

Spectrum of menstrual disorder and health consciousness of adolescent school going girls: A comparative study between the extremes of two socio-economic group

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Abstract

Introduction and Background: Two important aspect of female reproductive health is menarche and menstruation. Various menstrual dysfunctions such as dysmenorrhoea is quite common and significantly affects the quality of female life. Adolescents constitute the most vulnerable group because of their shy nature, ignorance and reluctance to seek medical advice. Present study aims to find out the prevalence of menstrual disorder and health seeking behavior of adolescent school girls in extreme of two socio economic group.

Materials and Method: The present study was a descriptive cross-sectional questionnaire based study conducted on 600 adolescent school going girls from two senior secondary school at Bhubaneswar, Odisha which represent two diverse socioeconomic group.

They were asked to complete a pretested and validated 30 point structured questionnaire anonymously. Data regarding age of menarche, menstrual pattern, menstrual complaints, it's impact on daily activities, source of information and reason to seek medical treatment, were noted.

Results: The mean age of menarche in high socio economic (H.S.E) group is 11.8 years and in low socio economic (L.S.E group) was 12.7 years. Majority in higher and lower SES group had regular cycle (64% versus 76.09%) with cycle length of 21 to 35 days (66% versus 96.97%). The most prevalent menstrual symptoms were dysmenorrhoea (60% versus 52%). 89.9% LSE group feel that their knowledge regarding reproductive health is inadequate. Only a few of them (38% versus 13.45%) sought advice for their menstrual problems and the source of advice were mostly friends and mother. 56% versus 11.7% in both group received medical treatment. School absentism was noted in 17% versus 9.76% and restricted sports activities in 49% versus 44.78%.

Interpretation and Conclusion: Menstrual problems are a significant cause of suffering in adolescent girls, which is further aggravated by inadequate knowledge, lack of information and their reluctance to seek medical advice when needed. To prevent this trend appropriate health education measures which can improve their understanding and break the barrier to seek medical advice are essential.

Keywords: Adolescence, Menarche, Menstrual pattern, Menstrual hygiene, Health seeking behaviour, Socio-economic class.

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Introduction

Female reproductive health revolves around menarche and menstruation. Menarche, which signals the beginning of reproductive maturity generally happens between 10 to 14 years in majority of girls depending on race, ethnicity, and socio economic and nutritional status.⁽¹⁾ Irregular menstrual cycles due to the immaturity of the Hypo-thalamo-pituitary-ovarian axis are quite common in adolescents. Increase in the childhood obesity and polycystic ovarian disease may further complicate the situation leading to greater presentation of disorder of menstruation in these age group.^(2,3)

Dysmenorrhoea is the commonest of various menstrual dysfunctions reported in adolescent girls. The prevalence of dysmenorrhoea is around 60-90% and accounts for majority of school absentism and restriction of daily activities in adolescents.⁽⁴⁾

Although menstrual disorder has significant impact on adolescent health and life style, medical consultation rate amongst them is surprisingly very poor. Many adolescents feel reluctant to talk about menstruation

and find gynaecological examination quite embarrassing and therefore avoid medical consultation which leads to unnecessary suffering and acceptance of menstrual problems. Majority prefer to seek advice from their mothers and peers rather than doctors.^(4,5)

Aims and Objectives

To find out the prevalence of menstrual disorders and health seeking behaviour of adolescent school going girls in the extremes of two socio-economic groups and to find out if they differ significantly.

1. Prevalence of various menstrual problems in the adolescents.
2. Knowledge and attitude towards menstrual problem.
3. To find out health seeking behaviour of adolescents.
4. To make a comparison between two socio-economic groups and find out whether they differ significantly in their menstrual symptoms and health seeking behavior.

Materials and Method

Study Period: August - September, 2011.

Study Design: Descriptive cross sectional questionnaire based study between High Socio-Economic (H.S.E) group and Low socio-Economic (L.S.E) group school going adolescent girls. This study consist of 600 adolescent school going girls from two senior secondary school (300 from each school) of which one is an International school (highly privileged group) and the other one is a Tribal residential school having students from underprivileged sector of Odisha at Bhubaneshwar.

Consent from the principal of the school was obtained prior to study. All girls were explained about the purpose of the study and asked to fill up the predesigned questionnaire. Data collected include demographic details, age of menarche menstrual pattern, presence of any menstrual problems and their impact on school attendance and outdoor activities, source of knowledge and information about menarche and menstruation, whether they received some treatment for menstrual problem, if not reason for not seeking medical help etc. Height, weight, mid arm circumference were obtained.

