Perspectives on adolescent girls' health-seeking behaviour in relation to reproductive health in Rohats, Bihar, India

Rimjhim Kumari[1]

[1]Department of Community Medicine, Narayan Medical College & Hospital, Sasaram.

ABSTRACT

Background: Adolescents girls face major problems related to menstrual abnormalities which lead to morbidity that may have an adverse effect on their school attendance. The objective of this study was to collect and analyse data on prevalence of menstrual patterns and menstrual disorders among adolescent girls attending Adolescent Reproductive Sexual Health clinic in a tertiary care teaching hospital in Rohtas, Bihar and assessing their treatment seeking behaviour. **Methods:** We conducted a cross sectional study o 140 girls in the age group of 10-19 years in a study period of one year. Demographic information and characteristics of menstrual bleeding were noted. **Results:** The study sample consisted of 140 girls with mean age 14.9± 2.5 years. Most of the girls were in the age group 12-14 years (37.8%). 79.3% girls had attained menarche at a mean age of 12.5 ± 1.3 years. The most common menstrual disorder was painful menstruation seen in 66.7% girls. The mean number of bleeding days was observed to be 5±1.7 days. The most common associated symptom reported by girls was backache. As per treatment seeking behaviour of adolescent girls, only 25.5% girls with history of heavy menstrual bleeding, 27% with painful menses and 34.8% with irregular cycles took medical advice by a doctor. Oligomenorrhoea was observed in 11.7% girls. **Conclusion:** In spite of high prevalence of menstrual disorder, only a few adolescent girls seek expert medical advice. There is a need to create awareness among girls about seeking medical advice for menstrual problems.

Keywords: Reproductive health, Treatment seeking behaviour, Adolescent, Bihar.

INTRODUCTION

Adolescence is a very important period of human life characterized by diverse hormonal changes.[1] Onset of menstruation is the most crucial physiological event of female puberty which occurs during starting period of adolescence. It plays a vital role in a woman's reproductive life.[2] Menstruation brings with it many abnormal symptoms like abdominal pain, heavy menstrual bleeding and irregular menstrual cycles. These may lead to school absenteeism and can have adverse effect on academic performance and other day to day chores of life. Above all this, many a times there is a delay in seeking expert medical advice for menstrual problems by adolescent girls.[3,4] The present study was taken with the objective of collecting data on prevalence of menstrual patterns and menstrual disorders among adolescent girls attending Adolescent Reproductive Sexual Health clinic in Narayan Medical College & Hospital, Rohtas, Bihar and assessing their treatment seeking behaviour.

Name & Address of Corresponding Author
Dr Rimjhim Kumari
Assistant Professor
Department of Community Medicine /PSM
Narayan Medical College & Hospital
Sasaram, Bihar.

MATERIALS AND METHODS

This was a cross sectional study approved by the Institutional Ethics Committee. The study was conducted in Adolescent Reproductive Sexual Health clinic affiliated to Department of Community Medicine, Narayan Medical College & Hospital, Rohtas, Bihar. Study duration was one year starting from 1st January, 2018 to 31st December, 2018. The estimated sample size was calculated based on menstruation hygiene maintained by females as reported in NFHS-4. The prevalence of good practices came to be 55% and taking 15% relative error with 5% precision and 20% power of the study, the sample size was ≈ 140. Only those girls whose parents offered written informed consent were included in the study. Girls aged between 18 and 19 years were included in study after obtaining their written informed consent. A questionnaire was designed specifically for this study. Demographic (age, standard in which studying, mother's education) and anthropometric measurements (height, weight, BMI) were collected. The data for menstrual history was collected in terms of regularity, duration, blood loss, pain during and before menses and other symptoms associated with menstrual period. Also, treatment seeking behaviour

for menstrual problems, use of any medication to relieve symptoms and school absenteeism to these problems were also noted. Questionnare was self-administered, written in both English and hindi language, easy to understand and required five minutes to complete.

The data was analysed using SPSS 16.0. The qualitative variables were expressed as percentages. Descriptive and inferential statistics were applied. Chi square test and odds ratio was calculated and values of p<0.05 was considered significant.

RESULTS

Our study sample consisted of 140 girls with mean age 14.9± 2.5 years (range 12-19 years). Figure 1 shows that most of the girls were in the age group 12-14 years (37.8%).

