

MENSTRUAL PROBLEMS AND HEALTH AWARENESS OF TRIBAL ADOLESCENT SCHOOL GIRLS OF ODISHA- A CROSS-SECTIONAL STUDY

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ABSTRACT

BACKGROUND

Some type of menstrual dysfunction is common in adolescent girls. Tribal adolescents are more vulnerable due to malnutrition, ignorance, poverty, sociocultural taboos and poor medical attention, which causes significant morbidity.

MATERIALS AND METHODS

The present study was a descriptive cross-sectional study based on self-administered, structured questionnaire conducted on 300 adolescent school going girls from a tribal residential school at Bhubaneswar, Odisha. They were asked to complete a pre-designed questionnaire anonymously. Information related to age of menarche, menstrual pattern, menstrual complaints, its impact on daily activities, source of information and reason to seek medical advice were noted.

RESULTS

The mean age of the respondent was 13.62 years in this study. Mean age of menarche was 12.07 years with a range being 10 to 16 years. Majority had regular cycle (76.09%) with cycle length of 21 to 35 days (96.97%). The most prevalent menstrual symptom was dysmenorrhoea (52%). 89.9% feel that their knowledge regarding reproductive health is inadequate. Only 13.45% sought advice for their menstrual problems and the source of advice was mostly from friends (66.33%). 11.7% received medical treatment. School absenteeism was noted in 9.76% and restricted sports activities in 44.78%.

CONCLUSION

Menstrual problems are a significant source of morbidity and major cause of school absenteeism. Many adolescent girls have inadequate information about menstrual problem and are reluctant to seek medical advice, leading to delay in diagnosis and treatment. Appropriate health education measures are required to prevent this trend.

KEYWORDS

Adolescence, Menarche, Menstrual Pattern, Menstrual Hygiene, Reproductive Health Education, Socioeconomic Class, Tribal Girl.

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BACKGROUND

The tribal populations constitute a unique population as they live in geographically isolated area under primitive conditions with their typical social and cultural practice. They are at risk of undernutrition because of their agricultural practice, uncertainty of food supply and have limited access to health care facilities. Menarche, the first menstrual period which indicates the maturity of reproductive potential and physiological growth,

generally occurs at 10 to 14 years in 95% of girls depending on race, ethnicity, and socioeconomic and nutritional status.¹ Irregular menstrual pattern is quite common due to hormonal fluctuation and immaturity of the hypo-thalamo-pituitary-ovarian axis during adolescent period. This may create diagnostic dilemma for physicians and may result in a delay in the treatment of underlying problems.²

Out of various menstrual problems reported in adolescents, dysmenorrhoea is most common and is the frequent cause of school absenteeism and restriction of daily activities.³

Although menstrual problems have tremendous impact on adolescent health only very few seek medical advice. Hence, there is underutilisation of health care services by adolescents.^{2,3,4,5} Not uncommonly they feel shy to talk about the menstruation and are afraid of seeing doctors. Due to lack of appropriate advice and guidance what they generally get from their peer groups and mother, they undergo silent suffering and acceptance of menstrual problems.

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Aims and Objectives

Aim

To find out occurrence of various menstrual disorders and their health awareness behaviour of adolescent school going girls of tribal Odisha and to find out if they differ significantly from the general population.

Objectives

To know the

1. Prevalence of various menstrual disorders in the adolescents.
2. Source of knowledge and their approach to menstrual problems.
3. Health awareness behaviour of tribal adolescent girls.

MATERIALS AND METHODS

This was a descriptive cross-sectional study based on self-administered, structured questionnaire undertaken from July to September, 2011.

Out of 600 adolescent girls studying in a tribal residential school at Bhubaneswar, Odisha, 300 adolescent school going girls aged 11-19 years who attained menarche were selected by simple random method for the study. The sample size calculated as per the prevalence of severe dysmenorrhoea during menstrual period 37.96%. In the study by 'A study of dysmenorrhoea during menstruation in adolescent girls by Agarwal AK et al, in the Indian Journal of Community Medicine 2010, Jan:35 (1):159-164, considering the formulae $4pq/d^2$, with the desired level of precision = 6%, and also by considering 10% as non-respondent, the final sample size came to 284. So we considered here the sample size 300. Out of them, 3 were excluded from the study as they did not respond to the questionnaire properly.