In the present study menstrual cycle of 21- 35 days with a mean of 28± 2 days was considered regular,

while it is considered irregular when it will be less than 21 days or more than 35 days.⁽⁶⁾

Menstrual flow was considered as scanty , average and heavy one based on number of sanitary towels used per day as mentioned by the respondents (1-2, 3-5 and >5 sanitary towel per day as scanty, average and heavy menstrual flow respectively).⁽⁶⁾

Body Mass Index (BMI) was calculated as weight in kg/height in m². According to BMI, nutritional status was classified as overweight if BMI (> 25), normal (18.5-24.99) and underweight (< 18.5) kg/height in m² respectively (WHO bulletin-2004).⁽⁷⁾

Data collected in MS Excel were analyzed using percentages and proportion. Chi-square test and p value calculated to derive statistical significance.

Observation and Result

All of high socio-economic(H.S.E) group participated in the study and three girls in low socio-economic(L.S.E) group left as they had not attended menarche. The mean age of the participants were 13.81years and 13.62 years in high socio-economic and low socio-economic group and the age range was 11.7- 18.2 years and 11.4-18.3 years respectively.

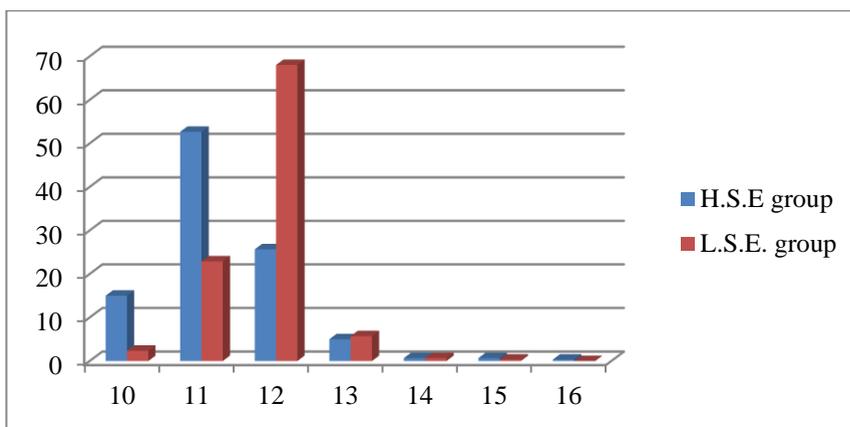


Fig. 1: Age of menarche in both the groups

Median age of menarche in H.S.E group is 11. 8 years and in L.S.E group 12.7 years.

Table 1: Menstrual pattern in both groups

Variable	H.S.E group No.(n=300)	L.S.E group No.(n=297)	χ ²	P value
Rhythm of menstrual flow				
Regular	192(64%)	226(76.09%)	10.3988	.001*
Irregular	108(36%)	71(23.91%)		
Length of menstrual cycle				
<21	54(18%)	6(2.02%)	94.7599	<0.00001*
21-35	198(66%)	288(96.97%)		
>35	48(16%)	3(1.01%)		
Duration of flow				
<=2 Days	9(3%)	5(1.7%)	9.871	.042

3-5 Days	210(70%)	223(75.1%)		
5-7 Days	75(25%)	53(17.8%)		
Others	4(1.33%)	10(3.39%)		
Not responded	2(0.67%)	6(2.01%)		
No. of sanitary towels used				
1 – 2(scanty bleeding)	99(33%)	207(69.69%)	93.112	<0.00001*
3-5 (average bleeding)	186(62%)	69(23.23%)		
>5(heavy bleeding)	10(3.33%)	12(4.04%)		
Not responded	5(1.67%)	9(3.04%)		
Percentage of girls knowing their LMP				
Yes	81(27%)	59(19.9%)	4.2321	0.039
No	219(73%)	238(80.1%)		

Table 2: Any associated symptoms

Associated symptoms	H.S.E. group(%)	L.S.E. group(%)	χ^2	P value
Dysmenorrhoea	72	52	8.489	0.0036
Body Ache	93.4	17		
Leg pain	70.5	14		
Vomiting & nausea	19.7	3		
Headache	29.5	17		
Dizziness	23.2	10.3		
Anxiety	34.4	23.6		
Breast tenderness	15.1	17.8		
Change in bowel habits	19.7	11.7		
Abdominal pain	35.4	25.2		
Back pain	31.1	23.2		
Abdominal bloating	20.1	9.7		
Fatigue	34.3	14.7		

Table 3: Girls experienced any menstrual problem in both groups

Experienced	H.S.E. group No.(n=300)	L.S.E. group No.(n=297)	χ^2	P value
Yes	164(54.67%)	95(31.97%)	31.2555	<0.0001*
No	136(45.33%)	202(68.03%)		

The chi-square statistic is 31.2555. The p-value is < .00001. The result is significant at p < .05.

