e-ISSN: 0975-1556, p-ISSN:2820-2643

Available online on www.ijpcr.com

International Journal of Pharmaceutical and Clinical Research 2022; 14(5); 744-750

Original Research Article

Descriptive Cross Sectional Study Assessment of the Socio-Demographic Correlates of Menstrual Problems among School Going Adolescent Girls

Preeti Kumari

Tutor, Department of Community Medicine, Anugrah Narayan Magadh Medical College, Gaya, Bihar, India

Received: 06-02-2022 / Revised: 12-03-2022 / Accepted: 15-04-2022
Corresponding author: Dr. Preeti Kumari
Conflict of interest: Nil

Abstract

Aim: To know the prevalence of menstrual disorders and its various determinants in rural women of Bihar Region.

Material & Methods: The study was of descriptive cross-sectional study, undertaken on 360 school going adolescent girls (14-18 years) in Bihar, the field practice area attached to department of community medicine, Anugrah Narayan Magadh Medical College, Gaya, Bihar, India.

Results: 27.2% were undernourished and 5.8% were overweight. 71% girls were found to be anemic. Most common menstrual abnormality was dysmenorrhea, reported in 47.8% of total study subjects followed by oligomenorrhea reported in 23.6% of adolescent girls.

Conclusion: 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

Adolescence is a high-risk group because during this stage major physical and mental change occurs. Menarche is a hallmark biological process of puberty [1] in adolescence girls and it leads to reproductive capacity. Menstrual abnormalities are common in adolescent and can lead to stressful conditions. [2] All over the world around 75% of girls are experiencing problems associated with menstruation[3]. The major abnormalities are dysmenorrhea, premenstrual syndrome (PMS), and menstrual irregularities. [4] These disorders may lead to problems in daily activities such as academic excellence, achievements in sports, and loss of self-confidence. [5-7] The lifestyle pattern of any individual leads to their prone of disease. Female reproductive cycle directly or indirectly influences with diet, physical work, and mental stress.

Dietary habits are directly related with individual quality of life, [6] and adolescence is a potential group to view the rapid growth and maturation which requests extra nutrients and energy-rich

food. [8] Food habits of adolescents in the recent past have changed [9] in their nutrient intake and needs such as widespread consumption of fast food, skipping of food intake. [5-6]

Menarche, the first menstruation of a girl occurs at the age of 12–13 years; it can arise as early as 10 years or as late as 16 years. In India, the age of menarche is 10–16 years (average age: 13.5 years). Globally, approximately 52% of the female population is of reproductive age group and for adolescent girls, menstrual hygiene is a vital part of basic hygienic practices. [10]

It is very essential to manage menstrual bleeding effectively and maintenance of proper menstrual hygiene, which if not treated accurately can cause infections of the urinary tract, pelvic inflammatory diseases, vaginal thrush, in addition to terrible odor, dirty clothes, and, in the long run, shame, leading to infringement of the girl's dignity. [11]

During menstrual cycles, the use of sanitary pads or clean and soft absorbents, adequate washing of the genital area, proper disposal of used absorbents, and other special healthcare needs of women are vital necessities for retaining menstrual hygiene. [12]

Those who attend school during menstruation, do not attend the outdoor activities. [13] 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. [14-15] 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 Bihar region.

Material & Methods:

The study was of descriptive cross-sectional study, undertaken on 360 school going adolescent girls (14-18 years) in Bihar, the field practice area attached to department of community medicine, Anugrah Narayan Magadh Medical College, Gaya, Bihar, India.

Adolescent girls of senior secondary school were enrolled in the study. There were 15 government senior secondary schools in the area, 6 schools were randomly selected and in each school 60 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 was conducted over a period of four months. 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/m^2 was considered as underweight, 18.5-22.9 kg/m^2 as normal, 23.0-24.9 kg/m^2 as overweight and ≥25 kg/m^2 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 360 school going adolescent girls was analyzed. Mean age of the menarche was 12.5 years. As shown in Table 1, majority (89.4%) were Hindus and 60% girls belonged to upper middle class as per modified BG Prasad scale of socioeconomic status and 15% belonged to middle class. Type of family was also enquired, and it was observed that 61.3% belonged to nuclear family, 26.9% belonged to joint family and 11.6% belonged to three generation family. Average family size was 4.3 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 27.2% were undernourished and 5.8% were overweight. 71% girls were found to be anemic. The girls however were unaware of that. Of them 36% 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 47.8% of total study subjects followed by oligomenorrhea reported in 23.6% of adolescent girls. Hypomenorrhea was present in 4.5% of the study subjects only. 28.6% girls reported irregular menstrual cycles.

