

STUDY ON PROPORTION OF MENSTRUAL DISORDER AMONG PROFESSIONAL COLLEGE STUDENTS IN GADAG CITY – A CROSS SECTIONAL STUDY.**Rajashree Kotabal,¹Pralhad Dasar^{2*}**

¹Assistant Professor, Department of Community Medicine, Shimoga Institute of Medical Sciences, Shivamogga, Karnataka.²Professor and Head, Department of Community Dentistry, Shri Arobindo Dental College, Indoor, Madhya Pradesh.

Date of Submission : 05-01-2018**Date of online Publication : 15-04-2018****Date of Acceptance : 17-02-2018****Date of Print Publication : 30-06-2018**

***Author for correspondence:** Dr. Pralhad Dasar, Professor and Head, Department of Community Dentistry, Shri Arobindo Dental College, Indoor, Madhya Pradesh. Pin; 453111 E-mail: drpralhaddasar@gmail.com

Abstract

Background: Menstruation is a physiological phenomenon in women. Any deviation from this normal physiology is known as menstrual disorder. Prevalence of menstrual disorder ranges between 34.6% to 95%. **Objectives:** 1) To know the proportion of menstrual disorder among college students in Gadag city. 2) To study the factors related to dysmenorrhoea. **Methodology:** An observational cross sectional study was conducted among 2 professional college students in Gadag city for a period of 2 months. A semi structured questionnaire was used to collect the information and anthropometric measurements were taken as per the WHO guidelines. **Results:** Out of 246 students 90.24% of students were suffering from menstrual disorders. Proportion of each menstrual disorders were dysmenorrhoea 84.55% , menorrhagia 2.85%, hypo menorrhoea 15.45% , poly menorrhoea 3.25% , oligomenorrhoea 9.76%, emotional PMS 50.41% and physical PMS 75.61%. There is significant association between dysmenorrhoea and age of students, age of menarche and BMI status. **Conclusion:** Our study concludes that there is a higher proportion of menstrual disorder that is 90.4%. Majority of the students were suffering from dysmenorrhoea and next is premenstrual symptoms.

Key-words: Menstrual disorder, Dysmenorrhoea, Students.

Introduction

Menstruation is a physiological phenomenon in women. Women will become reproductive after commencement of menstruation and this determines the reproductive health of a women. Normally menstruation starts in the female between the age group 10 – 16 years. Normal menstrual pattern is such that mean age of menarche is around 12.5 years, length of menstrual cycle between 21-35 days, the length of flow 3-7 days and amount of flow 50 - 80ml.¹ Any deviation from this normality is known as menstrual disorder.

Menstruation pattern varies due to physiological factors, psychological factors and biological factors. Because of these factors deviation in the normal menstrual cycle pattern leads to menstrual disorders or menstrual cycle irregularities. Oligomenorrhoea is a infrequent, irregularly timed episodes of bleeding usually occurring at intervals of more than 35 days. Polymenorrhoea denotes frequent episodes of menstruation, usually occurring at intervals of 21 days or less. Menorrhagia denotes regularly timed episodes of bleeding that are excessive in amount (>80ml) and /or duration of flow >5days. Hypomenorrhoea refers to

regularly timed but scanty episodes of bleeding.² Dysmenorrhoea is a cramping pain accompanying the menstruation and premenstrual symptoms is the cyclic appearance of one or more of large constellation of symptoms just prior to menses, occurring to such a degree that life style or work is affected followed by a period of time entirely free of symptoms.³

These disorders in cycles or its irregularities are major gynaecological problems among women during their reproductive years and they are the major cause of anxiety to them and their family.⁴

Prevalence of menstrual disorder ranges between 34.6% to 95%.^{5,6} The most prevalent menstrual disorders among young females are dysmenorrhoea,^{7,8} premenstrual syndrome.⁹ The current study was designed to know the proportion of menstrual disorder and factors related to dysmenorrhoea.