Table 4: Extent to which menstrual problems have impact

Impact	H.S.E. group	L.S.E. group
	No.(n=300)	No.(n=297)
Daily activities	72(24%)	59(19.87%)
Sports activity	147(49%)	133(44.78%)
Outdoor activities	21(7%)	68(22.9%)
School absentism	51(17%)	29(9.76%)
No impact	9(3%)	8(2.7%)

Table 5: Health seeking Behaviour in both the group

Number of girls seeking advice	H.S.E. group No.(n=300)	L.S.E. group No.(n=297)
Yes	114 (38%)	40(13.45%)
No	186(62%)	257(86.55%)
From whom		
Family	129(43%)	0(0%)
Friend	54(18%)	197(66.33%)

Doctor	90(30%)	25(8.42%)
Nurse	27(9%)	75(25.25%)
Midwife	0(0%)	0(0%)
medical treatment received		
Yes	168(56%)	35(11.7%)
No	132(44%)	262(88.3%)
Response to the treatment		
Yes	141(83.93%)	35(100%)
No	27(16.07%)	0(0%)
factors influenced her decision to seek medical advice		
Severity of symptoms	76(57.57%)	200(76.34%)
Opinion of family members	26(19.69%)	5(1.91%)
Doctor's gender	15(11.33%)	30(11.45%)
Anxiety about facing embarrassing	8(6.1%)	20(7.63%)

questioning		
Cost of consultation	2(1.52%)	2(0.76%)
Time constraints	5(3.79%)	5(1.91%)
Percentage of girls finding questions about menstruation, pregnancy, contraception and STDs embarrassing in both the groups		
Yes	123(41%)	62(20.9%)
No	177(59%)	235(79.1%)

Table 6: Knowledge and attitude and psychological response to menarche and menstruation

Source of knowledge	H.S.E. group No.(n=300)	L.S.E. group No.(n=297)
Mother	225(75%)	106(35.69%)
Friends	48(16%)	10(3.39%)
Other family members	9(3%)	8(2.29%)
School education	18(6%)	173(58.23%)
How many consider their knowledge adequate		
Yes	195(65%)	30(10.1%)
No	105(35%)	267(89.9%)
No of girls accepted menstruation as normal		
Yes	165(55%)	142(47.8%)
No	135(45%)	155(52.2%)
Psychological response to menarche and menstruation		
Excitement	8(5.9%)	17(10.97%)
Confusion	25(18.5%)	29(18.97%)
Sadness	18(13.3%)	27(17.41%)
Rejection	9(6.7%)	12(7.74%)
Apprehension	15(11.1%)	13(8.39%)
Fear	24(17.8%)	40(25.81%)
Disgusting, Messy	36(26.7%)	17(10.97%)
Duration of the psychological response (in months)		
1 to 3	81(60%)	88(56.77%)
3 to 6	29(21.5%)	36(23.23%)
6 to 12	19(14.1%)	23(14.84%)
>12	6(4.4%)	8(5.16%)

Discussion

Although menstruation is a normal physiological process, some kind of menstrual disturbances are common in a female’s life. But when severe this may lead to morbidity which causes undue suffering and loss of work days. In our study the mean age of the respondents were 13.81 in H.S.E group and 13.62 in L.S.E. group respectively. In H.S.E. group mean age of menarche is 11.8 years and in L.S.E. is 12.7 years which is consistent with studies done by Peacock et al,⁽³⁾ Shahbazian et al⁽⁸⁾ and Singh et al.⁽⁹⁾ More number

