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Original Research Article

Assessment of knowledge and health care seeking behaviour for menstrual health among adolescent school girls in urban slums of Bengaluru: a cross sectional study

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ABSTRACT

Background: Adolescent girls are often less informed and less comfortable in accessing reproductive health care and information. Due to taboos and socio-cultural restrictions associated with menstruation and its issues, a culture of silence surrounds it. Every stage of women's life influences next stage, thus present menstrual health will help the girls to have good reproductive, sexual and maternal health later. Good knowledge and better health care seeking behaviour will help in managing menstruation hygienically and with dignity. Hence the present study was undertaken with the objectives, to assess knowledge about menstruation and to determine health care seeking behaviour for menstrual health among adolescent girls in urban slums.
Methods: A cross sectional study was conducted to assess knowledge about menstruation and determine health seeking behaviour for menstrual health among 150 adolescent school girls. Multi stage random sampling with probability proportionate to size sampling technique was used. A pre-tested, semi-structured questionnaire was self administered to assess socio-demographic factors, knowledge and health care seeking behaviour for menstrual health.
Results: Among 150 adolescent girls, 102(68.0%) of them had good knowledge. Among girls who had excessive bleeding and irregular menses only half of them sought medical treatment ($p<0.05$) and though 59.5% had more than one symptoms in a cycle, only 37.3% sought treatment.
Conclusions: Health care seeking behaviour for menstrual health among adolescent girls was marginally low, only 34(37.4%) sought treatment.

Keywords: Adolescent girls, Menstruation, Knowledge, Health care seeking behaviour

INTRODUCTION

Menstruation is a conspicuous sign of sexual maturation in adolescent girls.[1] Though menstruation is a natural and biological phenomenon, it is still bound to religious, social and cultural taboos and restrictions in countries like India.[2] Menstruation and menstrual health are one of the major component of girl's reproductive health in early stages of adolescent period.[3] But, majority of the adolescent girls enter puberty unprepared to menstruation, with knowledge gaps.[4,5] Due to the stigma associated with menstruation and its issues, adolescent girls tend to restrict discussions openly, which eventually suppress them seeking health care assistance for menstrual health problems when needed.[6] Menstrual problems if left untreated can affect academics, physical and mental health. Academics can be affected resulting in school absenteeism, decreased academic performance. Physical health can be affected resulting in vaginal infections which inturn can affect reproductive health, if adolescent girls don't have adequate information regarding menstrual hygiene management. Mental health can be

affected manifesting as anxiety, irritability or depression.[7-10] Every stage of women's life influences next stage, thus present menstrual health will help the girls to have good reproductive, sexual and maternal health later.[11] Thus, it is essential to have good knowledge and understanding of menstruation and be aware of importance of health care seeking behaviour for menstrual health problems among adolescent girls. Hence the present study was undertaken.

Objective

- To assess knowledge about menstruation among adolescent girls in urban slums
- To determine health care seeking behaviour for menstrual health among adolescent girls in urban slums.

METHODS

This cross sectional study was conducted among adolescent school girls aged 14-16 years studying in High school (includes class 8th, 9th and 10th) of urban field practice area of Bangalore Medical College Research Institute (BMCRI) during July to August 2018. All the High schools were Private English medium schools. After explaining the study purpose, a pre tested, semi-structured questionnaire was self-administered to the participants. Informed assent was obtained from the participants. School teachers were informed regarding the study and they in turn had taken consent of the parents of the participants and confidentiality was assured in regard to their participation. Questionnaire included sections like socio-demographic profile, knowledge about menstruation and health care seeking behaviour for menstrual health.[6,7,12-14] In section related to knowledge, which included 6 items, each correct response was awarded with score 1 and incorrect answer with score 0, and total scores were grouped into three categories based on the number of correct responses, namely (a) good knowledge (5-6), (b) moderate knowledge (3-4), and (c) poor knowledge (<2). The questionnaire was in English language, before administering it all the items were explained and clarified their doubts beforehand.

Inclusion criteria

All the adolescent girls who had attained menarche were included in the study who had given assent.

Exclusion criteria

Adolescent girls who were not present on the day of visit to the school were excluded.

