KNOWLEDGE ABOUT MENSTRUAL PROBLEMS AND MENSTRUAL HYGIENE PRACTICES AMONG COLLEGE GOING UNMARRIED GIRLS IN CHANDIGARH, INDIA

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ABSTRACT

BACKGROUND

Menstruation is a vital part of the reproductive health of a woman. There is evident neglect of problems related to menstruation especially in young girls and they are lacking scientific knowledge regarding menstruation. The study was undertaken with the objective to assess the prevalence & patterns of menstrual problems, knowledge, belief, restrictions, menstrual hygiene and treatment seeking practice among college going unmarried girls of Chandigarh.

MATERIALS AND METHODS

A stratified multistage random sampling design was adopted for selection of participants from the selected colleges of Chandigarh. A total of 1000 girls who had attained menarche were selected. Information was collected through personal interviews conducted in privacy using semi -structured survey schedule.

RESULTS

The mean age of menarche was ± 13.89 years. Prior knowledge regarding menses was reported by 82.6% girls and 56.9% girls reported mother as the first source of information followed by 21.6% friends. 86.1% have regular menstrual history 86.8% of the respondents experienced pre menstrual syndrome while overall prevalence of menstrual problem in the present study was found 68.4%. Abdominal pain was the most common menstrual problem reported by 51.3% of participants having menstrual problems. 47.7% girls did not visit holy places during periods. 95.5% preferred sanitary napkins as menstrual absorbent. Treatment seeking behavior of the girls was poor and only about 34.9% of girls having menstrual problems approached for treatment. 72.4% of respondents were aware of emergency contraceptives.

CONCLUSION

The study revealed that there was an inappropriate knowledge and hygiene practice due to various Misconceptions, beliefs and taboos among college girls regarding menstruation. Reproductive health education in the school curriculum should be introduced for improving awareness regarding menstrual care practices.

KEYWORDS

Menstrual Problems, Knowledge, Belief, Restrictions, Menstrual Hygiene and Treatment Seeking Practice.

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BACKGROUND

Yesterday's girl is today's adolescent and tomorrow's mother. Menarche, which is the establishment of menstruation, is one of these milestones and a natural phenomenon unique to females.[1] Menarche is often horrifying and traumatic to an adolescent girl because it usually occurs without her knowing about it.[2] Overall, a woman spends approximately 2,100 days menstruating which is equivalent to almost six years of her life.[3] The profile of the woman's reproductive health is greatly influenced by the girl's reaction to menarche, her beliefs and attitude towards menstruation, and more important her behaviour during it.[4]

In social contexts where these issues are not openly discussed or where there is stigma and/or taboos surrounding menstruation, girls may have very little understanding of what is happening to them and their bodies. Social prohibitions and negative attitude of parents in discussing the related issues openly has blocked the access of adolescent girls to right kind of information.[5]

Taboos surrounding menstruation exclude women and girls from many aspects of social and cultural life as well as menstrual hygiene services.[6] Cultural, religious and traditional beliefs lead to a range of restrictions being placed on women.[7] Many young girls in our country may lack appropriate and sufficient information regarding menstrual hygiene, causing incorrect unhealthy behavior during their menstrual period.[8]

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Keeping the above trends in the mind, the present study was undertaken among college going unmarried girls of Union Territory of Chandigarh (India) with the following objectives-

1. To assess the knowledge, beliefs, myths and prior source of information regarding menstruation among the college girls.
2. To assess the prevalence and patterns of menstrual problems and complaints.
3. To study hygiene and treatment seeking practices regarding menstruation.

MATERIALS AND METHODS

Results of present study are based on a cross sectional survey conducted among unmarried girls studying in selected colleges of UT Chandigarh during September 2014 to August 2015.

Study Design- Cross sectional Survey was conducted among first year unmarried college girls in randomly selected 10 (5 government and 5 private) colleges in Chandigarh.

Sampling Design- A stratified multistage random sampling was adopted. Stratification was done on the basis of type of college. There were two strata, consisting of government and private colleges of Chandigarh. Within each stratum, list of colleges was prepared along with their respective sanctioned strength of students studying in first year. Sampling frame of sampling units at each stage of selection was prepared. At the first stage of selection, a sample of 10 colleges including five Government and five Private colleges were selected at random as first stage units out of 9 government and 7 private/government Aided colleges. Within each selected first stage units, a second stage sample of students of different streams of first year of an optimum size (100 in each college) with proportional allocation was selected as study units.