School absenteeism was also common among adolescents suffering from dysmenorrhea, 30.3% 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 5.8% 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 76.9% girls were using sanitary pads and 21% were using cloth at time of menstruation. [Figure 1] Cleaning of external genitalia was not practiced properly during menstruation. There were many myths and misconceptions attached with the menstruation. 74% of the total girls were not visiting temple, 89% were not entering kitchen and 63% of the girls were not eating pickle during menstruation. Majority of the girls (84%) 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	97	26.94
Nuclear	221	61.39

Three-generation	42	11.67
Variability of religion		
Hindu	322	89.44
Muslim	9	2.5
Sikh	29	8.05
Christian	0	0

Table 2: Categorization of study subjects as per their BMI

BMI Category	Number	%
Underweight 18.5 kg/m^2	98	27.22
Normal 18.5-2.9kg/m^2	241	66.94
Overweight (23.0-24.9 kg/m^2)	21	5.83
Obese (≥25 kg/m^2)	0	0
Total	360	100

Table 3: Distribution of study subjects as per their menstrual problems (n=360)

Age (years)	Dysmenorrhea	Irregular bleeding	Irregular cycles
14	12	07	06
15	58	15	10
16	38	38	41
17	36	14	26
18	28	11	20
Total (%)	172 (47.8)	85 (23.6)	103 (28.6)

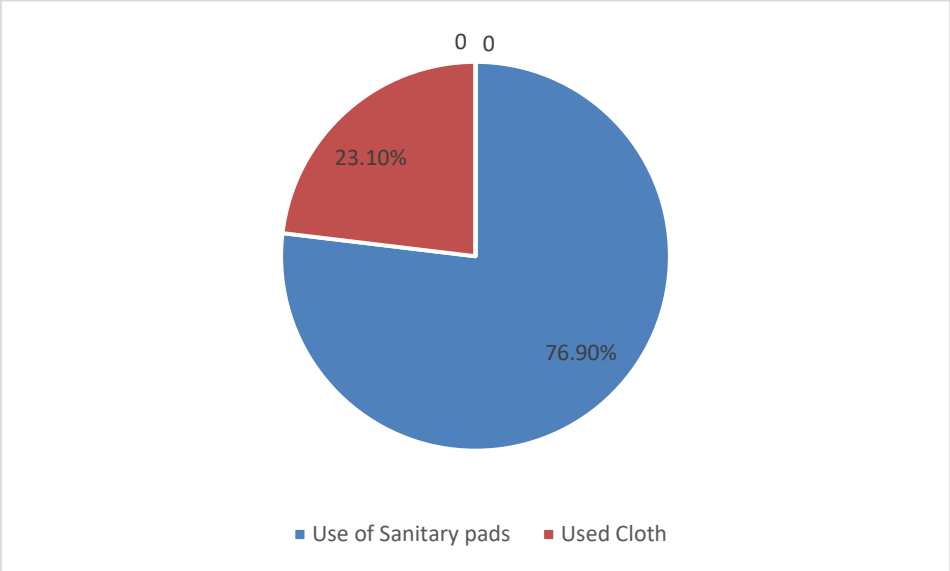

Figure 1: Use of sanitary pads and cloths during menstruation among study subjects.

Discussion:

In previous, it would be thought that menstrual abnormalities are found higher in metropolitan cities as compared to small hilly towns due to lifestyle pattern. [16] Most of the studies showed the menarcheal

age stabilized at the age of 12 to13 year. [17-18] The lower age of menarche could explain that the variation in age of menarche change according to the hereditary pattern, nutritional status, and climate difference. [7]

The result suggested that the dysmenorrhea is the highest among all menstrual abnormalities in a mountainous region, which support the fact that dysmenorrhea is common among 70%–90% adolescent girls [19-21] globally.

Absar Ahmad *et al*. [22], in their study in Lucknow, North India in 2020, found that religion, mother occupation, and family type were associated with good hygiene practice of menstruation among students. Students of other religions (Sikhism and Christianity) were 88% less likely to had good menstrual hygiene practices than Hindu students (AOR = 0.11, 95% CI: 0.048–0.273). Students belonging to nuclear families were 34% less likely to have good menstrual hygiene practices than students from joint families (AOR = 0.659, 95% CI: 0.508–0.855).

Avinash Surana *et al*. [23], in their study in 2019 among school-going girls in a rural area of southern Haryana, India, mentioned that the education of the mother and the family's socioeconomic status showed a trend with poor menstrual hygiene practices. Adolescent girls with illiterate mothers and lower SES class families had 3.1 and 9 times more odds of poor menstrual hygiene practice, respectively, than mothers having higher education and upper SES class family (aOR: 3.13, 95% CI: 1.71–5.7, *P* = 0.031, and aOR: 9.00, 95% CI: 2.27– 35.64, *P* = 0.000), respectively.

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. [24] 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. [25]

Balasubrahmanian et alamong rural girls in Tamil Nadu observed that normal menstruation was 84%. [26] In another study by Vani et al, 42.5% school going girls reported menstrual abnormality among Sangly district of Maharashtra. [27,28]

Conclusion:

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.

It is usually essential to enhance information and practices of good menstrual hygiene among adolescent girls so that they can lead a healthy productive life. Improvement of mothers' knowledge is also a major area to be focused on.