Sample size

Sample size calculation was done according to study conducted by Kabir et al, in which the prevalence of health care seeking behaviour for menstrual health was 40.0%.[12] Using formula, $n=4pq/d^{2,}$ for an absolute precision of 8%, and prevalence 40%, a sample size of 150 was obtained.

Multi stage random sampling with probability proportional to size sampling technique was used. Of 5 high schools, 3 schools were selected randomly by chit picking and from each school 30, 45 and 75 participants respectively, those who were present on the day of data collection to attain sample size of 150, which constitutes 20%, 30% and 50% of the total sample respectively.

Data analysis

Data was coded and entered in MS Excel and analyzed using statistical software SPSS version 20.0. Results were expressed in terms of percentages, tables and graphs. Appropriate descriptive statistics and Fischer's exact test was used.

RESULTS

Our study sample consisted of 150 adolescent girls aged between 14-16 years, with mean age 15.03±0.83 years and mean age of menarche 12.31±1.16 years.

Majority were Hindu by religion (72.7%) and from nuclear families (72.0%). Majority of the mothers of the girls were home makers (65.3%) and had completed middle schooling (30.7%) (Table 1)

Table 1: Sociodemographic characteristics of participants (n=150).

Demographic variables	Group	N	%
Age(in years)	14	46	30.7
	15	45	30.0
	16	59	39.3
Religion	Hindu	109	72.7
	Muslim	37	24.7
	Christian	4	2.7
Education status of mother	Illiterate	18	12.0
	Primary school	36	24.0
	Middle school	46	30.7
	High school	34	22.7
	PUC	8	5.3
	Graduate	8	5.3
Employment status of mother	Employed	52	34.7
	Unemployed (Home maker)	98	65.3
Type of family	Nuclear	135	90.0
	3 generation family	6	4.0
	Joint	9	6.0

In section related to knowledge regarding menstruation, 92.0% of the participants were aware that menstruation is

physiological, 87.3% knew the source of bleeding is uterus. Of these 6 questions related to knowledge regarding menstruation, the responses were grouped into following knowledge score, good: 102(68.0%), moderate: 43(28.7%) and poor: 5(3.3%). Mother was the source of information regarding menstruation in 55.3% of the participants, followed by friends (27.3%) and siblings (10.7%) (Table 2).

Table 2: Knowledge regarding menstruation (n=150).

Variables		N	%
Cause of menstruation	Physiological	138	92.0
	God given	7	4.7
	Don't know	5	3.3
Source of bleeding	Uterus	131	87.3
	Bladder	4	2.7
	Don't know	15	10.0
Normal age of menarche	<10 years	5	3.3
	11-15 years	142	94.7
	>16 years	3	2.0
Normal duration of blood flow (in days)	1-3 days	15	10.0
	3-5 days	113	75.3
	5-7 days	22	14.7
Normal duration of menstrual cycle(in days)	21-35 days	128	85.3
	>35 days	22	14.7
Frequency of changing pad/cloth in a day during menstruation	Once in 4-6 hours	98	65.3
	Once in 7-8 hours	42	28
	Once in 9-12 hours	7	4.7
	Don't know	3	2.0

Lower abdominal pain was the most common symptom which was reported in 109 (72.7%) participants, followed by pain in lower back and generalized weakness which was seen in 95 (63.3%) and 93 (62.0%) participants respectively. Other menstrual symptoms reported among the participants were irregular menses, excessive bleeding and nausea, headache and vertigo which was seen in 47 (31.3%), 41 (27.3%) and 22 (14.4%) respectively (Figure 1).

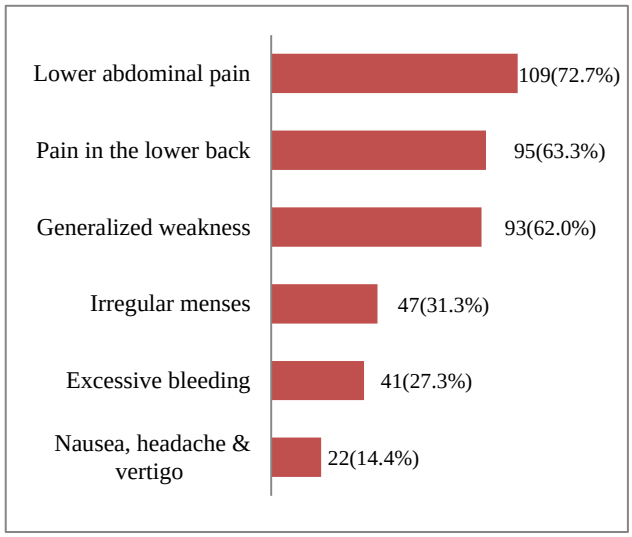

Figure 1: Menstrual symptoms experienced by adolescent girls.