Methodology

An observational cross sectional study was conducted among undergraduate students of professional colleges of Gadag for a period of two months from 1st

February 2017 to 31st March 2017. By convenient sampling technique randomly we have taken 2 professional colleges of Gadag city. Before conducting the study Ethical clearance was obtained from the Gadag institute of medical sciences, Gadag. A prior permission was obtained from the college principal after explaining the study protocol. Written informed consent was obtained from the female undergraduate students. All the female students were taken in a separate class room and provided a preformed semi structured questionnaire which includes Age, Height, Weight, Physical activity, Stress, questions related to menstrual disorder like pain during menstruation, Episodes of bleeding, Duration of flow etc. Anthropometric measurements like height and weight of study subjects were taken as per the WHO guidelines. Girls who were present at the time of visit were included in the study and girls who were absent and not willing to participate were excluded from the study.

Data was entered in the Microsoft excel sheet and analysed using Epi info 7 software. Frequency of each menstrual disorder was obtained. Association was drawn between the variables and dysmenorrhoea by using Chi square test.

Results

An observational cross sectional study was conducted among undergraduate student of 2 professional colleges of Gadag. Among 246 girls 13.82% of girls belongs to 18 years, 26.02% of girls belongs to 19 years, 19.51% of girls belong to 20 years, 23.98% girls belongs to 21 years and 16.61% girls belong to 22 year age groups.

In our study we found that 90.24% of students were suffering from menstrual disorders. Out of 246 students 84.55% students suffering from dysmenorrhoea, 2.85% of students suffering from menorrhagia, 15.45% of students suffering from hypo menorrhea, 3.25% of students suffering from poly menorrhea, 9.76% of students suffering from oligomenorrhoea. 50.41% of students were having emotional PMS and 75.61% of students were having physical PMS. (Figure1).

In our study prevalence of dysmenorrhoea was high among 18 years age group compared to 22 years age group which shows significant association at p value <0.05. Prevalence of dysmenorrhoea was more among students with age of menarche between 15 – 17 years(93.65%) compared to 10 – 14years (81.42%) which shows significant association at p value <0.05. dysmenorrhoea prevalence was high among obese students and students under stress and this shows significant association at p value <0.05. but dysmenorrhoea not shows any significant association with physical activity. (Table 1)

Figure 1. Proportion of each menstrual disorder.

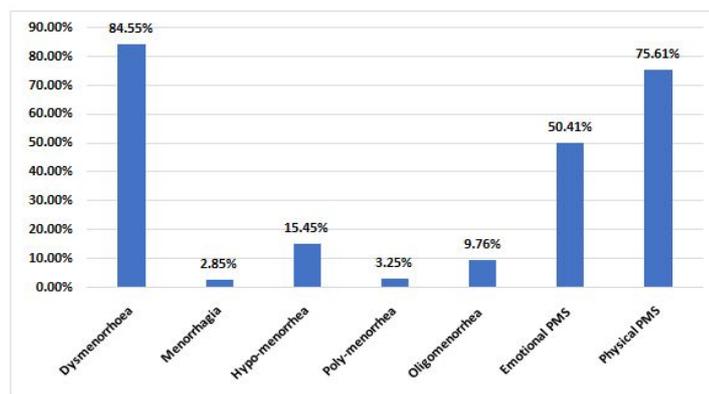


Table 1. Association between dysmenorrhoea and various factors.

Variables		Normal N(%)	Dysmenorr hoea N(%)	Total N	Chi square &P value
Age	18 years	6(9.38)	58(90.63)	64	13.74 0.008
	19 years	4(9.76)	37(90.24)	41	
	20 years	4(11.76)	30(88.24)	34	
	21 years	6(12.50)	42(87.50)	48	
	22 years	18(30.51)	41(69.49)	59	
Age of menarche	10-14years	34(18.58)	149(81.42)	183	5.36, 0.02
	15-17years	4(6.35)	59(93.65)	63	
Body Mass Index	Normal	18(12.16)	130(87.84)	148	15.88, 0.0004
	Underweight	8(50)	8(50)	16	
Physical activity	Obesity	12(14.63)	70(85.37)	82	1.9, 0.386
	Mild	6(18.75)	26(81.25)	32	
	Moderate	30(14.42)	178(85.58)	208	
Stress	Severe	2(33.33)	4(66.67)	6	3.74, 0.053
	Yes	6(8.45)	65(91.55)	71	
	No	32(18.29)	143(81.71)	175	

Discussion

In our study proportion of menstrual disorder was 90% which was higher compared to study conducted by C. E. Ekpenyong 34.6% in South Eastern Nigeria⁵ and lower compared to study conducted by AE Olowokere 95%.⁶