References:

1. 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.
2. Deligeoroglou E, Creatsas G. Menstrual disorders. Endocr Dev 2012; 22:160-70.
3. Lee LK, Chen PC, Lee KK, Kaur J. Menstruation among adolescent girls in Malaysia: A cross-sectional school survey. Singapore Med J 2006; 47:869-74.

4. Deligeoroglou E, Tsimaris P, Deliveliotou A, Christopoulos P, Creatsas G. Menstrual disorders during adolescence. Pediatr Endocrinol Rev 2006;3 Suppl 1:150-9.
5. Fujiwara T. Skipping breakfast is associated with dysmenorrhea in young women in Japan. Int J Food Sci Nutr 2003; 54:505-9.
6. Fujiwara T, Sato N, Awaji H, Sakamoto H, Nakata R. Skipping breakfast adversely affects menstrual disorders in young college students. Int J Food Sci Nutr 2009;60 Suppl 6:23-31.
7. Rupa Vani K, Veena KS, Subitha L, Hemanth Kumar VR, Bupathy A. Menstrual abnormalities in school going girls – Are they related to dietary and exercise pattern? J Clin Diagn Res 2013; 7:2537-40.
8. Anand K, Kant S, Kapoor SK. Nutritional status of adolescent school children in rural North India. Indian Pediatr 1999; 36:810-5.
9. Balbi C, Musone R, Menditto A, Di Prisco L, Cassese E, D'Ajello M, et al. Influence of menstrual factors and dietary habits on menstrual pain in adolescence age. Eur J Obstet Gynecol Reprod Biol 2000; 91:143-8.
10. House S, Mahon T, Cavill S. Menstrual hygiene matters: A resource for improving menstrual hygiene around the world. Reprod Health Matters 2013; 21:257-9.
11. Verma P, Ahmad S, Srivastava RK. Knowledge and practices about menstrual hygiene among higher secondary school girls. Indian J Community Health 2013; 25:265-71.
12. Deshpande TN, Patil SS, Gharai SB, Patil S, Durgawale P. Menstrual hygiene among adolescent girls-A study from urban slum area. J Family Med Prim Care 2018; 7:1439-45.
13. 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.
14. Puri S, Kapoor S. Taboos and Myths associated with women health among rural and urban adolescent girls in Punjab. Indian J Community Med. 2006; 31:16870.
15. Kumar A, Srivastava K. Cultural and social practices regarding menstruation among adolescent girls. Soc Work Public Health. 2011; 26:594-604.
16. Wyshak G, Frisch RE. Evidence for a secular trend in age of menarche. N Engl J Med 1982; 306:1033-5. Gaudineau A, Ehlinger V, Vayssiere C, Jouret B, Arnaud C, Godeau E, et al. Factors associated with early menarche: Results from the French health behaviour in school-aged children (HBSC) study. BMC Public Health 2010; 10:175.
17. Papadimitriou A, Fytanidis G, Douros K, Bakoula C, Nicolaidou P, Fretzayas A, et al. Age at menarche in contemporary Greek girls: Evidence for levelling-off of the secular trend. Acta Paediatr 2008; 97:812-5.
18. Hillen TI, Grbavac SL, Johnston PJ, Straton JA, Keogh JM. Primary dysmenorrhea in young Western Australian women: Prevalence, impact, and knowledge of treatment. J Adolesc Health 1999; 25:40-5.
19. Banikarim C, Chacko MR, Kelder SH. Prevalence and impact of dysmenorrhea on Hispanic female adolescents. Arch Pediatr Adolesc Med 2000; 154:1226-9.
20. Vicdan K, Kukner S, Dabakoglu T, Ergin T, Keles G, Gokmen O, et al. Demographic and epidemiologic feature of female adolescents in Turkey. J Adolesc Health 1996; 18:54-8.
21. Wiksten-Almstromer M, Hirschberg AL, Hagenfeldt K. Menstrual disorders and associated factors among adolescent girls visiting a youth clinic. Acta Obstet Gynecol Scand 2007; 86:65-72.

22. Ahmad A, Garg SG, Gupta S, Alvi R. Knowledge and practices related to menstruation among Lucknow College students in North India: Results from cross-sectional survey.
23. Surana A, Rajesh DR, Tank R, Singh A, Gupta V, Agrawal D, et al. Social determinants of menstrual hygiene among school-going girls in a rural area of Southern Haryana, India. Soc Health Behav 2020; 3:117-23.
24. Amita S. Prevalence and severity of dysmenorrhoea among first- and second-year female medical students in MP. Indian J Physiol Pharmaco.l 2008;52:389-97.
25. 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.
26. Berthelot, M., Rieker, A., & Correia, J. C. The difficulties experienced by patients with low back pain in France: a mixed methods study. Journal of Medical Research and Health Sciences, 2022:5(6), 2039–2048.
27. Balasubramanian P. Health needs of poor unmarried adolescent girls- a community-based study in rural Tamil Nadu. Indian J Population Educ. 2005;18-33.
28. 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.