They were explained about the purpose of the study by the investigator and principal of the school before their voluntary participation was requested. Consent from the principal of the school was obtained. They were asked to fill in the questionnaire. The questionnaire included demographic details, age of menarche, psychological response towards menstruation, current menstrual status, presence of any menstrual problems, its severity, impact on daily activities/school attendance, whether medical attention was received, barrier to seek medical services, source of their knowledge and information, etc.

Menstrual pattern of the subjects is considered regular if cycle length is 21-35 days with a mean of 28 ± 2 days and irregular when it will be less than 21 days or more than 35 days. Menstrual flow was considered as scant, average and heavy one based on number of sanitary towels used (1-2, 3-5 and >5 sanitary towel per day as scanty, average and heavy menstrual flow respectively). Common definitions used to collect data are Amenorrhoea (Primary): absence of menarche till the age of 16 years. Amenorrhoea (Secondary): no menses for three months or more, oligomenorrhoea or infrequent menses (menstrual cycles of 35-90 days). Menorrhagia: excessive bleeding >500 mL/soaked pads >5/day/ periods lasting > 7 days. Metrorrhagia: breakthrough bleeding or spotting in-between periods. Hypomenorrhoea (Scanty bleed): regularly timed but scanty bleeding (<50 mL/soaked pads 1-2/day), Dysmenorrhoea: lower abdominal pain accompanying the menstrual cycle. Premenstrual syndrome: symptoms like abdominal pain, leg

cramps, headache, low backache, breast tenderness, irritability, etc. before onset of menstruation.⁶⁻⁹

All data entered in MS Excel were analysed using percentages and proportions.

RESULTS

Response rate 99%, 1% did not fill in the questionnaire properly thus excluded from the study. The mean age of the respondent 13.62 years. The age range 11.4-18.3 years.

Age	Group (n=297)	
	No.	Percentage
10 to 11	7	2.36
11 to 12	68	22.89
12 to 13	202	68.01
13 to 14	17	5.72
14 to 15	2	0.67
15 to 16	1	0.34
16 to 17	0	0

Table 1. Age at Menarche

Median age of menarche is 12.7 years.

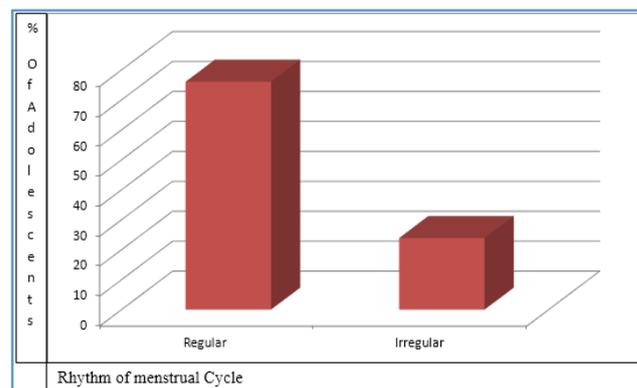


Figure 1. Rhythm of Menstrual Flow

The rhythm is regular in majority.

Cycle Length		
	No. (n=297)	Percentage
<21	6	2.02
21-35	288	96.97
>35	3	1.01
Duration of Bleeding		
<=2 Days	5	1.7
3-5 Days	223	75.1
5-7 Days	53	17.8
Others	10	3.39
Not responded	6	2.01
No. of Pads used		
1 - 2(scanty bleeding)	207	69.69
3-5 (average bleeding)	69	23.23
>5 (heavy bleeding)	12	4.04
Not responded	9	3.04
History of Passing Clots		
Yes	95	31.99
No	202	68.01
No. of Girls Knowing their LMP		
Yes	59	19.9
No	238	80.1

