



ORIGINAL RESEARCH PAPER

Community Medicine

“PRIOR AWARENESS OF MENARCHE AND MENSTRUAL HYGIENE PRACTICES AMONG SCHOOL GOING ADOLESCENT GIRLS IN CHANDIGARH (UT), NORTHERN INDIA”

KEY WORDS: Adolescent girls; Menarche; Menstrual hygiene practices

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ABSTRACT

Background: Menstruation is an extremely important reproductive health phenomenon which marks the onset of reproductive life of the girls. Despite this fact, its importance is mostly underestimated by researchers. Present study is conducted to investigate prior awareness and menstrual hygiene practices of school-going adolescent girls in Chandigarh. **Methods:** A cross sectional survey was conducted among 655 unmarried adolescents aged 14-19 years from selected 12 schools of Chandigarh, a highly urbanized city in Northern India. A stratified multistage random sampling was adopted. Study variables included socio-demographic characteristics: age, gender, literacy status of students as well as of their parents, elder/younger siblings, religion, type of family, occupation of parents and socio-economic status and menstruation related information like prior knowledge regarding menarche, restrictions imposed during menstruation and menstrual-hygiene practices undertaken. **Results:** In the present study, 655 girls who had attained menarche at the time of the study were included. The mean age of the participants was 14.93 years. There were 521 (79.5%) girls having prior awareness of menarche. Prior awareness was not found to be associated with any of socio-demographic variables included except type of school. Girls studying in government schools were comparatively at higher risk of not having awareness than their counterparts. There were 595 (90.8%) respondents who were using branded napkins and 497 (75.9%) girls reportedly disposed the napkin in the garbage. **Conclusions:** Little knowledge gaps regarding menstrual hygiene and safe menstrual hygiene observed should be bridged in order to reduce reproductive health problems faced by the adolescent girls. There is a need of continuous health education interventions for ensuring safe menstrual hygiene practices and to decrease the stigma and taboos related with menstruation.

INTRODUCTION

Menstruation is an extremely important reproductive health phenomenon which marks the onset of reproductive life of the girls. Despite this fact, its importance is mostly underestimated by researchers. Prior awareness of menarche and menstrual hygiene are important issues to maintain healthy wellbeing of the girls. The onset of menstruation is an event that reportedly brings along various experiences of anxiety, fear, confusion and depression among the adolescent girls. The socio-cultural restrictions result in adolescent girls remaining uninformed regarding the various scientific facts and menstrual-hygiene practices leading to adverse health outcomes.¹ Neglecting the menstrual hygiene practices increases the vulnerability of the young girls to the reproductive tract infections and thus, adversely affects their quality of life.² Menstrual hygiene management practices developed in adolescence are likely to persist in adult life.³ A number of studies are available on importance of menstrual hygiene practices in relation to their reproductive health.^{4,5,6}

There is a considerable lacuna in the knowledge about menstruation among the girls, leading to hazardous menstrual hygiene practices. It has been seen that maintenance of menstrual hygiene is far from satisfactory in majority of adolescent girls.⁷ Problems related with menstrual hygiene remain ignored and misunderstood by the society.⁸ Therefore, it is important to identify the knowledge gaps regarding menstrual hygiene and to promote safe menstrual hygiene in order to reduce reproductive health problems faced by the adolescent girls. Targeting the knowledge gaps regarding safe menstrual hygiene practices is of paramount importance to improve the health of the adolescent girls. Therefore, present study is conducted to investigate prior awareness and menstrual hygiene practices of school-going adolescent girls in Chandigarh.

METHODS:

Present study was conducted as a part of detailed survey under Indian Council of Medical Research (ICMR), India sponsored project “Natural Mentoring and Its Impact on Health Conditions of Adolescents”. A cross sectional survey was conducted among 655 unmarried adolescents aged 14-19 years from selected 12 schools of Chandigarh, a highly urbanized city in Northern India.

A stratified multistage random sampling was adopted to select girls within schools comprising two strata: government and private schools of Chandigarh. Power analysis was done to calculate sample size for the study. Sample size of 655 girls was optimum based on 60% anticipated prevalence of menstrual problems, 90% confidence coefficient and 5% relative precision.

