

Study to Evaluate the General Menstruation Patterns, the Incidence of Common Menstrual Disorders and the Sociodemography of the Students

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Abstract

Aim: The aim of the present study was to evaluate the general menstruation patterns, the incidence of common menstrual disorders and the sociodemography of the students in schools and colleges.

Methods: The present study was conducted on 500 girls in Bihar. After obtaining a written consent, a questionnaire was distributed and collected after 20 min. The sociodemographic data was collected in terms of age, education, joint or nuclear family, mothers education and occupation.

Results: 55% girls belonged to the age group of 16- 20 yrs. 320 girls were hindu by religion and 315 students belonged to nuclear family. Only 15% of the girls in the study belonged to a good socioeconomic status whereas maximum girls belonged to lower- and middle-class income status. Majority of the mothers were illiterate in the study. 95% girls were student by occupation. 88% girls attended menarche at the age of 10-14 yrs, 75% girls had regular cycles and 44 % girls used > 2 pads per day indicating that the flow is adequate. 200 girls had dysmenorrhoea, excessive bleeding during menses was seen in 110 girls and frequent cycles were found in only 50 girls. 140 girls had no symptom during menses, back pain and abdominal pain was seen in 240 and 200 girls respectively. Only 2% girls had fainting attacks.

Conclusion: Menstrual disorders are common disorders in the adolescent female and a significant source of morbidity in this population. However, adolescent girls are reluctant to seek medical treatment, leading to delay in diagnosis and treatment. Appropriate health education measures need to be put into place to prevent this trend. Mass media should also emphasize on health information about menstrual hygiene.

Keywords: Adolescence, symptoms, dysmenorrhoea, menstruation

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Introduction

According to the World Health Organization (WHO), adolescents are individuals aged between 10 and 19 years. [1] Secondary sexual characteristics, sexual maturation, and reproductive capacity are usually attained in this age range. In girls, ovulation and menstruation begin during this period [2-5] and are often accompanied by menstrual disorders and related morbidities. [4-6] Inequality in a country's socioeconomic status can lead to progressive health issues. [7]

Adolescence is the transitional period during which a child matures into an adult. Ascribed to the immaturity of the hypothalamo-pituitary-ovarian axis, menstrual cycle disturbances are quite common during this phase of life. Menstruation-related problems contribute to school absenteeism and can

significantly add to the problems faced by adolescents and their families during this sensitive and difficult phase of development. Also, menstrual problems can be symptoms of certain conditions like polycystic ovarian syndrome and endometriosis, which if undiagnosed and untreated may have profound implications in both the reproductive and general health of women. It has been shown that a society's socioeconomic status can have an influence on the age of menarche as well as the prevalence of menstrual irregularities in the population. [8-10]

Most girls with intellectual disability attain menarche at the usual age and go through regular menses as their nondisabled peers. A few studies have reported similar age in menarche in

comparison to the general population. [11-13] Despite the similarity, anxiety among parents/guardians is high in regard to the impact of menses on the wellbeing of their incapable children. [14] They are particularly concerned about their daughters' capability to handle with menstruation and the increasing risk of sexual abuse. Although the impact of menstruation on the girls and their caretakers is significant, not many of them come forward to seek medical help regarding menstrual management. Most of them perceived that their daughter's menses problem does not affect their daily activities. [15]

The aim of the present study was to evaluate the general menstruation patterns, the incidence of common menstrual disorders and the sociodemography of the students in schools and colleges.

