

RESEARCH

A study of reproductive health and health seeking behaviour of adolescent girls residing in urban slums of Guwahati city

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ABSTRACT

Objectives: Study is carried out to assess the menstrual health and hygiene practices of the adolescent girls and their health seeking behavior. **Methodology:** This community based cross sectional study was conducted among adolescent girls of 10-19 years residing in the urban slums of Guwahati city for a period of one year. Predesigned pretested semi structured proforma was used to collect sociodemographic and individual information of the respondents. **Results and Observations:** Out of 400 respondents, 309 (77.20%) had attained menarche at the time of survey. Out of which 77.70% had regular menstrual cycle. Majority of the girls (91.30%) were found to use old cloth during their menstrual period. 42.10% of the adolescent girls were suffering from dysmenorrhea. Out of all the girls who were suffering from menstrual disorders only 33.48% of the girls preferred seeking treatment. Younger adolescents were found to be more reluctant in seeking treatment. Necessity of treating menstrual disorders was not perceived by majority of the adolescents. **Conclusion:** Good menstrual hygiene is crucial for the health and dignity of girls and women. This is an important sanitation issue which has been long in the closet and still there is a long standing need to openly discuss it, make girls aware and encourage health seeking behavior in them.

Keywords: Adolescents, menstrual hygiene, health seeking behavior, dysmenorrhoea, slums.

Conflict of interest: None. **Disclaimer:** Nil.

Adolescence is defined as period of personal development during which young people establishes a personal sense of individual identity and feeling of self-worth, which also includes an alteration of his or her body image, adaptation to more mature intellectual abilities, adjustment to society's demand for behavioral maturity, internalizing personal value system and

preparing for adult role[1]. World Health Organization has defined adolescence as a period between 10-19 years of age [2] and it has been recognized as a special period particularly in girl's life that requires specific and special attention. This period is marked with onset of menarche. Menstruation is a phenomenon unique to all females. And though it is a natural process,

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it is plagued by several perceptions and practices which sometimes results in adverse health events.

Materials and Methods

It is a community based cross sectional study done in the urban slums of Guwahati city for a period of one year from August 2011 to July 2012. The study population comprises of adolescent girls in the age group of 10 to 19 years residing in the urban slums of Guwahati city.

Inclusion criteria: All resident adolescent girls in the age group of 10-19 years in the selected slums (residing for > 6 months).

Exclusion criteria: a) Pregnant and lactating adolescent mothers, b) Nonresident adolescents, for example, visitors staying for less than 6 months in the selected slums.

The sample size has been calculated based on the assumption that prevalence of any morbidity among the adolescent group at a given point of time is 50% because it shall yield the largest value of “n”, when the level of precision “L” is fixed [3]. Applying the formula $n=4pq/L^2$, the sample size for this study came out to be 400 (n=400).

Slums were taken as the primary sampling unit in the study. Out of a total of 90 slums as per Guwahati Development Department, Government of Assam, 2009, 10 slums were selected randomly to get the desired sample size. 40 adolescents from each slum were interviewed. Within each slum random sampling was used to select the first household and then subsequent houses were visited. In each selected household, all the adolescent girls meeting the inclusion criteria were included in the study. Consent for hemoglobin estimation was given by only 274 respondents.

Predesigned pretested semi structured proforma was used to interview the respondents. Colour scale for hemoglobin was used to estimate hemoglobin level.

Before commencing the field work, necessary approval for conducting the study from the Institutional Ethics Committee of Gauhati Medical College and Hospitals has been obtained.

Analysis: Data collected was entered in Microsoft Office Excel and analysed using SPSS version 17.0. Chi square test was used for analysis of categorical variables.

Results

A total of 400 adolescent girls were interviewed regarding their onset, pattern and practices of menstruation. Out of 400 girls, 309 (77.20%) had attained menarche at the time of survey. Majority of the girls attaining puberty were of the age group of 15-19 years (45.20%). In this age group 96.90% of the girls had attained puberty at the time of survey.

Out of 309 subjects attaining menarche, 240 (77.70%) had regular menstrual cycle, 73.10% had an average of 3-5 days of menstrual bleeding and 76.10% having an average quantity of menstrual blood loss.

