was 12.1 years among urban and 12.2 years among the rural participants in a study by Datta et al.[10]

Current study observed that Pre menstrual symptoms (PMS) were present among participants. Abdominal pain was the main PMS in nearly three forth of participants. Other symptoms like Joint pain, acne, constipation, fever and bodyache were also seen. While Sohail et al study showed that backache was the main complaint as PMS among study participants.[11]

Abdominal pain was found in nearly 70% of participants during menstruation in our study. Similar finding were seen in study from Punducherry.[8] Study from Lahore showed that pain was the main symptom in almost all participants during mensruation.[11] In our study, for relieving of abdominal pain two third participants had taken medicine. Kheda district study reported that nearly 50% of participants were having complain of abdominal pain during menstruation. And nearly 80% had medicine for that.[12]

In our study, almost one third of girls had irregular menstruation. Here 84% of participants had normal flow of bleeding while 5% had Hypomenorrhoea and 12% had Menorrhagia. In a study Rana et al found that 19% of adolescent girls had irregular menstruation.[12] Hossain et al in their study reported that nearly 70% girls were having normal duration of bleeding, 3% had Hypomenorrhoea and 26% had Menorrhagia.[13]

In this study nearly one third participants had problem in daily and specific activities. Almost half number of girls were not able to go school due to their menstruation related problems. Datta et al in their study observed absenteeism from school mainly due to pain in abdomen and excessive bleeding in both urban and rural population.[10] Sohail et al found that 12.0% girls were not able to carry out usual routine work during menstruation which could be due to weakness superadded by anaemia due to blood loss.[11]

This study shows that 50% participants used sanitary napkins as absorbent during last three menstruations. In a study done in West Bengal it was observed that 48% girls knew the use of sanitary pad during menstruation but only 11% girls used sanitary pads during menstruation.[7] Study from Mumbai observed that despite knowledge of sanitary pads in 72% subjects, only 59% were actually using sanitary pads.[14] In a study done in Nigeria unsanitary menstrual absorbents were used by 55.7% of the respondents.[15] A majority of women used clothes (90%) during their menstruation to prevent blood stains from becoming evident. The use of sanitary napkins and locally prepared napkins was 11.2% and 3.9% respectively in one Indian study.[16]

In this study 63% participants were cleaning genitals during menstruation. Methods of cleaning were water (66.54%), soap water (30.21%), antiseptic (02.51%) and other (00.71%). One study from Nagpur, Maharashtra reported that 40% of girls were cleaning genitals by only water, around 60% were cleaning by soap and water and only 2% were used water and antiseptic.[9] Juyal et al observed in their study that 94% of adolescent girls were cleaning genitals during Menstruation.[17] Study from Gujarat showed that 99% of girls were cleaning genitals.[18]

In our study 92% participants were restricted from attending religious functions which was similar to study done in Chennai by Seenivasan et al.[19] Participants were also restricted from cooking, touching stored food and doing household work in our study. Sharma et al. study from north India reported that 85% of girls were restricted from attending religious functions, 93% were not allowed to enter in kitchen and 72% were restricted from touching anything.[20] Jain et al study also reported that 52% adolescent girls had some kind of restrictions during menstruation.[21]

CONCLUSION

Mean age of menarche was 13.31±1.03. Abdominal pain was main premenstrual symptoms and mothers were main sources of guidance for taking treatment to get relief from pain. Restrictions due to menstruation were very highly imposed. Most of girls were using water to clean genitals during menstruation. Associations of absorbents used by participants with absorbents used by their mothers and sisters were statistically significant. So there were all chances that same types of the adsorbent were used by the adolescent girls, which were used by their mothers and sisters.

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