Materials and Methods

The present study was conducted on 500 girls in Bihar. After obtaining a written consent, a questionnaire was distributed and collected after 20 min. The sociodemographic data was collected in terms of age, education, joint or nuclear family, mothers education and occupation. The questionnaire collected data about the characteristics

of: a 'usual' period in terms of regularity, duration and heaviness; the pain experienced with menstruation, and the use of pads and their numbers per day during the menstrual cycle; interference of menstruation with various life activities; days of blood flow and any other problems like feeling depressed, emotional outbursts and anger. Girls present at school on the day of data collection were given a questionnaire and consent form on entering the hall, or 20 minutes before the end of class (after male students were dismissed). The girls who attained menarche were included for the study. Students signed a consent form before participating in the study, which was collected separately from the questionnaire for de-identification purposes. Completing the questionnaire was voluntary. Questionnaires were collected directly after completion and before leaving the hall or classroom to maximize the response rate. 1000 students participated in the study.

Data were entered into a Statistical Package for Social Sciences (SPSS) 14.0 database. Categorical data were assessed using chi-square tests, and one independent-samples Student's t-test was carried out.

Results

Table 1: Social factors of study population

Age in yrs	Number (n=500)	Percentage (%)
<15	175	35
16 – 20	275	55
21-25	50	10
Total	500	100
Religion		
Hindu	320	64
Muslim	160	32
Other	20	4
Total	500	100
Type of family		
Nuclear	315	63
Joint	185	37
Total	500	100

55% girls belonged to the age group of 16- 20 yrs. 320 girls were hindu by religion and 315 students belonged to nuclear family.

Table 2: Socioeconomic and educational status of the mother

Socioeconomic status	Numbers (n= 500)	Percentage (%)
Grade 1 (>=6391)	75	15
Grade 2 (3196-6390)	60	12
Grade 3(1971-3195)	130	26
Grade 4(959-1916)	100	20
Grade 5(=<958)	135	37
Total	500	100
Educational status of mother		
Secondary to Higher	25	5
Middle	60	12

Primary	175	35
Illiterate	240	48
Total	500	100
Occupation		
Student	475	95
Part time job (tuitions etc)	15	3
Self employment	10	2
Total	500	100

Only 15% of the girls in the study belonged to a good socioeconomic status whereas maximum girls belonged to lower and middle class income status. Majority of the mothers were illiterate in the study. 95% girls were student by occupation.

Table 3: The pattern of menstrual cycle

Menarche age	Number(n=500)	Percentage (%)
Early menarche (< 10 yrs)	25	5
Normal (10-14 yrs)	440	88
Delayed (> 15 yrs)	35	7
Mean age	14+1.1	100
Duration of flow (days)		
< 3 days	55	11
3-5 days	335	67
6-7 days	110	22
Total	500	100
Regularity of menstrual cycle		
Regular	375	75
Irregular	125	25
Total	500	100
Menstrual blood loss(pads used / day)		
< 2 pads / day	280	56
>2 pads / day	100	20
>3 pads/day	120	24

88% girls attended menarche at the age of 10-14 yrs, 75% girls had regular cycles and 44 % girls used > 2 pads per day indicating that the flow is adequate.

Table 4: Problems associated with menses

Dysmenorrhea	No. (n= 500)	(%)
Yes	200	40
No	300	60
Total	500	100
Premenstrual symptoms		
Yes	125	25
No	375	75
Total	500	100
Excessive bleeding in menses		
Yes	110	22
No	390	78
Total	500	100
Frequent cycles (< 21 days)		
Yes	50	5
No	450	95
Total	500	100
Restriction of activities due to menses		
Yes	440	88
No	60	12
Total	500	100

200 girls had dysmenorrhoea, excessive bleeding during menses was seen in 110 girls and frequent cycles were found in only 50 girls.

Table 5: Menstrual symptoms seen in participants

Symptoms	Number(n=500)	Percentage (%)
No symptoms	140	28
Weakness	150	30
Vomiting	15	3
Anorexia	20	4
Abdominal pain	200	40
Backpain	240	48
Headache	125	25
Leg pain	210	42
Fainting	10	2

140 girls had no symptom during menses, back pain and abdominal pain was seen in 240 and 200 girls respectively. Only 2% girls had fainting attacks.