Sample size- Power analysis was done to calculate optimum sample size for the study. Sample size was calculated by using the following formula with approximation for large population-

$$\mathbf{N}\ \text{opt} = \frac{Z^2_{1-\alpha/2}\, P\ (100-P)}{\in^2}$$

Where, P= Anticipated population proportion 1-α= Confidence Coefficient

$\in$= Relative precision, and

Z = is the value of standard normal variate (1.96).

Sample size of 1024 girls was optimum based on 60% anticipated prevalence of menstrual problems (based on previous studies).[9-12] 95% confidence coefficient and 5% relative precision. Taking the round off, we surveyed 1000 college going unmarried girls of Union Territory of Chandigarh.

Information Collected- Participants were interviewed in privacy using pretested semi –structured interview schedules to collect information including socio-demographic characteristics: age, literacy status of their parents, religion, type of family, occupation of parents and menstruation related information like prior knowledge, reactions, regularity of menses, problems faced during menstruation and their treatment seeking behavior. Only those unmarried girls who had already attained menarche and were willing to participate were interviewed provided their parents also gave consents.

Statistical Methods- The statistical analysis was carried out using Statistical Package For Social Sciences (SPSS 20). All the quantitative variables were estimated using simple frequencies, percentages, arithmetic mean, and standard deviation.

Ethical Issues- In the data collection process, steps were taken to ensure privacy of participants, confidentiality of responses and freedom to respond truthfully. Prior approval from Institutional Ethics Committee (IEC) of Government Medical College and Hospital (GMCH), Chandigarh was taken. Before starting the data collection, permissions were taken from the Director Higher Education (DHE) Chandigarh and the respective Principals of colleges.

RESULTS

The present study included 1000 College going unmarried girls who had attained menarche in the age group of 16-24 year in the ten colleges of Chandigarh.

Characteristic	Frequency	Percentage
Age (N=1000)		
16-18	442	44.2%
19-21	436	43.6%
21-25	122	12.2%
Mean age 18.41 ±.98 Years		
Type of family (N=1000)		
Joint	248	24.8%
Extended	752	75.2%
Religion (N=1000)		
Hindu	750	75.0%
Sikh	227	22.7%
Muslim	3	0.3%
Christian	6	0.6%
Buddhist	14	1.4%
Education Status of Father (N=1000)		
Illiterate	09	0.9%
Literate	991	99.1%
Education Status of Mother (N=1000)		
Illiterate	17	1.7%
Literate	983	98.3%
Occupation of Father (N=1000)		
Unemployed	25	2.5%
Govt. job/private Job/business/others	975	97.5%
Occupation of Father Mother (N=1000)		
House wife	873	87.3%
Govt. job/private Job/business/ farmer/others	121	12.1%

Table 1. Socio-demographic Characteristics of the Participants

Table 1 presents a detailed account of the socio-demographic characteristics of all the girls surveyed. The mean age of respondents was 18.41 years. Only 248 (24.8%) were belongs to joint families. 75% girls were from Hindu community followed by 22.7% belonging to Sikh community. Fathers of 99.1% girls and mothers of 98.3% girls were literate. Overall, fathers of 97.5% girls were in service or employed anywhere whereas mothers of 87.3% girls were housewives.

The mean age of menarche was 13.89 ± 1.244 years. (Table 2) Study reported maximum number of girls (57.5%) had attained menarche between the age of 13-14 years followed by 29.6% at the age of 15-17 years, 12.9% at age of 10-12 years. It was observed that 82.6% of total girls who had attained menarche had its prior knowledge and the prior source of knowledge regarding menarche was mother reported by 56.9% respondents, followed by friends (21.6%), sisters (11.5%) teacher (9.5%) and 0.5% books & mass media.