Study variables included socio-demographic characteristics: age, gender, literacy status of students as well as of their parents, elder/younger siblings, religion, type of family, occupation of parents and socio-economic status and menstruation related information like prior knowledge regarding menarche, restrictions imposed during menstruation and menstrual-hygiene practices undertaken.

Information was collected by personal interviews conducted in privacy using pretested semi-structured interview schedules. Only those unmarried girls who had already attained menarche and were willing to participate were interviewed provided their parents also gave consents. Approval of Institutional Ethics Committee was granted for the project.

RESULTS

In the present study, 655 girls who had attained menarche at the time of the study were included. The mean age of the participants was 14.93 years. Among all girls included, 67.9% of the total respondents were from a government school and

32.1% were from a private school and 92.4% were from an English-medium school and 6.9% from Hindi-medium.

First reactions at start of menarche and prior knowledge regarding menstruation are shown in Table-1. There were 521 (79.5%) girls having prior awareness of menarche. When asked about their first reaction regarding menarche, 351 (53.6%) of the girls reportedly felt discomfort at menarche followed by 176 (26.9%) of the girls who were scared at the beginning of menstruation including 123 (23.5%) among those having prior knowledge and 53 (40.5%) among those having no prior knowledge. Whereas, 102 (15.6%) of the girls were indifferent while 64 (9.8%) girls reported to have been guilty and 58 (8.9%) felt shy at menarche. Table 1 gives an account of the respondents' first reaction at menarche.

Logistic regression analysis was used to investigate factors associated with having prior knowledge about menstruation. It was found that girls from government school were more likely to have the knowledge. Other correlates were not found to be significant meaning thereby girls were having prior knowledge of menstruation irrespective of their socio-demographic characteristics except type of school as shown in Table-2.

Table 3 presents information regarding menstrual hygiene practices like type of napkins and use thereof during menstrual cycle. There were 595 (90.8%) respondents who were using branded napkins, out of which Whisper (72.1%) was the most commonly used. Homemade napkins by dirty/old clothes were reported to be used by 7 (1.1%) respondents. The napkins being used twice during first day was seen in 312 (47.6%) respondents while during second day number of napkins being used twice was found in 332 (50.7%) respondents and on the third day 208 (31.8%) girls reported to have used the napkins twice while maximum (49.5%) respondents reported to have used the napkin once. The disposal of the napkin was reported as thrown openly by 6 (0.9%) girls while 497 (75.9%) girls reportedly disposed the napkin in the garbage.

DISCUSSION

In the present study, 655 adolescent school going girls were included and their prior awareness regarding menarche and menstrual hygiene practices were investigated. There were 79.5% aware of menarche and prior awareness was not found to be associated with any of socio-demographic variables included except type of school. Girls studying in government schools were comparatively at higher risk of not having awareness than their counterparts. Use of branded napkins was reported by about 91% girls surveyed and disposal of napkins in garbage was the most common practice reported by about 76% girls.

Prior awareness in our study is higher as compared to earlier studies. Previous studies have highlighted socio-cultural implications of improper menstrual hygiene practices including taboos that prevent girls from seeking help from professionals causing various health symptoms involving genital and urinary tracts encumbrance in the school attendance of the adolescent girls causing an even greater hindrance to the education of these girls.³⁰ In a study in rural parts of East Delhi reported poor prior knowledge about menarche, only 29% awareness among adolescent girls.⁹ Another study also reported only 22.3% awareness of menstrual cycle before attaining menarche.¹⁰ In the present study, the menstrual hygiene practices investigated and that 90.8% girls used branded napkins during menstruation. Our study reported progress in use of branded napkins by girls in Chandigarh. In an earlier study conducted in Chandigarh, branded napkins were used by 46.9% adolescent girls during menstruation.¹¹ However, another study conducted among adolescent girls in West Bengal reported that only 11.25%

used sanitary napkins during menstruation.² The practice of use of commercial sanitary napkins during menstruation has been reported to be quite low among the Indian girls in other studies also.^{3,12} Our study reported only 2.1 % of the adolescent girls reported to use home-made sanitary pads in contrast to several other studies. Among Rajasthani girls 75% girls were reported using old cloths during their periods.³ In another study conducted in a rural area of East Delhi, it was seen that majority of the girls (74.8%) used home-made sanitary pads while a lesser number (24%) used ready-made sanitary napkins.⁹ In Gantur, majority (53.7%) of the girls used sanitary pads while 34.6% of the girls used old clothes during menstruation.¹³ A study reported better menstrual practices among urban girls as compared to the rural girls.¹⁴

Present study has several some limitations as adverse impacts of unsafe menstrual hygiene on reproductive life of women could not be assessed in the present study. Moreover this study failed to assess the impact of any health intervention on prior awareness and menstrual hygiene practices of girls.

