

Research Article

A study of the menstrual pattern and problems among rural school going adolescent girls of Amravati district of Maharashtra, India

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ABSTRACT

Background: Onset of menstruation is considered as a landmark in the growth and development of an adolescent girl. The age of onset and the pattern of menstrual cycles vary on different factors. After menarche many adolescent girls faces problems of irregular menstruation, excessive bleeding and dysmenorrhea and many more. Present study was carried in this line to find out problems. **Objectives:** To study the menstrual pattern & problems among school going adolescent girls in rural area of Amravati district of Maharashtra.

Methods: The Prospective observational study was carried out among selected 435 Secondary and higher secondary girls students (12-16 years of age) of Ner Pinglai by purposive sampling method. The study was done in the month August 2013 to February 2014. Statistical analyses were done using SPSS 16.0 version.

Results: Total 435 adolescent girls had attained menarche. The mean age of menarche was 13.5 (1.0) years. 17.9% of adolescent girls reported premenstrual syndrome. 81.3% girls had abdominal pain during menstruation followed by 28.5% cramp, 11% were uncomfortable, 11% had backache, 6.6% had headache and 2.5% girls had depression. 3.4% of the adolescent girls were did not have any symptoms during menses. Dysmenorrhoea was the most common menstrual complaint reported by 62.3% girls. 33.5 % girls have reported use of sanitary pads during menstruation. 41.6% girls have reported use of old clothes during menstruation. 21.8% had irregular menstrual cycle.

Conclusion: Menstruation is an important milestone for adolescent girls and menstrual problems are common among adolescent girls. The mean age of menarche was 13.1 ± 1.0 of years. There were 1.5 menstrual symptom per adolescent girls commonest being abdominal pain. Dysmenorrhoea was seen in 62.3% of the adolescent girls. 33.5% girls have reported use of sanitary pads during menstruation. 41.6% girls have reported use of old clothes during menstruation.

Keywords: Adolescent girls, Dysmenorrhea, Menstruation, School going, Rural

INTRODUCTION

Twenty-five per cent of the populations of India were an adolescent in 2011.¹ Menstruation is a normal physiological process but the onset of menstruation is a unique phenomenon for adolescent girls. In India it is considered unclean, and young girls are restricted from

participating in household and religious activities during menstruation. These restrictions extend to eating certain foods like jaggery and papaya as well.^{2,3} Menarche is a complex of growing up. From both medical and social perspectives, it is often considered as the central event of female puberty, as it suggests the possibility of fertility. The age of onset of the menstrual cycle varies from 9-18 years, with the average age in the United States being

about 12 year in India; it is slightly lower and has been reported to be around 12 years.⁴ Awareness about menstruation prior to menarche was found to be low among both urban and rural adolescents in Maharashtra state.⁵ Lack of menstrual hygiene was found to result in adverse outcomes like reproductive tract infections.⁶ Better knowledge about menstrual hygiene reduced this risk of reproductive tract infections.⁷ According to a multicounty survey, menstrual disturbances were among first and fourth most commonly reported causes of morbidity among adult women.^{8,9} In rural India, where a female child and its problems are neglected, there is an urgent and unmet need to understand menstrual pattern and problems of adolescents and include it into primary health care program. Present had following objectives.

1. To study the menstrual patterns among school going adolescent girls.
2. To study the incidence of various menstrual problems among them & their approach towards that.

METHODS

Study design and setting

Prospective observational study among 435 secondary and higher secondary girls students (12-16 years of age) of Ner Pinglai by purposive sampling method school children was carried out in rural area of Amravati from August 2013 to February 2014 in rural area under "Rural health training centre", Ner Pinglai of Dr. Panjabrao Deshmukh Memo medical college, Amravati, MH, India.

Data collection

The adolescent girls those who have attended menarche were included in the study. Effort was made to examine the students who were absent on a particular day at the next visit. After taking permission from the school authority, the class teachers of class were explained the purpose of the study and rapport was built up with the girl students and verbal consent was obtained from them. Briefing was done to the students regarding the questionnaire provided to them. Data on socio-demographic variables were collected using a pre designed questionnaire. Information on various aspects of menstruation was obtained from adolescent girls who have attended menarche by lady Medical Social worker with the help of pretested and validated questionnaire. The information about personal details, age of menarche in years, menstrual cycle pattern and whether they experience any menstrual problems was collected. They were also asked to indicate whether they had sought medical advice or treatment for their menstrual problems.

