

Original Research Article

Socio-demographic correlates of menstrual problems among school going adolescent girls in a rural block of Haryana

Vinod Chayal^{1*}, Garima Shivhare², Ramesh Verma¹, Meenakshi Kalhan¹, Rohit Dhaka³, Ginni Agrawal¹, Gopal Kumar¹, Aman Sachdeva¹, Vidya Sagar¹, Jitesh Satija¹

¹Department of Community Medicine, PGIMS, Rohtak, Haryana, India

²Adesh Medical College and Hospital, Mohri, Haryana, India

³Department of Community Medicine, ESIC Hospital, Faridabad, Faridabad, India

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*Correspondence:

Dr. Vinod Chayal,

E-mail: drvinodchayal@gmail.com

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ABSTRACT

Background: In the last few years, there has been a significant shift on the subject of human reproduction from mainly a 'demographic issue' to a broader 'women's health and development issue.' Malnutrition, infection, early and repeated child bearing play an important role in determining menstrual problems of females in India. The other risk factors among women are the existing socio-economic and cultural environmental conditions. The present study was undertaken to know the prevalence of menstrual disorders and its various determinants in rural women of Haryana (Block Beri).

Methods: The study was of descriptive type, undertaken on 252 adolescent girls (14-18 years) in a rural block of Haryana (Block Beri), the field practice area attached to department of community medicine Pt. B.D. Sharma PGIMS, Rohtak. Design used was cross-sectional. The subjects were selected by systematic random sampling technique. Informed verbal consent was taken. A semi-structured interview schedule was used. The data was analyzed by using percentages, proportions.

Results: 48.8% of adolescent girls in the study group were suffering from menstrual problems. No statistically significant association of menstrual disorders was observed with type of family, age group, caste and literacy status. Income and mother's education were statistically significantly associated with menstrual problems.

Conclusions: It can be concluded from the study that even though menstrual problems are widely prevalent in the adolescent girls they are not addressed properly. Moreover, there is a need to generate awareness about menstruation at school level.

Keywords: Menstrual problems, Adolescent girls, School going, Sociodemographic, Rural

INTRODUCTION

In the last few years, there has been a significant shift on the subject of human reproduction from mainly a 'demographic issue' to a broader 'women's health and development issue.' Malnutrition, infection, early and repeated child bearing play an important role in determining menstrual problems of females in India. The other risk factors among women are the existing socio-

economic, cultural and environmental conditions. Menstruation is a normal physiological process where blood released from uterus comes out of vagina and normally it starts at 11-13 years which is known menarche.¹ Onset of menarche is dependent on factors like socioeconomic conditions, nutritional status and genetic factors/determinants of the girls. The adolescent girls lack knowledge of menstruation and don't understand the issues related to it. Most common

menstrual problem is dysmenorrhea which may range from 33% to 84% as observed in various studies. It is least reported by adolescent girls due to various reasons including lack of awareness about it, lack of privacy at the clinics and near absence of psychological support at home and school. It is the most common cause of school absenteeism. Those who attend school during menstruation, do not attend the outdoor activities.² Most of the girls who attend school do not take medication for any menstrual issues. There is a definite effect on concentration in school going adolescents during menstruation in studies, which may have direct or indirect consequences of school drop out of such girls. Menstruation is considered a social taboo; people don't want to talk about it. Most disgusting thing is that the female is considered impure during menstruation.^{3,4} Scientifically it is a normal physiological process and no guilt should be attached to it. The present study was undertaken to know the prevalence of menstrual problems, identify its determinants in rural girls of Haryana.

Aims and objectives

Aim and objectives of the study were I) To find out the prevalence of different types of menstrual problems in school going adolescent girls (14-18 years) in a rural block of Haryana (Block Beri). II) To study the association of the various factors with menstrual problems.