Discussion

The menstruation is surrounded by various cultural and social taboos in all communities. It is especially so in a country like India where people are quite traditional and stick to cultural systems. Adolescents constitute about one fifth (21.4%) of India's population. They are future building blocks of our nation. Health of an adult depends upon health reproductive development and experiences during adolescent years. It is undeniable that a healthy adolescent can blossom into a healthy adult. Menstrual cycle is an important indicator of women's reproductive health. However, menstruation has a different pattern within a few years after menarche, which might not be well understood by many adolescent girls. Due to the relative immaturity of the hypothalamic-pituitary-ovary axis in the first 2 years following menarche, more than half of the menstrual cycles are anovulatory. This results in irregular cycles where cycle frequency can vary from less than 20 days to more than 90 days. Anovulatory cycles are often heavy and prolonged with some girls bleeding for several weeks at a time. [16] Menstrual disorders are a common presentation by late adolescence; 75% of girls experience some problems associated with menstruation including delayed, irregular, painful, and heavy menstrual bleeding, which are the leading reasons for the physician office visits by adolescents. [17] Menstrual patterns are also influenced by a number of host and environmental factors. [18]

55% girls belonged to the age group of 16- 20 yrs. Menarche age is the most widely used indicator of sexual maturation and influenced by many factors such as genetic and environmental conditions, family size, body mass index, SES, and level of education. [19,20] 320 girls were hindu by religion and 315 students belonged to nuclear family. Only 15% of the girls in the study belonged to a good socioeconomic status whereas maximum girls

belonged to lower and middle class income status. Abundant menstrual blood loss was also a common problem among the participants in this study. The most common cause of heavy menstrual bleeding in adolescents is dysfunctional uterine bleeding related to anovulation [12] therefore, it is expected to be higher in the adolescence period. [21]

The prevalence of dysmenorrhea in our study was almost the same as other reports from India. [22] Avasarala AK et al [21] studied dysmenorrhoea in Indian population and found out that girls who were reporting an increased severity of pain were also more likely to report more menstrual symptoms, more interference with their life activities and more school absence related to menstruation. Dysmenorrhea is the most common (66.8%) gynecological problem associated with adolescent females. Several other studies reported its prevalence range from 25% to 90% among women and adolescents girls. [22,23] Majority of the mothers were illiterate in the study. 95% girls were student by occupation. 88% girls attended menarche at the age of 10-14 yrs, 75% girls had regular cycles and 44 % girls used > 2 pads per day indicating that the flow is adequate. 200 girls had dysmenorrhoea, excessive bleeding during menses was seen in 110 girls and frequent cycles were found in only 50 girls. 140 girls had no symptom during menses, back pain and abdominal pain was seen in 240 and 200 girls respectively. Only 2% girls had fainting attacks.

Anaemia is very common in the young population of our country and menstrual disorders rank in the uppermost causes in the list. [24] Dysfunctional uterine bleeding is a frequent gynecological problem in women of all ages [25] and particularly common during adolescence and perimenopausal periods. The abnormal menstrual patterns caused by hormonal imbalances. In majority of cases, it is secondary to anovulation, which is more common at the extremes of reproductive age. hence it is very commonly seen in the adolescent age group. Menstrual symptoms are a broad collection of affective and somatic concerns that occur around the time of menses. Some women manage their monthly periods easily with few or no concerns, while others

experience a number of physical and emotional symptoms that may cause psychological and physical discomfort. [26]

Conclusion

Menstrual disorders are common disorders in the adolescent female and a significant source of morbidity in this population. However, adolescent girls are reluctant to seek medical treatment, leading to delay in diagnosis and treatment. Appropriate health education measures need to be put into place to prevent this trend. Mass media should also emphasize on health information about menstrual hygiene. Therefore, policy makers and stakeholders should setup health education program to create awareness and practice of good menstrual attitude. This will help in lowering the morbidity associated with menstrual disorders and help in seeking early medical assistance for the menstrual symptoms.

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