Data analysis

All the data were collected, entered and analyzed in SPSS 16.0. The data was analyzed using percentages and proportions through tables.

RESULTS

Total 435 girls had attained menarche. The mean age of menarche was 13.5 (1.0) years with 10 and 17 years being the lowest and highest age for attaining menarche respectively. Majority of girls (81.1%) had attained menarche at 13-15 years of age, followed by 14.5% at the age of 10-12 years and 4.4% at 16-18 years of age. (Table 1) Out of total 435 respondents, 357 (82.1%) girls were free from premenstrual symptoms 78 (17.9%) reported premenstrual syndrome. 81.3% girls had abdominal pain during menstruation followed by 28.5% cramp, 11% were uncomfortable, 11% backache, 6.6% headache and 2.5% girls had depression. 3.4% did not have any symptoms during menses. The average number of menstrual symptom per adolescent girl was 1.5 (Table 2 & 3). Dysmenorrhoea was the most common menstrual complaint reported by 271 (62.3%) girls. 33.5% girls have reported use of sanitary pads during menstruation. 41.6% girls have reported use of old clothes during menstruation (Table 4 & 5).

Table 1: Distribution of adolescents according to age of menarche.

Age of menarche (years)	No.	(%)
10-12	63	14.5
13-15	353	81.1
16-18	19	4.4
Total	435	100.0

Table 2: Distribution of adolescents according to premenstrual tension.

Premenstrual tension	No.	Percentage
Never	357	82.1
Occasionally	60	13.8
frequently	9	2.1
Always	9	2.1
Total	435	100.0

Table 3: Distribution of adolescent girls according to menstrual symptoms.

Menstrual symptoms	No.	Percentage
Abdominal pain	354	81.3
Cramp	124	28.5
Uncomfortable	58	13.3
Backache	48	11
Body ache	16	3.6
Headache	29	6.6
Irritability	20	4.6
Depression	11	2.5
No symptoms	15	3.4
Multiple response		

Table 4: Prevalence of dysmenorrhoea among adolescents.

Dysmenorrhoea	No.	Percentage
Never	164	37.7
Occasionally	17	3.9
Frequently	75	17.2
always	179	41.1
Total	435	100.0

Table 5: Distribution of adolescents according to type of material used during menstruation.

Type of material used during menstrual period	Frequency	Percentage
Sanitary pads	146	33.5
New cloths	68	15.6
Old cloths	181	41.6
All	40	9.3
Total	435	100

Most of them (78.2%) had regular menstrual cycle and 21.8 had irregular cycle. The duration of blood flow was within 5 days in 75.8% of girls with 24.2% having prolonged menses (>5 days) (Figure 1 & 2).

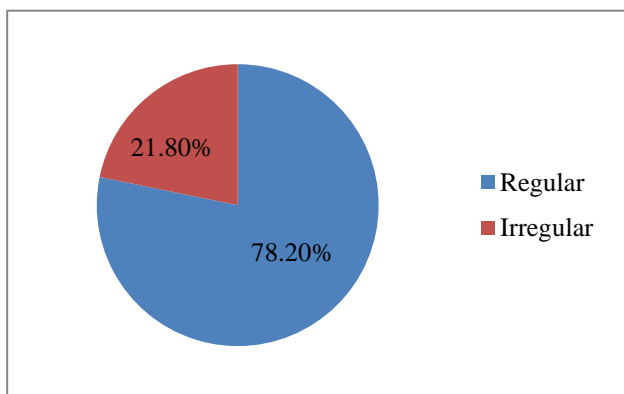


Figure 1: Menstrual patterns among the adolescents (Menstrual cycle).

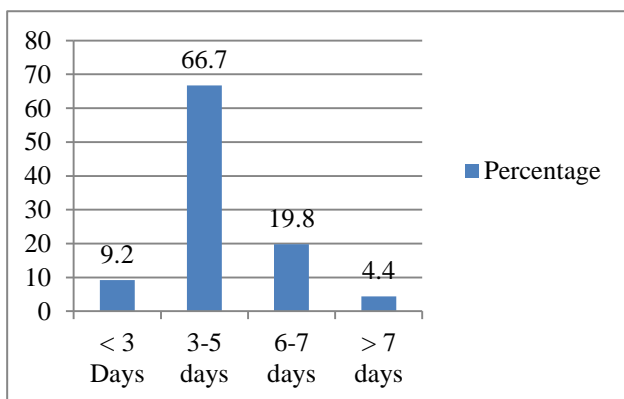


Figure 2: Showing number of days of menstrual cycle.