Out of 150 participants, only 45 (30.0%) participants visited a health care facility for their menstrual symptoms and rest 105 (70.0%) participants didn't visit any health care facility. Another fact that was observed was, the girls were following home remedies (66.0%), visited traditional healers (22.0%) and took self-medication (7.3%) and rest of the girls (4.7%), neither they visited health care health care facility nor followed other methods. Reasons stated for not visiting health care facility were cost of consultation would be high in 76 (72.3%), embarrassment in discussion and physical examination and unpleasant experience at the health care centre in 14 (13.4%), doctor was male in 11 (10.5%) and distant health centre from their locality in 4 (3.8%). (Table 3).

Table 3: Health care seeking behaviour of adolescent girls for menstrual symptoms.

Variables		(n=150)			%
Visiting health care facility	Yes	45			30.0
	No	105			70.0
Following other methods		**(n=45)**	**(n=105)**	**Total**	
	Traditional healers	11	22	33	22.0
	Home remedies	22	77	99	66.0
	Self medication	11	0	11	7.3
	None	1	6	7	4.7
Reason for not visiting health care facility				**(n=105)**	
Cost of consultation (would be high)				76	72.3
Embarrassment in discussion and physical examination, unpleasant experience at the health care centre				14	13.4
Doctor was male				11	10.5
Distant health centre far from their locality				4	3.8

Table 4: Association between symptoms experienced by adolescent girls and health facility visit (n=150).

Symptoms	N	Visited health facility		P value
		Yes	No	
Pain in the lower back	95 (63.3)	19	76	<0.05*
Irregular menses	47 (31.3)	24	23	
Excessive bleeding	41 (27.3)	14	27	
More than one symptoms in a cycle	91 (60.6)	34	57	

P<0.05* statistically significant, Fischer's exact test.

Table 5: Overall assessment knowledge of menstruation among adolescent girls (n=150).

Knowledge	N	%
Good	102	68.0
Moderate	43	28.7
Poor	5	3.3

In our study, there was a statistically significant association between health care facility visit and adolescent girls who were suffering from more than one menstrual symptoms like pain in lower back, irregular menses and excessive bleeding (p<0.05). Though adolescent girls had multiple symptoms, their health care visit was significantly low among them (Table 4).

Based on the number of questions answered under knowledge section, the responses were categorised as explained in the methodology. Majority of the adolescent girls had good knowledge regarding menstruation (Table 5).

DISCUSSION

The present study was conducted with an intention to assess knowledge regarding menstruation and health care seeking behaviour among adolescent girls attending High school.

Menstruation is an important milestone in women's life, which unveils many changes physically, physiologically and psychologically. Menstruation is influenced by many factors such as general condition, nutrition, environment, socio-economic conditions. Race, ethnicity genetics and hereditary factors also play key role in attainment of menarche.[15]

Menarche refers to first menstrual bleeding/flow, which in typically occurs between 10 to 16 years, with mean age of menarche is between 12 to 13 years.[15-18] In this study, the mean age of the menarche in adolescent girls was found to be 12.31±1.16 years, which falls within normal age of menarche and corresponds to the study results conducted by Tarannum et al and Chan et al which was 12.52±1.41 years and 12.3±1.1 years respectively.[13,19] But, few studies also quote that there is a decrease in age of menarche, from ±15 years to ±12.5 years, in recent decades among developed countries due to factors related to nutrition, physical activity, physical built and others.[15,18,20]

Menstrual symptoms are experienced commonly are lower abdominal pain, low back ache, fullness of the breasts or mastalgia, headache, vomiting, tiredness, dizziness. Many of these symptoms are physiological which are reported just prior or during menstruation which usually subsides as the menstrual cycle completes. Sometimes, these menstrual symptoms can be debilitating, restricting them to carry out their daily activities and also affects quality of life, such as, menstruation including painful (dysmennorhoea), and heavy or excessive menstrual bleeding.[16,21] If these conditions are severe, it might affect reproductive health in long term, thus need to be evaluated. Positive health care seeking behaviour related to menstrual symptoms need to be emphasized from a very tender age.