Characteristic	Frequency	Percentage
Age at menarche (N=1000)		
10 – 12	129	12.9%
13 – 14	575	57.5%
15 – 17	296	29.6%
Mean age at the time of menarche 13.89 ± 1.244 Years		
Prior knowledge regarding menarche (N=1000)		
Yes	826	82.6%
No	174	17.4%
Source of information (N= 826)		
Mother	467	56.9%
Sister	96	11.5%
Friends	179	21.6%
Teacher	79	9.5%
Books/Mass Media	5	0.5%
First Reaction towards menarche (N=1000)		
Fear	347	34.7%
Embarrassment	176	17.6%
Guilt	60	6.0%
Anxiety	120	12.0%
No reaction	297	29.7%
Attitude towards menstruation (N=1000)		
Normal phenomenon	768	76.8%
Essential sign of adulthood	109	10.9%
Sign of virginity	09	0.9%
Essential for fertility	113	11.3%
Sign of impurity	01	0.1%

Table 2. Awareness and Attitude about Menstruation among the Participants

According to table 2, 34.7% of the respondents scared of menarche, 29.7% had no reaction, 17.6% were embarrassed, 12% had anxiety, and 6% felt guilt. Menstruation was considered to be a normal phenomenon by 76.8% girls while 10.9% considered it as an essential sign of adulthood and 11.3% were of opinion that it was essential for reproduction /fertility.

It was observed that 86.1% of girls had a regular menstrual cycle history. Excessive menstrual flow was reported by 14.8% girls while normal flow reported by maximum 83.6% girls. The duration of the menses was mostly 4-5 days reported by 68.2% girls.

Among the participants, 86.8% reported to have suffered from problems before menstruation. Pre-menstrual problems included abdominal pain (64.1%), followed by backache (56.2%, fatigue (32.6%) and mood swings (27.3%).

Characteristic	Frequency	Percentage
Menstrual History (N=1000)		
Regular	861	86.1%
Irregular	139	13.9%
Duration of menstrual cycle in days (N=1000)		
1-3	194	19.4%
4-5	682	68.2%
6 or more	124	12.4%
Menstrual flow (N=1000)		
Scanty	16	1.6%
Normal	836	83.6%
Excessive	148	14.8%
Problem faced before menstruation (N=1000)		
Yes	868	86.8%
No	132	13.2%
Type of Problem faced before menstruation (N=868)		
Pre menstrual syndrome	Frequency	Percentage
Headache	151	17.4%

Backache	488	56.2%
Lower abdominal pain	556	64.1%
Abdominal cramps	142	16.4%
Thigh cramps	100	11.5%
Mood swings	237	27.3%
Fatigue and weakness	283	32.6%
Loose motions	48	5.5%
Constipations	44	5.1%
Anxiety	45	5.1%
Bloating	23	2.6%
Acne/pimples on face	287	33.1%
Irritable bowel syndrome	31	3.5%
Problem faced During menstruation period (N=1000)		
Yes	684	68.4 %
No	316	31.6 %
Type of menstrual problem faced During menstruation period (N=684)		
Abdominal pain	351	51.3%
Backache	245	35.8%
Headache	231	33.7%
Nausea / vomiting	39	5.7%
General weakness	147	21.4%
Leg Pains/cramps	201	29.4%
Change in mood	118	17.3%

Table 3. Menstrual Characteristics and Problems of the Participants

Among all respondents, 68.4% reported to have at least one problem related with menstruation. (Table 3) Among 684 girls reporting problems, 51.3% suffered from abdominal pain during menstruation, followed by those who suffered from backache (56.2%), headache (33.7%) and leg pains/cramps (29.4%). Change in mood during menstruation was reported by 17.3% girls while general weakness during menstruation was reported by 21.4% of respondents.

Characteristic	Response	Percentage
Restrictions practiced during menstruation (N=1000)		
Physical activity	154	15.4%
Separate bed	19	1.9%
Visit holy places	477	47.7%
Enter Kitchen/cooking & serving foods	25	2.5%
Social activities	30	3.0%
Practice isolation	9	0.9%
Bathing	103	10.3%
Distribution on the basis of absorbent material (N=1000)		
Sanitary napkin	955	95.5%
New/clean cloth	19	1.9%
Used /old/dirty cloth	6	0.6%
Cotton roll	20	2%
Distribution on the basis of change of absorbent material Per day (N=1000)		
Once a day	24	2.4%
Twice a day	359	35.9%
Thrice a day	495	49.5%
Four times a day	122	12.2%
Distribution on the basis of material used for disposing off (N=1000)		
Paper	519	51.9%
Plastic	48	4.9%
Both	433	43.3%
Distribution on the basis of method of disposal of absorbent material (N=1000)		
Domestic refuse	346	34.6%
Burning	2	0.2%
roadside	34	3.4%
dustbin	598	59.8%
burial	20	2%