Table 2. Menstrual Profile

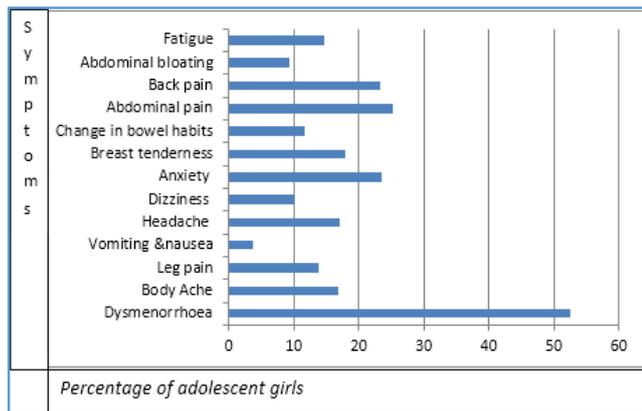


Figure 2. Associated Symptoms

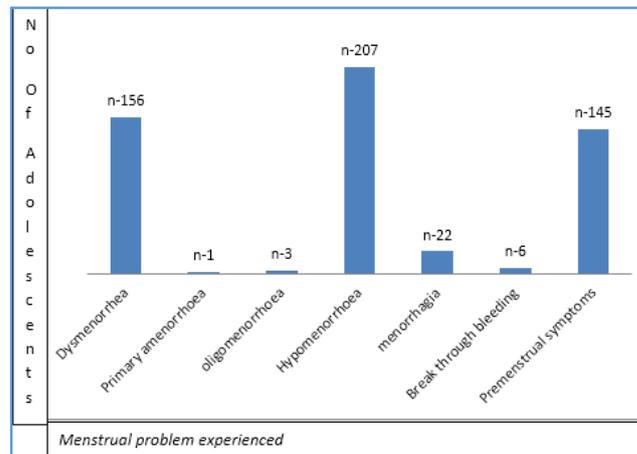


Figure 3 - Various Menstrual Problem Experienced

Activities Restricted	No. (n=297)	Percentage
Daily activities	59	19.87
Sports activity	133	44.78
Outdoor activities	68	22.9
School absenteeism	29	9.76
No impact	8	2.7

Table 3. Impact of Menstruation and Menstrual Problems on Various Activities

Source of Knowledge		
	No. (n=297)	Percentage
Mother	106	35.69
Friends	10	3.39
Other family members	8	2.69
School education	173	58.23
Girls Considering their Knowledge Adequate		
Yes	30	10.1
No	267	89.9
Girls Accepting Menstruation as Normal		
Yes	142	47.8
No	155	52.2
Different Psychological Response		
Excitement	17	10.97
Confusion	29	18.97
Sadness	27	17.41
Rejection	12	7.74
Apprehension	13	8.39
Fear	40	25.81
Disgusting, Messy	17	10.97
Duration of the Psychological Response (in months)		
1 to 3	88	56.77
3 to 6	36	23.23
6 to 12	23	14.84
>12	8	5.16
Percentage of Girls finding Questions about Menstruation, Pregnancy, Contraception and STDs Embarrassing		
Yes	62	20.9
No	235	79.1
Percentage of Girls having Information Regarding STDs		
Yes	30	10.1
No	264	88.89
Not willing to answer	3	1.01

Table 5. Knowledge, Information and Attitude regarding Reproductive Health

Sought for Advice		
Sought for advice	No. (n=297)	Percentage
Yes	40	13.45
No	257	86.55
From whom		
Family	0	0
Friend	197	66.33
Doctor	25	8.42
Nurse	75	25.25
Midwife	0	0
Received any Medical Treatment		
Yes	35	11.7
No	262	88.3
Responded to the Treatment		
Yes	35	100
No	0	0
Factors Influencing her Decision to seek Medical Advice		
Severity of symptoms	200	76.34
Opinion of family members	5	1.91
Doctor's gender	30	11.45
Anxiety about facing embarrassing questioning	20	7.63
Cost of consultation	2	0.76
Time constraints	5	1.91