CONCLUSIONS:

Study concludes that high percentages of adolescent girls in schools of Chandigarh were having prior awareness of menarche and most of them were maintaining menstrual hygiene practices. However, reasonable number of the surveyed girls was having misconceptions as reflected from their first reactions at menarche. Little knowledge gaps regarding menstrual hygiene and safe menstrual hygiene observed should be bridged in order to reduce reproductive health problems faced by the adolescent girls. There is a need of continuous health education interventions for ensuring safe menstrual hygiene practices and to decrease the stigma and taboos related with menstruation. The education regarding reproductive health and safe menstrual hygiene practices may be included as part of the school curriculum to reach out to the maximum number of adolescent girls. There should be provision of sanitary napkins at low cost to be made available for girls may be helpful in promotion of menstrual hygiene.

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Table 1: Respondents by prior awareness and first reaction at menarche

Reaction	Prior Knowledge	No prior knowledge	Total
Scared	123(23.5)	53(40.5)	176(26.9)
Discomfort	288(55.0)	63(48.1)	351(53.6)
Felt guilty	43(8.2)	15(11.5)	58(8.9)
Shyness	55(10.5)	9(6.9)	64(9.8)
Indifferent	85(16.2)	17(13.0)	102(15.6)
Any other	30(5.7)	0(0)	30(4.6)
Overall	524	131	655

Table 2: Logistic regression analysis of factors affecting prior knowledge about menstruation

Factor	B	S.E.	Sig.	Exp (B)	95.0% C.I. for EXP(B)	
					Lower	Upper
Govt School Vs Others	.499	.246	.042	1.647	1.017	2.668
Hindi Medium Vs Others	.022	.397	.955	1.023	.470	2.227
Joint Family Vs Others	-.338	.256	.187	.713	.431	1.178
Low / Middle SES Vs High	-.108	.255	.672	.898	.545	1.479
Hindu Vs Others	-.144	.238	.546	.866	.543	1.382

Having Sisters	.379	.229	.098	1.461	.932	2.290
Illiterate Mother Vs Literate	-.021	.327	.949	.979	.516	1.859
Housewife Vs Working	.215	.254	.397	1.240	.754	2.039
Having Significant Person in Life	.293	.219	.181	1.341	.873	2.060
Having Mentor In Life	.577	.364	.113	1.781	.873	3.634
Constant	-2.692	.513	.000	.068		

Table 3: Girls by menstrual hygiene practices

Practice	No	%
(a) Types of napkin used		
No response		
Home made by dirty/old cloths	7	1.1
Home made by clean /new cloths	14	2.1
Cotton roll	8	1.2
Branded napkins		
Whisper	429	72.1
Stayfree	137	23.0
Don't worry	29	4.9
(a) No. of napkins during 1st day		
No Response	27	4.1
Once	80	12.2
Twice	312	47.6
More than that	236	36.0
Mean ± SD		
(b) No. of napkins during 2nd days		
No Response	30	4.6
Once	60	9.2
Twice	332	50.7
More than that	233	35.6
(c) No. of napkins during 3rd days		
No Response	32	4.9
Once	177	27.0
Twice	325	49.6
More than that	121	18.5
(d) No. of napkins during 3rd days		
No Response	74	11.3
Once	324	49.5
Twice	208	31.8
More than that	49	7.5
(d) Disposal of napkins		
Disposal in garbage	497	75.9
Throw away openly	6	0.9
Burry underground	1	0.2
Throw in flush	2	0.3
Re-use after washing	2	0.3
Any other	118	18.0
No response	29	4.4

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