In this study, dysmenorrhoea reported was 72.7%, which almost similar to the finding of study done by Omidvar et al,which was found to 70.2%.[21] Dysmenorrhoea was the most common menstrual symptom experienced by adolescent females.[22]

In this study, other than dysmennorhoea, symptoms experienced by adolescent girls were pain in the lower back, generalized weakness and nausea, headache & vertigo which were found to be 63.3%, 62.0% and 14.4% respectively. In comparison to a study conducted by Kabir et al, the findings reported were, pain in the lower back in 52.0%, generalized weakness in 6.0%, and nausea, headache & vertigo in 32.0%.[11]

In present study, irregular menses was reported in 31.3%, but in study done by Kabir et al the prevalence reported was 6.0%.[12] Initial few years of menarche, irregular cycles can be common. These irregular cycles should be keenly investigated, which might be an early sign implying polycystic ovary syndrome (PCOS), Thyroid dysfunction, cushing syndrome and so on.[17]

In present study, excessive bleeding was reported in 27.3%, which corresponds to the findings of study done by Omidvar et al, where excessive bleeding reported was 30.1%.[3] Excessive or heavy menstrual bleeding is one of the most common cause of iron deficiency anemia in women especially in reproductive and child bearing age group.[23]

In our study, out of 150 participants, only 30.0% had visited a health care facility for their menstrual problems, which is almost similar to the findings of the study by Rahatgaonkar et al which was 26.7%.[24] In contrast to the

above findings, health care facility visit reported in study by Baliga et al and Farotimi et al was 74.7% and 7.9% respectively.[6,7]

In our study, participants followed home remedies was reported in 66.0%, which was much higher when compared to previous studies by Baliga et al (19.2%) and Farotimi et al (16.4%).[6,7] In the present study, 4.7% girls didn't seek any treatment for their menstrual problems nor followed other methods, which corroborates the study findings of Baliga et al (6.1%), but prevalence of not seeking treatment reported was too high in study by Farotimi et al (46.4%).[6,7]

In present study, reasons stated for not visiting health care facilities for menstrual problems included many. Of them major concern opined by girls was cost of consultation reported in 72.3%, which was found to be 57.4% in a study by Chung et al.[13]

Other reasons for not visiting any health care facilities, in our study included embarrassment in discussion and physical examination & unpleasant experience at the health care centre reported in 17.2%, which had similar results done by Deka (19.7%).[25] This may be due to the social stigma associated with menstruation, which quiet new for the adolescents to go through.

Few more reasons stated in present study were, gender (male) of the doctor (10.5%) and location of health care facility (3.8%).Other previous studies also enlisted similar reasons.[13,25] Gender of the doctor, being a female can help adolescent girls to openly discuss regarding menstrual issues, which might not be the same when doctor is male. Point of health care facility, located nearby their residential area would help the girls to access the health facility much easily.

In the present study, we attempted to assess the health care seeking behaviour of the adolescent girls, and various factors associated with that.

CONCLUSION

Among 150 adolescent girls, 102 (68.0%) of them had good knowledge. The health care seeking behaviour was marginally low, only 34 (37.3%) sought treatment though they had more than one symptoms. Majority of them gave reason of high consultation for not visiting health care facility. Comprehensive health education regarding menstruation and menstrual problems targeted on adolescent girls, mothers and school teachers could help the students and promote positive health care seeking behaviour among them.

Recommendations

A comprehensive package of awareness activities focused on reproductive and menstrual health with adolescent friendly center (AFC) should be strengthened. These AFCs should involve parents also along adolescent girls, and should emphasize on health care seeking behaviour with respect to menstruation and its issues**.** Teachers should be trained effectively in menstrual health, so that they can educate the adolescent girls effectively. Health education should involve mother and adolescent girls about menstrual symptoms and its effective treatment by appropriate health seeking behaviour**.** The importance of health consultation for menstrual health problems and its awareness should be emphasized among both adolescent girls and parents. Establishing well trained female health personnel and counsellors in health centers and AFCs helps in delineating barriers to health care seeking behaviour.

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