METHODS

The study was of descriptive type, undertaken on 250 school going adolescent girls (14-18 years) in a rural block of Haryana (Block Beri), the field practice area attached to department of community medicine Pt. B.D. Sharma PGIMS, Rohtak. Design used was cross-sectional. Adolescent girls of senior secondary school were enrolled in the study. There were 14 government senior secondary schools in the block Beri, 5 schools were randomly selected and in each school 50 study subject were selected by systematic random sampling technique. Prior permission was obtained from school authority before interviewing the study subjects. Study subjects were interviewed individually, of which initial ten to fifteen minutes of the interview were used for rapport building. The confidentiality of data was strictly maintained. Study period was from Aug 2019 to Nov 2019. Informed verbal assent/consent was taken. A semi-structured interview schedule was used. Interview schedule contained information about socio-demographic characteristic of the study subjects, knowledge about menstrual hygiene, socioeconomic status of the study subjects and menstrual problems faced by the study subjects. The study was analyzed by using percentages, proportions.

Some important definitions used in the study are as under:

Menorrhagia: It is defined as regularly timed episodes of bleeding, which are either, excessive in amount (>500 ml) and/or, in duration of flow (>5 days),

Hypomenorrhoea: It is a condition in which menstrual flow is short in duration and lasts for 1-2 days.

Polymenorrhoea: It is a condition in which menstrual flow is long in duration and lasts for more than 5 days.

Dysmenorrhea: It is defined as lower abdomen pain associated with the menstrual cycle.

Body mass index: It is defined as the weight in kilograms per square meter of height of an individual. BMI less than 18.5 kg/m² was considered as underweight, 18.5-22.9 kg/m² as normal, 23.0-24.9 kg/m² as overweight and ≥25 kg/m² as obese. Anthropometric assessment was made using standard height and weight measurements, anthropometric rod and weighing scale were used to measure the height to the nearest of 0.1 cm and weight to nearest of 0.5 kg.

RESULTS

Data of 250 school going adolescent girls was analyzed. Mean age of the menarche was 12.1 years. As shown in Table 1, majority (92%) were Hindus and 65% girls belonged to upper middle class as per modified BG Prasad scale of socioeconomic status and 17% belonged to middle class. Type of family was also enquired and it was observed that 56% belonged to nuclear family, 28% belonged to joint family and 16% belonged to three-generation family. Average family size was 4.9 in these study subjects. Body mass index of the adolescent girls was also calculated and as shown in table 2, it was found out that 34.7% were undernourished and 5.7% were overweight. 76% girls were found to be anaemic. The girls however were unaware of that. Of them 31% girls were symptomatic but were ignoring them.

As depicted in Table 3, it was revealed that around half of adolescent girls reported menstrual abnormality at some point of time. Most common menstrual abnormality was dysmenorrhea, reported in 48.8% of total study subjects followed by oligomenorrhoea reported in 24.8% of adolescent girls. Hypomenorrhoea was present in 3.1% of the study subjects only. Dysmenorrhea was widely prevalent among adolescent girls but it was not treated well, only 24.3% adolescent girls took analgesics to control it and rest of females either resorted to desi medication or did not take anything at all. 34.4% girls reported irregular menstrual cycles. School absenteeism was also common among adolescents suffering from dysmenorrhea, 31.2% girls were absent due to some reason related to menstruation. Treatment seeking behavior was also enquired among adolescent girls who were suffering from menstrual problems. It was surprising to know that only 5.6% had visited a doctor, when enquired further about reason for not visiting the

doctor, most common reason was lack of privacy in the hospital followed by shyness to discuss it with family members, and many were not even aware whether it is actually a problem or not.

Menstrual hygiene was discussed among the study subjects. It was found that 76% girls were using sanitary pads and 24% were using cloth at time of menstruation. Cleaning of external genitalia was not practiced properly during menstruation. There were many myths and misconceptions attached with the menstruation. 76% of the total girls were not visiting temple, 87% were not entering kitchen and 65% of the girls were not eating pickle during menstruation. Majority of the girls (88%) were not aware about menstruation at the time of menarche, and the most common source of information was their peer group.

Table 1: Distribution of study subjects as per their socio-demographic profile.