Table 4. Health Awareness Behaviour

DISCUSSION

In the present study, the mean age of the respondents was 13.62 respectively. Mean age of menarche is 12.7 years. This corresponds to the mean age of menarche quoted in various

studies done by Peacock et al,⁵ Shahbazian et al,¹⁰ and Singh et al,¹¹ Shipra Nagar.¹²

The regular rhythm of the menstruation cycle in this study was 76.09%. Irregular cycles were reported in 23.91%. Similar findings were also reported by Agarwal et al² and Verma et al¹³ and Begum et al.¹

Majority of girls could not recall their LMP. 97% reported menstrual cycle of length 21 to 35 days similar to study of Chan et al³ where 60-80% cycles were 21 to 35 days. The duration of the flow was 3 to 5 days in 75.1%. Average flow was reported in 23.33% whereas scanty bleeding in 69.69%. Majority of tribal girls reporting scanty bleeding which is in contrast to Chan et al study³ might be due to malnutrition and iron deficiency anaemia. In our study, 3.04% girls have poor understanding of menstruation as they did not respond to these specific questions.

In contrast to other study such as Nwankwo et al¹⁴ where associated symptoms were quoted as high as 69.4%, our study revealed only 31.97% had associated symptoms. Significant number of tribal girls remaining symptom free in menstrual period might be due to lack of health awareness and ignorance which made them to accept symptoms and develop more tolerance.

The major symptoms were dysmenorrhoea in 52% which was less than what was reported in J Begum study, where the prevalence of dysmenorrhoea was 60.9%.¹ Family history of dysmenorrhoea was reported in 32% which was similar to J Begum et al study.¹

Not uncommonly menstrual problems are a source of significant debility in adolescent girls. In our study, almost one fourth of girls had restriction of daily activity and approximately one half had restricted sports activity during menstruation. School absenteeism reported in our study were significantly lower (9.76%) in contrast to several other studies. However, dysmenorrhoea was the major cause for school absenteeism (52.53%).^{1-4,10,11,13,15-18.}

For their problems, very few (13.45%) took advice. Out of them only 8% went to doctors, this is more or less similar to the findings of study conducted by Nwankwo et al¹⁴ and Chan et al.³

11% needed treatment and the response rate was very good (100%). The tribal girls have better tolerance for their menstrual symptoms, therefore needing less medical attention and higher satisfaction rate. The main reason for seeking medical advice was the severity of symptoms.

In our study, many girls feel shy to talk about menstruation and were afraid of gynaecological examination. Not uncommonly many girls feel uncomfortable to take advice from a male doctor. (Chan et al, 2009).³

Despite the significant impact on health, only a small proportion of girls in our study obtained medical attention although staying in a residential school where they have access to health care facilities. Underutilisation of health care system and low consultation rate by adolescents has also been reported in many studies,²⁻⁵ and we do not know exactly how worse the situation in their native dwelling place is.

89% of adolescent girls are not satisfied by their current knowledge about menstruation and reproductive health. Around half of the adolescent girls did not accept menarche and menstruation normally in the present study. They have variable psychological response to menarche and menstruation. It is messy and disgusting to some, whereas

unknown fear complex dominates many others. Shanbhag study¹⁹ at Bangalore city also revealed similar psychological response such as fear (44.1%), anxiety in 26.1%. This could be due to lack of prior knowledge. However, this psychological response was more at the start of menses lasting for few months and gradually decreased with time.

49% felt embarrassed when asked questions about menstruation, pregnancy, contraception and STDs. 88% of them did not have any information regarding STDs and contraception, 9% of adolescent girls were not willing to answer about STDs and contraception.

CONCLUSION

The majority of menstrual disorders are usually self-limiting as most are due to the immaturity of the hypothalamic-pituitary axis, but some are attributable to significant pathology. Menstrual problems are a significant source of morbidity in adolescents. The major cause of suffering in adolescent girls is lack of knowledge and insufficient information about menstrual problems in unprivileged tribal sector. Moreover, reluctance to seek medical treatment may aid to further suffering due to delay in diagnosis and treatment.

Health education measures, revising school curriculum to include related topics is helpful to break the barrier. Involving and educating their mothers who are primarily responsible for the transmission of such type of information should be highly encouraged.

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