Out of all girls attaining menarche during the survey period, majority (91.30%) were found to use old cloth during their menstrual period.

Menstrual parameter	Menstrual pattern	Respondents	
		No	%
Status of menarche	Menarche not attained	91	22.8
	Menarche attained 10-14 years (n=213)	128 (60.1%)	32.0
	Menarche attained 15-19 years (n=187)	181 (96.8%)	45.2
	Total	400	100
Menstrual cycle	Regular	240	77.7
	Irregular	69	22.3
	Total	309	100
Duration of menstrual period	<3	42	13.6
	3-5	226	73.1
	>6	41	13.3
	Total	309	100
Amount of blood loss	Scanty	48	15.5
	Average	221	71.6
	Heavy	40	12.9
	Total	309	100

Table 2: Distribution of adolescent girls according to their menstrual hygiene

Menstrual hygiene	Method practiced	Respondents	
		No	%
Material used during menstruation	Sanitary pads	14	4.5
	New cloth	11	3.6
	Old cloth	282	91.3
	All of the above	2	0.6
	Total	309	100
Number of times changed per day	1-2	50	16.2
	3-6	228	73.8
	7 or more	31	10
	Total	309	100
Method of disposal	Cloth pieces reused	298	96.4
	Sanitary pads/cloth pieces disposed	11	3.6
	Total	309	100
Method of cleaning reused cloth	Soap and water	234	75.73
	Water only	75	24.27
	Total	309	100

Sanitary pads were used by only 4.50% of the girls. 73.80% of the respondents changed their pads 3 to 6 times per day during menstruation. 96.40% of the girls were found to reuse the cloth pieces during their subsequent periods. Soap and

water was used by most of the girls (75.73%) to clean the cloth pieces for subsequent uses. (Table 2)

Out of a total of 309 girls attaining menarche, 221 were complaining some or the other form of menstrual disorders. 42.10% had primarily dysmenorrhea, the prevalence being more common in the age group of 10-14 years. 23.10%, 18.50% and 16.30% had complained of white discharge per vagina, menorrhagia and oligomenorrhoea respectively. It is however seen that symptoms of reproductive tract infection (white discharge per vagina) is substantially higher (33.08%) among the girls of 15-19 years age group compared to 10-14 years age group (7.95%). (Table 3)

Out of the 274 respondents whose hemoglobin estimation was done, the mean hemoglobin of menstruating girls (8.87 gm %) was found to be less than in the non-menstruating girls (10.15 gm %). The mean difference between the two groups was found to be significant at 5% level of significance (Z= 12.79) (Table 4)

Table 4: Distribution of adolescent girls according to their menstrual status and mean hemoglobin level

Menstrual status	No (%)	Mean Hb (gm%)
Menstruating	309 (77.5)	8.87
Non menstruating	91 (22.5)	10.15

Table 3: Distribution of adolescent girls according to prevalence of menstrual disorders across age group

Menstrual disorders	Age (in years)				Total
	10-14		15-19		
	No.	%	No.	%	No. (%)
Dysmenorrhoea	46	56.82	47	35.34	93 (42.10)
Oligomenorrhoea	18	20.45	18	13.54	36 (16.30)
Menorrhagia	17	19.32	24	18.04	41 (18.50)
White discharge per vagina	7	7.95	44	33.08	51 (23.10)
Total	88	100.00	117	100.00	221 (100.00)

Health seeking behavior of the studied adolescents in regards to menstrual health was found to be of a very marginal level. Only 33.48% of the girls preferred seeking treatment. The health care seeking was maximum for polymenorrhoea (53.05%) and least for white discharge per vagina (13.73%). (Table5)

Girls in the age group of 10-14 years were found to be more reluctant in seeking treatment (78.40%) compared to girls of 15-19 years age group (58.65%).

Table 5: Treatment seeking behavior of adolescent girls according to their menstrual disorders

Menstrual disorders	Number of girls suffering	%	Number seeking care	%
Dysmenorrhoea	93	42.10	33	(35.48)
Oligomenorrhoea	28	12.70	8	(28.57)
Polymenorrhoea	49	22.10	26	(53.06)
White discharge per vagina	51	23.10	7	(13.73)
Total	221	100.00	74	(33.48)

N.B: Figures in parenthesis indicate row wise percentage

regarding menstrual health.