Variable	Number	Percentage (%)
Variability of family type		
Joint	73	29.2
Nuclear	141	56.4
Three-generation	36	14.4
Variability of religion		
Hindu	227	90.8
Muslim	5	2.0
Sikh	18	7.2
Christian	0	0

Table 2: Categorization of study subjects as per their BMI.

BMI category	Number	Percentage (%)
Underweight 18.5 kg/m ²	85	34
Normal 18.5-2.9kg/m ²	149	59.6
Overweight (23.0-24.9 kg/m ²)	16	6.4
Obese (≥25 kg/m ²)	0	0
Total	250	100

Table 3: Distribution of study subjects as per their menstrual problems (n=250).

Age (years)	Dysmenorrhea	Irregular bleeding	Irregular cycles
14	09	05	07
15	23	13	12
16	31	21	29
17	32	11	21
18	27	12	17
Total (%)	120 (48)	62 (24.8)	86 (34.4)

*Subjects have multiple responses



Figure 1: Use of sanitary pads and cloths during menstruation among study subjects.

DISCUSSION

Menstruation is a natural process in females but it is not given due attention, especially in rural areas where still talking about it is considered a taboo. The mean age of menarche in our study was 12.1 years which was very low as compared to a study conducted by Umeora et al in Nigeria and by Patil et al in Maharashtra, India where it was 15 years and 13.7 years respectively.^{5,6} It was comparable to a study by Beevi et al in Thiruvananthapuram district in India and in study of Singh et al conducted in Madhya Pradesh where it was 12.2 years and 12.5 years respectively.^{2,7} Age of menarche is dependent on various factors including socioeconomic conditions, environment, genetic factors, and nutritional status of adolescent girls. Moreover, it is observed that age of menarche is decreasing with each passing year. BMI of the adolescent girls was also calculated and it was found out that 34.7% of the girls were undernourished and 5.7% were overweight whereas none of the adolescent girls reported to be obese. A study by Ramachandran reported 12.9 % adolescent girls to be overweight and 9.9% to be obese.⁸ In a similar study by Bose et al overweight and obesity was 17.63% and 5.10%.⁹ It may be due to better nutritional status in those regions, while on the contrary in our area under-nutrition was more common. In a study by Taheri et al, 1.8% adolescent girls were obese. 3.9% adolescent girls were obese in a study by Mosha conducted in Iran and Tanzania.^{10,11} It can be due varied cultural differences and better socioeconomic condition in these countries where obesity is more prevalent.

Around half of the adolescent girls reported menstrual abnormality during some point of time. Most common menstrual abnormality was dysmenorrhea, reported in 48.8% of total study subjects followed by oligomenorrhea reported in 24.8% of adolescent girls. In a study conducted by Lee et al on adolescent girls in Singapore, Malaysia it was reported that 84.8% girls had one or more symptoms during menstruation and dysmenorrhea accounted for 33%.¹² Overall symptoms were quite high whereas dysmenorrhea was bit on lower side, this may be due to sociocultural variations in the two countries. Menstrual disorder was 21.1% in a study by Nair et al in

Thiruvanthapuram.¹³ Yet another study by Balasubrahmanian et al among rural girls in Tamil Nadu observed that normal menstruation was 84%.¹⁴ In another study by Vani et al, 42.5% school going girls reported menstrual abnormality among Sangly district of Maharashtra.¹⁵ The huge gap observed in the two states might be explained on the basis of sociocultural difference or differential perception of study subjects regarding menstrual problems. At times there is a lot of inhibition in admitting the difficulties that the girls are facing during menstruation. There were many myths and misconceptions attached with the menstruation. Out of total 76% were not visiting temple during menstruation, 87% not entering kitchen, 65% girls were not eating pickle. In a study by Puri et al, mensurating girls were not allowed to enter kitchen and temple and in another study by Kumar et al, girls believed that during mensuration their body emits a smell which leads to spoilage of preserved food including pickle so they must not touch it.^{3,4} These myths are based on false assumption that menstruating females are having bad blood which is impure and it can lead to such evil effects including spoilage of holy places like temple whereas there is no scientific basis to it.