of overweight and obese girls in HSE group could explain the lower age of menarche. The regular rhythm of the menstrual cycle in this study is observed more frequently in LSE group than in HSE group (76.09% vs 64%). Whereas irregular cycles were reported more frequently in HSE group (36% vs 23.91%). This is consistent with the findings of Begum et al⁽¹⁾ Agarwal et al,⁽²⁾ Verma et al.⁽¹⁰⁾ Majority of girls in both group didn’t know their last menstrual period (LMP) date. Similar to Chan et al⁽⁴⁾ study majority of the respondents in both group (66% vs 97%) were having menstrual cycle of length 21 to 35 days. The duration of the flow was 3 to 5 days in majority in both the group (70% vs 75.1%).Whereas majority of LSE group (69.69%) had scanty bleeding in our study which is in contrast to Chan et al study,⁽⁴⁾ where scanty bleeding was observed only in 41.4%. Such trend of scanty bleeding in LSE group could be due to malnutrition and iron deficiency anemia in the adolescent girls. More number of respondents in the HSE group (54.67%) experienced associated symptoms than LSE group (31.97%) which is consistent with Nwankwo et al study.⁽¹¹⁾ Significantly more number girls of LSE group were symptom free in menstrual period compared to HSE girls. This might be due to LSE girls being more negligent towards suffering which leads to tolerance and acceptance of the symptoms. Similar to J Begum study⁽¹⁾ the predominant symptoms in the present study was also dysmenorrhoea although the LSE group tend to have less dysmenorrhoea than HSE group (52% vs 60%). More LSE girls were free from menstrual disorders than HSE group girls.

For their problems very less number of girls took advice from others (38 % vs 13.45%). The majority of the girls preferred to take advice from family members such as mothers (75% vs 35%) and friends (16% vs 3%). Present study revealed adolescent seeking less medical consultation for their problem which was even negligibly poor in LSE group (30% vs 8%). Our study is consistent with several other studies^(2,3,4,15) which reported low consultation rate and suboptimal use of health care system by adolescents. This may lead to delay in seeking medical attention and unnecessary suffering.

56% of HSE and 11% of LSE group needed treatment for their problem and the response rate was 83.93% HSE group whereas 100% in LSE group. This implies that the girls of higher socio economic status need more medical attention in comparison to their counterpart but satisfaction rate is better in the girls of lower socio economic group. The girls of lower socio economic status have better tolerance for their menstrual symptoms, therefore needing less medical attention. The main reason for seeking medical advice was the severity of symptoms (57.57% vs 76.34%), opinion of a family member(19.69% vs 1.91%). Many girls in the present study regard question about menstruation and gynecological examination is

threatening and embarrassing. Many girls were feeling reluctant to take advice from a male doctor (Chan et al, 2009).⁽⁴⁾ Menstrual problems account for significant morbidity in adolescent girls. In our study almost one fourth of girls in both groups had restriction of daily activity and approximately one half had restricted sports activity during menstruation. 17% of adolescent girls remain absent from school in HSE group whereas the school absenteeism is little lower (9.76%) in the lower socio economic group, which is significant statistically (Chi-square test = 5.92, p value- 0.015). (Table 4). However dysmenorrhea is the major cause for school absenteeism (60.67% vs 52.53%).^(1,2,6,14-17)

35% girls of HSE group and 89% of LSE group are not satisfied by their current knowledge about menarche and menstrual problems. Around half of the adolescent girls in both the groups (45% vs 52%) did not accept menarche and menstruation normally. Predominant psychological response to menarche vary in both the groups. It is messy and disgusting to the HSE group whereas unknown fear complex takes the predominance in LSE group. Shanbhag study⁽²¹⁾ at Bangalore city also revealed large majority of the students experiencing fear (44.1%), followed by anxiety in 26.1%.⁽¹⁷⁾ This could be due to lack of prior knowledge. However these psychological response was more at the start of menses lasting for 1- 3 months and gradually decreased. Many girls accepted it as normal with the advancement of menstrual years as well as psychological maturity.

Almost half of the adolescent girls in both the group feel embarrassed when asked questions about menstruation, pregnancy, contraception and STDs. Majority of LSE group do not have any information regarding STDs and contraception in contrast to HSE group. This could be due to less number of educated mothers in LSE group.

Conclusions

Menstrual problems in adolescent girls are common and is adversely affecting their life style and daily activities causing undue suffering. However, their knowledge and understanding regarding menstruation and reproductive health is comparatively poor which is more so in underprivileged sector. This prevents them to seek appropriate medical advice at the time of need. Educating adolescent girls as well as their mother about menstruation and related problems is highly important in this context. Including related topic in school curriculum and considering an education programme involving the adolescent girl as well as their mother should be highly encouraged to improve their understanding and reduce sufferings. Barrier to seek medical attention need to be further explored and appropriate interventions need to be implemented so that they come forward to avail the health care facility when needed.

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