Distribution on the basis of daily bathing during menstruation (N=1000)				
Yes	897	89.7%	897	89.7%
No	103	10.3%	103	10.3%

Table 4. Social Restrictions and Menstrual Hygiene Practices among the Participants

Majority of the respondents 47.7% avoided visit holy places, followed by 15.4% restricted physical activity, 10.3% restricted bathing, 3% did not attend social activities, 2.5% did not enter kitchen, and 0.9% practiced isolation. (Table 4) Most of the respondents i.e. 95.5% used sanitary napkins as absorbent material during menstruation, 1.9% used new cloth, 0.6% used old cloth and 2% used cotton roll as absorbent material. 49.5% of the respondents changed pads three times in a day, 35.9% two times, 12.2% four times and 2.4% changed once in a day. Among the participants, 51.9% used paper to wrap absorbent material, 4.9% used plastic and 43.3% used both paper and plastic to wrap the pad before disposing off. Dustbin was the most commonly used place of disposal of used absorbent (59.8%) but 3.4% students threw used pad on the roadside. Majority of the respondents i.e. 89.7% took bath daily during menstruation while 10.3% restricted bathing.

Treatment taken (N= 684)		
Yes	239	34.9%
No	445	65.1%
Source of treatment (N=239)		
Allopathic Treatment	178	74.5%
Ayurveda	12	5.1%
Herbal medicines	2	0.8%
Yoga/Physical Exercise	85	35.6%
Home-remedy	98	41.1%
Any other	16	6.7%
Reasons of not approaching (N=445)		
Hesitation/shyness	223	50.1%
Use home remedy	98	22.1%
Nobody to accompany	1	0.2%
Fear	8	1.8%
Non-availability of privacy in hospitals	87	19.6%
Any others	35	7.9%
Awareness of medication for pre-pone/postpone of menses (N=1000)		
Yes	177	17.7%
no	823	82.3%
Awareness of medication for emergency contraceptives (N=1000)		
yes	724	72.4%
no	276	27.6%

Table 5. Treatment seeking Behavior for Menstrual Problems among the Participants

Treatment seeking behavior of respondents is given in Table 5. Only 239 (34.9%) out 684 respondents with menstrual complaints, opted for treatment for menstruation related problems. Among girls who opted for treatment, 74.5 % relied on allopathic treatment, followed by 41.1% on home remedies for their problems. 35.6% relied on yoga/physical exercises and only 0.8% of the respondents took herbal medicines for treating the problems.

Among respondents (445) who did not opt for any treatment, 50.1% reported hesitation/shyness, followed by the usage of home remedies (22.1%) and lack of privacy in hospitals (19.6%) as the primary reason for not approaching for treatment. Only 17.7% girls were aware of medication for pre-poning/postponing of menses while 72.4% of the participants were aware about emergency contraceptives.

DISCUSSION

The study was conducted on 1000 college girls to assess the knowledge, source of information, and hygiene practices regarding menstruation. In the present study mean age of menarche was 13.89 ± 1.244 years which has been found to be similar to the study conducted in Nagpur district in 2011, with their mean age of menarche 13.82 ± 0.832 years, age ranged from 12-17 years.[13]

Present study, study reported that 80.0% girls had prior knowledge about menarche. Whereas, an earlier study in rural parts of East Delhi reported poor prior knowledge about menarche, only 29% awareness among adolescent girls.[14] High degree of awareness about menarche observed in our study may be attributed to the dominance of urban girls in our study. The study also reported generalized negative perception regarding menstruation in a majority of the population of India leading to ignorance of this crucial event.