Out of 140 girls, 111 (79.3%) girls had attained menarche at a mean age of 12.5 ± 1.3 years. Only a small proportion of girls (2.7%; 3/111) had attained menarche before turning 10 years while 9.9% (11/111) attained menarche between 14.1 and 16 years. Rest 97 (87.4%) attained menarche between 10.1 and 14 years, a common age to attain menarche. No participant had attained menarche later than 16 years. So, the data of 111 girls who had attained menarche were considered for studying menstrual disorders.
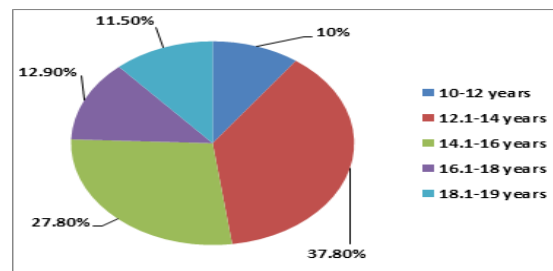

Figure 1: Age distribution of Participants (n=140)

Table 1: Menstrual disorders among girls according to their age (n=111)

Menstrual Disorders	Age (in years)					Total	P value
	10-12	12.1-14	14.1- 16	16.1- 18	18.1- 19		
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	
Heavy Menstrual Bleeding							
Yes	1 (33.3)	16 (44.4)	20 (50.0)	7 (38.9)	7 (50.0)	51 (45.9)	0.49
No	2 (66.7)	20 (55.6)	20 (50.0)	11 (61.1)	7 (50.0)	60 (54.1)	
Total	3 (100)	36 (100)	40 (100)	18 (100)	14 (100)	11 1 (100)	
Painful menses							
Yes	2 (66.7)	21 (58.3)	28 (70.0)	14 (77.8)	9 (64.3)	74 (66.7)	0.04**
No	1 (33.3)	15(41.7)	12 (30.0)	4 (22.2)	5 (35.7)	37 (33.3)	
Total	3 (100)	36 (100)	40 (100)	18 (100)	14 (100)	111 (100)	
Cycle irregularities (Days)							
Normal (21-32)	2 (100)	29 (76.3)	28 (77.8)	14 (77.8)	15 (88.2)	88 (79.3)	0.15
Frequent (≤20)	0 (0)	5 (13.2)	4 (11.1)	1 (5.5)	0 (0)	10 (9.0)	
Infrequent (33-60)	0 (0)	3 (7.9)	4 (11.1)	2 (11.2)	2 (11.8)	11 (9.9)	
Infrequent (61d-9 m)	0 (0)	1 (2.6)	0 (0)	1 (5.5)	0 (0)	2 (1.8)	
Total	2(100)	38 (100)	36 (100)	18 (100)	17 (100)	111 (100)	

Table 2: Other symptoms reported during menses (n=111)

Symptoms	Frequency	Percentages*
Headache	10	9.0
Vomitting	4	3.6
Fever	5	4.5
Backache	45	40.5
Pain in Legs	28	25.2
Tiredness	24	21.6
Heaviness in breast	3	2.7
Others	5	4.5

*Sum of percentages is not 100

Table 3: Menstrual problems, Medication intake and treatment seeking behaviour (n=111)

Menstrual Problem	Medication intake				Total	
	Yes		No			
	N	%	N	%	N	%
HMB	9	17.6	42	82.4	51	100
Painful menses	15	20.3	59	79.7	74	100
Cycle Irregularities	5	21.8	18	78.2	23	100
Doctors Visit						
HMB	13	25.5	38	74.5	51	100
Painful menses	20	27.0	54	73.0	74	100
Cycle Irregularities	8	34.8	15	65.2	23	100

[Table 1] demonstrates menstrual disorders among girls according to age. The most common disorder was painful menstruation seen in 74 (66.7%) girls, followed by heavy menstrual bleeding (HMB) in 51 (45.9%) girls and cycle irregularities in 23 (20.7%) girls. Significantly, more girls in each age group had painful menses (p=0.04).

The mean number of bleeding days was observed to be 5±1.7 days. There was no significant association seen between age and number of bleeding days (p=0.135). As regarding cycle length, it was found that 88 (79.3%) had a normal cycle of 21 to 32 days. [Table 1] The most common associated symptom reported by girls was backache, followed by leg pain and tiredness. [Table 2] Our study found out that HMB was very much prevalent. The treatment seeking behaviour of adolescent girls vary according to menstrual problems. [Table 3] Only 25.5% girls with HMB, 27% with painful menses and 34.8% with irregular cycles took medical advice by a doctor. In this study the cycle irregularity was seen in 23 (20.7%) girls. 11 (9.9%) of these participants had infrequent cycles at an interval of 33 to 60 days

while 2 (1.8%) had infrequent cycles at the interval of 61 days to 9 months. That means, oligomenorrhoea was observed in 13 (11.7%) girls.