In the present study, 77.20% of the girls had attained menarche at the time of survey. 77.70% had regular menstrual cycle, 73.10% had an average of 3-5 days of menstrual bleeding and 76.10% having an average quantity of menstrual blood loss.

Did not think necessary was one of the main reason for not seeking treatment across all age groups (29.25%). High cost of treatment (16.34%), long waiting time (13.60%), not knowing source of treatment (12.92%), treatment facility far off (8.16%) were some of the other reasons cited for not seeking care. Nearly one fifth (19.73%) of the adolescents said that they felt embarrassed to go for treatment.(Table 6)

Acharya et al [3], in their study on nutritional status and menarche in adolescent girls in an urban colony of South Delhi found that 64.40% of the adolescent girls had attained menarche. In the study it was observed that 37.5% and 96.70% of the adolescent girls had attained menarche in the age group of 10-14 years and 15-19 years respectively. The variations in mean age at attainment of menarche are the result of genetic and environmental factors. Difference between rural urban groups or between poor and better off girls within given areas are primarily due to differences in health related concomitants of socioeconomic status, nutrition, hygiene, health care etc [4].

Discussion

Menstruation is an inevitable part of a girl’s life and more so an important indicator of normal physical, physiological and functional wellbeing. The present study tries to highlight the menstrual status of adolescent girls residing in the slums of Guwahati city and their health seeking behavior

Most of the girls in the present study (91.30%) were found to use old cloth during

Table 6: Distribution of the adolescent girls by reasons for not seeking treatment for their menstrual disorders

Age (in years)	Reasons for not seeking treatment												Total
	Not necessary		Did not know the source		Costs too much		No time/long waiting time		Facility far off		Embarrassed to seek treatment		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
10-14 (n=88)*	16	23.19	14	20.28	11	15.94	8	11.60	5	7.25	15	21.74	69 (78.40%)
15-19 (n=133)**	27	34.62	5	6.41	13	16.67	12	15.38	7	8.97	14	17.95	78 (58.65)
Total (n=221)***	43	29.25	19	12.92	24	16.34	20	13.60	12	8.16	29	19.73	147 (66.52)

*Denotes total number of girls with menstrual disorder in 10-14 years age group.
 ** Denotes total number of girls with menstrual disorder in 15-19 years age group.
 *** Denotes total adolescents with menstrual disorder.

their menstrual period. Sanitary pads were used by only 4.50% of the girls. 96.40% of the girls was found to reuse the cloth pieces during their subsequent periods. Soap and water was used by 75.73% to clean the cloth pieces for subsequent use. Similar findings were noted in studies conducted by Khanna et al (2005) [5], Reddy et al (2005) [6].

Out of 309 girls attaining menarche at the time of survey 221 had complained of some or the other form of menstrual disorders. Out of which dysmenorrhea seems to be the leading cause of reproductive morbidity across the various age groups. Similar findings were reported by some other authors [7, 8].

The mean hemoglobin of menstruating girls (8.87 gm %) was found to be less than that of non menstruating girls (10.15 gmb %). Study conducted by Chaudhary et al 2003 also depicts similar findings [9].

Of all girls suffering from menstrual disorders, only 33.48% of the girls preferred seeking treatment for their menstrual disorders. Most of the girls did not deem reproductive problems to necessitate treatment (29.25%). High cost of treatment, long waiting time, not knowing source of treatment etc. were some of the other reasons cited for not seeking care. Similar finding came to the fore in various studies conducted in different parts of the country [10, 11].

Conclusion

Menstrual health is fundamental to women's sexual and reproductive health. Changes in the normal menstrual patterns of women in reproductive age groups may affect the physical and psychological wellbeing. The present study has demonstrated a marginal level of reproductive health status among the slum dwelling adolescent girls. Educating and creating awareness among the girls and their families particularly the mother is important in bringing

about a change in outlook regarding menstrual health.

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