In the present study, more than half of the girls gained knowledge regarding menstruation from mothers and also discussed their problems with mothers. This observation was in accordance with a study reporting maximum percentage of girls relying on their mothers as the main source of information about menstruation.[15]

According to the present study, 34.7% of the respondents scared of menarche, 29.7% had no reaction, 17.6% were embarrassed, 12% had anxiety, and 6% felt guilt which has been found to be similar with the study of Manipur in 2013 which revealed fear in 46.3%, 18.5% felt embarrassed, and anxiety in 14.1% and no reaction from 26.3 % in adolescent girls.[16]

The study reported high prevalence of menstrual 68.4% as well as pre-menstrual problems (86.8%) amongst the participants in UT, Chandigarh. In a study in Pondicherry, 73.3% of the girls reported some or other kind of menstrual problem.[17] This issue requires immediate attention as large proportion of menstruation- problems remains undetected.

Maximum number of girls in the present study reported to have suffered from abdominal pain during menstruation followed by backache/headache and leg cramps. Abdominal pain was also found to be the most common problem related to menstruation suffered by 57.7% respondents in our earlier study.[18]

It was seen in the present study that 86.8% of the girls faced problems before menstruation and majority of them suffered from abdominal pain followed by backache, fatigue and mood swings. A similar account of premenstrual problems has been reported among girls in Nagpur.[19]

Menstrual flow was reported to be normal by 83.6% of the total respondents in the present study. This observation was in accordance with another study from Kolkata in which maximum number of girls had normal flow during menstruation. Although, menstrual history was recorded to be regular in fourth-fifths (86.1%) of the girls in the present study, it was irregular among majority of girls in the study done by Mandal et al in kolkata.[20]

Majority of the respondents 47.7% avoided visit holy places followed by 15.4% restricted physical activity, 10.3% restricted bathing, 3% did not attend social activities, 2.5% did not enter kitchen, and 0.9% practiced isolation. Among the respondents i.e. 95.5% used sanitary napkins as absorbent material during menstruation, 49.5% of the respondents changed pads three times in a day, 51.9% used paper to wrap absorbent material before disposing off which is found to be similar with the study of Uttrakhand.[21] Dustbin was the most commonly used place of disposal of used absorbent (59.8%) but 3.4% students threw used pad on the roadside similar to study done by Pandit et al[22]

In the present study, only 34.9% of the girls reported to have taken treatment for menstruation related problems mainly allopathic treatment by 74.5% of girls. Available literature has reported that females who take treatment, mostly go for allopathic cure.[23] About 32.7% subjects never took a treatment in spite of having problems related with menstruation found in an another study.[24] Reasons for not approaching for treatment in the present study included mainly hesitation, shyness, use of home remedies, lack of privacy in hospitals and cultural beliefs associated with menstruation.

It has been seen that the girls lack knowledge related to medication available for preponing or postponing menses. In the present study, only 17.7% girls were aware of medication for preponing /postponing of menses amongst the school-going girls. Very little was known regarding this aspect of menstruation-related medications. Awareness of medication for preponement/postponement menses was reported 13.2% among unmarried girls in Chandigarh in an earlier study.[18] About three fourth of the participants were aware about emergency contraceptives which was higher than the earlier study done by Gothankar et al[25]

CONCLUSION

Study concludes that menstrual problems among girls are highly prevalent among adolescent girls in colleges of Chandigarh. Menstrual practices have been still clouded by socio-cultural restrictions resulting in adolescent girls remaining ignorant of the scientific facts and hygienic health practices. There is an urgent need to create awareness of menstrual problems and safe menstrual practices among girls as well as mothers. The findings reinforced the need to encourage safe and hygienic practices among the girls and

bring them out of traditional beliefs, misconceptions and restrictions regarding menstruation.

Recommendations

Incorrect restrictions, myths and beliefs associated with menstruation could be removed by the help of teachers, parents and educating girls about the scientific facts of menstruation so that they could lead to a healthy life. Reproductive health education in the school curriculum should be introduced for improving awareness of the adolescents and simplifying the approach for seeking professional help. Screening programs for menstrual related problems should also be started at school and college level to reduce upsurge of menstrual problems among Indian girls.

They should be educated about the significance of selection of sanitary menstrual absorbent and its proper disposal. This can be achieved through educational programs, so that they wipe away the old wrong ideas and make her free to discuss menstrual matters without any inhibitions.

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