DISCUSSION

World health organization (WHO) predicts that one in every five people in the world is an adolescent.[5] Nearly 85% of these live in developing countries. But adolescents tend to underutilize health care services that can have significant impact on their physical, social and mental well being.[6-9] In this study, we have analysed different menstrual disorders among adolescents. The mean age of menarche in this study was 12.5 ± 1.3 years with a majority of study participants having menarche age between 12 and 14 years. This is similar to studies done in Canada and India.[12,13] Another study from South Ethiopia reports 13-14 years as the menarche age for majority adolescent girls.[14] A study done by Patil S et al in amongst Adolescent Girls In Rural Areas of Ratnagiri District of Maharashtra showed that mean age of menarche was 13.7 years.[15] This study showed that only a few girls (2.7%) had menarche before 10 years. Progressive reduction in the menarche age has been observed over a period of almost three decades in studies done in different parts of India.[16,17] Late menarche age after 14 years was found to vary between 14-27% in various studies.[12,13,18,19]

In our study, painful menstruation was the most commonly found menstrual disorder seen in 66.7% girls and it increased with increasing age. This is comparable to previously reported prevalence in both developed as well as developing nation.[19-21] Kumar S et al in Manipur and Rigon F et al in Italy found that prevalence of dysmenorrhoea was higher among adolescents aged 16-17 years as compared to aged 14 years.[20,21] Our study also found that HMB was severe enough to cause school absenteeism. This is comparable to an Australian study and Nigerian study that found pain to be most common cause for girls who missed school.[22,23] Mean number of bleeding days in this study was 5±1.7 days, which was comparable to a study done in Saudi Arabia.[24] Our study found out that HMB was very much prevalent. But a study done in Hong Kong found less prevalence of HMB.[4]

As far as treatment seeking behaviour of adolescent girls was concerned, only 25.5% girls with HMB, 27% with painful menses and 34.8% with irregular cycles took medical advice. This observation is similar to MDOT study in Australia where 33% girls with painful menses took medical advice. In this study the cycle irregularity was seen in 20.7% girls. Oligomenorrhoea was observed in 11.7% girls. These observations are comparable to a study done in Singapore adolescents where irregular cycles were seen in 23.1% and oligomenorrhea was observed in 15.3% study participants.[25]

Menstrual problems cause a lot of morbidity among adolescent girls. In a study conducted in Pakistan, painful menses was found in 78% of girls whom only 16% took medication and 11% used some home remedies.[26] This is comparable to the results seen in our study. Inadequate use of health care system or low consultation rate has also been reported in other studies done in adolescents.[7-9]

Over the past decade, there has been a paradigm shift in the field of maternal and child health care. Now rather than focussing just on family planning services, we also concentrate on overall reproductive health of adolescents and women of reproductive age group (15-49 years).Observations from various studies indicate that menstrual problems are a major cause of morbidity in adolescents and menstrual dysfunction has an impact on health status and quality of personal and social life.[6,18]

CONCLUSION

Menstrual problems are very common among adolescent girls. They affect day to day life. However, only a small proportion of adolescents seek expert health advice. This study could help to develop a questionnaire regarding MDOT (menstrual disorders of teenagers) as a non-invasive screening tool to identify girls who would require further investigations and treatment for menstrual abnormalities and develop an appropriate education module about menstrual health for adolescent girls.

REFERENCES

1. Blakemore SJ, Burnett S, Dahl RE. The role of puberty in the developing adolescent brain. Hum Brain Mapp. 2010;31:926–33.
2. Esen İ, Oğuz B, Serin HM. Menstrual Characteristics of Pubertal Girls: A Questionnaire-Based Study in Turkey. J Clin Res Pediatr Endocrinol. 2016;8:192–6.
3. Miiro G, Rutakumwa R, Nakiyingi-Miiro J, Nakuya K, Musoke S, Namakula J, et al. Menstrual health and school absenteeism among adolescent girls in Uganda (MENISCUS): a feasibility study. BMC Womens Health. 2018;18:4.
4. Chan S, Yiu K, Yuen P, Sahota D, Chung T. Menstrual problems and health-seeking behaviour in Hong Kong Chinese girls. Hong Kong Med J. 2009;15:18–23.
5. World Population Monitoring. United Nations. 2012.
6. Smitha M, Narayana M, Srinivas B, Renuka M. Adolescent menstrual health: Profoundness of the problem and the rationale behind denial of treatment. Natl J Community Med. 2016;7:499–504.
7. Ghafari M, Shamsuddin K, Amiri M. Barriers to utilization of health services: perception of postsecondary school malaysian urban youth. Int J Prev Med. 2014;5:805–6.
8. Kabir H, Saha NC, Wirtz AL, Gazi R. Treatment-seeking for selected reproductive health problems: Behaviours of unmarried female adolescents in two low-performing areas of Bangladesh. Reprod Health. 2014;11:1–7.
9. Chauhan M, Patel H, Solanki H. Reproductive Health Problems and Treatment Seeking Behavior Among Adolescent Girls of Uhtc Field Practice Area, Govt. Medical College. Natl J Community Med. 2016;7:355–8