DISCUSSION

Adolescence is a period of transition from puberty to early adulthood. Transition phase involves major physical and emotional changes in the individual. In a traditional family setting in developing countries, mothers are usually the care takers of their daughters during these critical phases of physical and emotional development. In a conservative society and in rural population, the subject of menstruation and its hygiene is still considered a taboo subject for discussion.

In present study the mean age of menarche was 13.5 years. Beena Sachan et al.¹⁰ in study on school-going adolescent girls of a North Indian district observed the mean age at menarche to be 13.6 years. Joseph et al.¹¹ In a study on adolescent girls in rural India, observed the mean age at menarche to be 13.9 years. In the study by P. B. Verma et al.¹² the mean age of menarche was 14 (13.99, SD 1.8). Nair et al.,¹³ in study on unmarried females in rural area of Delhi, observed the mean age at menarche to be at 13.6 years, which were almost similar to the mean age at menarche (13.5 years) in our study. The Result of other study by Singh MM et al.¹⁴ the mean age of menarche was 13.6. In another study in rural Orissa, the mean age of menarche was found to be 12.97 (SD 0.99).¹⁵ Chaturvedi et al.¹⁶ reported 13.7 years as the mean age of menarche. Patil MS¹⁷ and Durge PM¹⁸ have reported mean age at menarche as 13.45 and 13.5 years respectively.

The findings of the present study showed a high prevalence of dysmenorrhoea 62.3%. Similar finding were reported by Suresh K. Kumbhar et al. (65.02%),¹⁹ Sharma P, Malhotra C, Taneja DK et al. (67.2 %),²⁰ Sharma M and Gupta S. (67%),²¹ Mckay and Diem (67%),²² Pragya Sharma et al. (67.2%)²³ Sundell G, Milsom I, Andersch B (67%),²⁴ Jayashree R, Jayalakshmi VY. (74%),²⁵ and Harlow and Park (71.6%).²⁶ Comparatively lower prevalence had been reported by Sharma A, Taneja DK, Sharma P, et al. (33%),²⁷ Verma et al. (50.6%)¹² and study by Atchuta Kameswararao Avasarala (56%).²⁸

Twenty two percent adolescent girls had irregular cycle. It is due to the hormonal fluctuation taking place in peri-pubertal and peri-menopausal age of women. The duration of blood flow was within 5 days in 75.8% of adolescent girls with 24.2% having prolonged menses (>5 days). Similar study by Patil MS¹⁷ shows that 7.5% girl had irregular cycle. 81.3% girls had abdominal pain during menstruation followed by 28.5% cramp, 11% were uncomfortable, 11% backache, 6.6% headache and 2.5% girls had depression. 3.4% did not have any symptoms during menses. The average number of menstrual symptom per adolescent girl was 1.5. 33.5% of the girls have reported the use of sanitary napkins during menstruation, 41.6% reported the use of old cloths and 15.6% were used new cloths during menstrual period. Poverty, high cost of sanitary pads and ignorance may be the reasons for present finding. The study by author Kirti

Jogdand in urban slum area of Guntur district reported 34.63% girls used of old clothes during menstruation.²⁹

CONCLUSION

Attainment of menarche at right age is an important milestone during adolescence, which signifies the normal functioning of the female reproductive system. Study revealed that majority of adolescent girls had attained menarche at appropriate age. Dysmenorrhoea was the commonest problem among the adolescents. The use of old cloths as absorbent was prevalent in majority of adolescent girls. The cycle was regular in majority of girls.

Recommendation

1. Adolescent girls may feel shy and embarrassed to discuss aspects of menstruation like dysmenorrhoea consequently leading to ill health. It was suggested that a strong need exists for strong health educational activities among the adolescent girls for effective management of menstrual problems.
2. Education regarding reproductive health and hygiene should be included as a part of school curriculum. Better hygienic practices can be adopted by making sanitary pads available at affordable prices. ASHA and Anganwadi worker should take responsibility to encourage the adolescent girls about the benefit of scheme by GOI of making available subsidized sanitary napkins to adolescent girls in the age group of 10-19 years in rural area. It will help in their development as healthy and responsible adults.

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