Limitations

Excluding adolescent girls not going to school also might be considered a limitation of the study. Including them can give a wider view of the health of adolescent girls in rural population. Interviewing the female teachers about their knowledge about the subject and updating it, as need be, can be beneficial as they are the ones that the girls reach out to primarily apart from their families.

CONCLUSION

Menstrual problems in adolescent girls add is a huge burden on women's health in the rural population of our country. Creating awareness about menstruation at school level can be counterproductive in this regard.

Recommendations

Doing similar studies in other states can provide a nationwide view on menstrual problems in adolescent girls. We also recommend creating a model to educate the adolescent girls regarding menstruation, the appropriate hygiene during menstruation, the problems related to it, the issues that should raise an alarm and prompt them to consult a health worker. Also, the myths regarding menstruation should be dissolved. A scientific approach should be inculcated in the adolescent girls. This would not only help them to stay healthier but also promote logical and scientific attitude in the children that they would rear in future.

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REFERENCES

1. Wateraid.org. Module one: Menstrual Hygiene Basics. 2012. Available at: http://www.wateraid.org/~media/Files/Global/MHM%20files/Module1_HR.pdf. Accessed on 2014 Aug 09.
2. Beevi NP, Manju L, Bindhu AS, Haran JC, Jose R. Menstrual problems among adolescent girls in Thiruvananthapuram district. *Int J Community Med Public Health*. 2017;4:2995-8.
3. Puri S, Kapoor S. Taboos and Myths associated with women health among rural and urban adolescent girls in Punjab. *Indian J Community Med*. 2006;31:168-70.
4. Kumar A, Srivastava K. Cultural and social practices regarding menstruation among adolescent girls. *Soc Work Public Health*. 2011;26:594-604.
5. Oui U, Ve E. Age at menarche and the menstrual patterns of Igbo women of Nigeria. *Afri j Reprod Health*. 2008;12:1.
6. Patil SN. Health profile amongst adolescent girls in Rural area of Ratnagiri district of Maharashtra. *India J Clin Diagno Res*. 2009;5:1784-90.
7. Amita S. Prevalence and severity of dysmenorrhoea among first- and second-year female medical students in MP. *Indian J Physiol Pharmacol*. 2008;52:389-97.
8. Ramachandran A, Snehalatha C, Vinitha R, Thayyil M, Kumar CK, Sheeba L et al. Prevalence of overweight in urban Indian adolescent school children. *Diabetes Res Clin Pract*. 2002;57:185-90.
9. Bose K, Bisai S, Mukhopadhyay A, Bhadra M. Overweight and obesity among affluent Bengalee school girls of Lake Town, Kolkata, India. *Matern Child Nutr*. 2007;3:141-5.
10. Taheri F, Kazemi T. Prevalence of overweight and obesity in 7- to 18-year-old children in Birjand/Iran. *Iran J Pediatr*. 2009;19:135-40.
11. Mosha TC, Fungo S. Prevalence of overweight and obesity among children aged 6-12 years in Dodoma and Kinondoni Municipalities, Tanzania. *Tanzan J Health Res*. 2010;12:1-16.
12. Lee LK, Chen PC, Lee KK, Kaur. Menstruation in adolescent girls in Malaysia -cross sectional school survey. *Singapore Med J*. 2006;47(10):869-74.
13. Nair MK, Chacko DS, Ranjith Darwin M, Padma K, George B, P S R. Menstrual disorder and menstrual hygiene practices in higher secondary school girls. *Indian J Paediatr*. 2012;79(1):74-8.
14. Balasubramanian P. Health needs of poor unmarried adolescent girls- a community-based study in rural Tamil Nadu. *Indian J Population Educ*. 2005;18-33.
15. Vani RK, Veena KS, Subitha L, Kumar HS, Bupathy A. Menstrual abnormalities in School going girls-Are they related to dietary and exercise pattern. *J Clin Diagnos Res*. 2013;7(11):2537-40.

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