10. Deardorff J, Abrams B, Ekwaru JP, Rehkopf DH. Socioeconomic status and age at menarche: an examination of multiple indicators in an ethnically diverse cohort. Ann Epidemiol. 2014;24:727–33.

11. Braithwaite D, Moore DH, Lustig RH, Epel ES, Ong KK, Rehkopf DH, et al. Socioeconomic status in relation to early menarche among black and white girls. Cancer Causes Control. 2009;20:713–20.

12. Pandey M, Pradhan A. Age of attainment of menarche and factors affecting it amongst school girls of Gangtok, Sikkim, India. Int J Contemp Pediatr. 2017;44:2187–92.

13. Al-Sahab B, Ardern CI, Hamadeh MJ, Tamim H. Age at menarche in Canada: results from the National Longitudinal Survey of Children & Youth. BMC Public Health. 2010;10:1471–2458.

14. Ayele E, Berhan Y. Age at menarche among in-school adolescents in Sawla Town, South Ethiopia. Ethiop J Health Sci. 2013;23:189–200.

15. Patil S, Wasnik V, Wadke R. Health Problems Amongst Adolescent Girls In Rural Areas of Ratnagiri District Of Maharashtra India. J Clin diagnostic Res. 2009;3:1784–90.

16. Pathak PK, Tripathi N, Subramanian SV. Secular trends in menarcheal age in India-evidence from the Indian human development survey. PLoS One. 2014;9:e111027.

17. Song Y, Ma J, Wang HJ, Wang Z, Hu P, Zhang B, et al. Trends of Age at Menarche and Association with Body Mass Index in Chinese School-Aged Girls, 1985-2010. J Pediatr. 2014;165:1172–7.

18. Bachloo T, Kumar R, Goyal A, Singh P, Yadav SS, Bhardwaj A, et al. A study on perception and practice of menstruation among school going adolescent girls in district Ambala Haryana, India. 2016;3:931–7.

19. Kumbhar SK, Reddy M, Sujana B, Roja Reddy K, Divya Bhargavi K, Balkrishna C. Prevalence of Dysmenorrhea Among Adolescent Girls (14-19 Yrs) of Kadapa District and Its Impact on Quality of Life : a Cross. Natl J Community Med. 2011;2:265–8

20. Kumar S, Konjengbam S, Devi HS. Dysmenorrhea among higher secondary schoolgirls of Imphal West district, Manipur: A cross-sectional study. JMS. 2016;30(1):38–43.

21. Rigon F, De Sanctis V, Bernasconi S, Bianchin L, Bona G, Bozzola M, et al. Menstrual pattern and menstrual disorders among adolescents: an update of the Italian data. Ital J Pediatr. 2012;38:38.

22. Parker MA, Sneddon AE, Arbon P. The menstrual disorder of teenagers (MDOT) study: Determining typical menstrual patterns and menstrual disturbance in a large population-based study of Australian teenagers. BJOG An Int J Obstet Gynaecol. 2010;117:185–92.

23. Nwankwo TO, Aniebue UU, Aniebue PN. Menstrual Disorders in Adolescent School Girls in Enugu, Nigeria. J Pediatr Adolesc Gynecol. 2010;23:358–63.

24. Karout N. Prevalence and pattern of menstrual problems and relationship with some factors among Saudi nursing students. J Nurs Educ Pract. 2015;5:1–8.

25. Agarwal A, Venkat A. Questionnaire Study on Menstrual Disorders in Adolescent Girls in Singapore. J Pediatr Adolesc Gynecol. 2009;22:365–71.

26. Gulzar S, Khan S, Abbas K, Arif S, Husain SS, Sommer J. Prevalence, Perceptions and Effects of Dysmenorrhea in School Going Female Adolescents of Karachi, Pakistan. Int J Innov Res Dev. 2015;4:236–40.