In our study proportion of each of the menstrual disorder was different and higher percentage of the students were suffering from the dysmenorrhoea which was 84.55% and others were 75.61% of physical premenstrual symptoms, 50.41% of emotional PMS, 15.45% of hypo menorrhoea, 9.76% of oligomenorrhoea, 3.25% of polymenorrhoea and 2.85% menorrhagia. Study done by Lakkawar NJ⁸ showed dysmenorrhoea 76%, premenstrual syndrome 69% and irregular menstruation 29%. Similarly study done by C. E. Ekpenyong⁵ showed commonest menstrual disorder was menorrhagia 37.5% and others were pre-menstrual

Syndrome 33.1%, oligomenorrhea 19.9%, and amenorrhea 5.9%. Other study shows 30% were suffering from irregular menstrual cycle, 77% were experienced dysmenorrhea and 68% were suffering from PMS.¹⁰ Typical menstruation in adolescence includes pain (93%), cramping (71%), premenstrual symptoms (96%) and mood disturbance (73%).⁹ The variation in the percentage of menstrual disorders may be due to their geographical area and the physical activity of students.

In our study prevalence of dysmenorrhoea was more among the 18 years age group compared to 22 years age group. Some of the studies have showed that prevalence of dysmenorrhoea decreases with increasing age.¹¹ Similarly study done by Shivani Sinha in UP shows 10-13 years age group students had 29.4% of irregular cycle compared to 17-19 years age group students that is 16.1%.¹² This earlier occurrence of menstrual problems may be associated with hormonal changes and adjustment with the menstruation at the earlier periods of menstruation.

Students with age of menarche 15-17 years shows increased prevalence of dysmenorrhoea compared to 10-14 years age. Several studies have shown a significant association between early age at menarche and dysmenorrhoea.¹³ Study done Kural MR et.al. shown no significant difference in the mean age of menarche between presence and absence of dysmenorrhea.¹⁴

In the present study normal and overweight students shows higher percentage of dysmenorrhoea compared to underweight. Similarly, few studies shows association between BMI with dysmenorrhoea.¹³ Kural MR et.al. study findings were consistent with this and showed no association with BMI.¹⁴ Study done by Lakkawar NJ, et.al. shows higher prevalence of dysmenorrhea in normal and underweight category in comparison to over weight ($p \leq 0.001$).⁸

Conclusion: Our study concludes that there is a higher proportion of menstrual disorder that is 90.4%. Majority of the students were suffering from dysmenorrhoea and next is premenstrual symptoms. There is significant association between dysmenorrhoea and age of students, age of menarche and BMI status.

Recommendations: Female undergraduates should be taught about premenstrual symptoms and how to adequately prepare themselves for menstruation to minimize the effect of menstrual disorders through informative, educative and communication materials.

Acknowledgement: Authors are thankful to college principals for giving permission to do study in their colleges. We sincerely thank to college students for their cooperation during study procedures.

References

- 1) Salhan S. Textbook of Gynecology. 1sted. New Delhi: Jaypee Brothers Medical Publishers; 2011;56-60.

- 2) VG Padubidri. Howkins and Bourne. Shaws Textbook of Gynaecology. 14th ed. Uttar Pradesh: Elsevier Publisher; 2009;255-68.
- 3) Shirish S Sheth. Essentials of Gynecology. 2nd ed. New Delhi: Jaypee Brothers Medical Publishers; 2011;53-74.
- 4) Lakshmi AS. Impact of Life Style and Dietary Habits on Menstrual Cycle of College Students. International Journal of Science and Research. 2015;4(4);2845-47.
- 5) Ekpenyong CE. Academic stress and menstrual disorders among female undergraduates in Uyo, South Eastern Nigeria – the need for health education. Niger. J. Physiol. Sci. 2011;26: 193 – 198.
- 6) Olowokere AE et.al. Menstrual disorders: The implications on health and academic activities of female undergraduates in a federal university in Nigeria. Journal of Nursing Education and Practice, 2014; 4(5):126-135.
- 7) Baghianimoghadam MH, Azam Mohammad Loo AM, Falahzadeh H, Mehdi Mirzaei Alavijeh MM. A Survey about the Prevalence of Dysmenorrhea in Female Students of Shahid Sadoughi University of Medical Sciences and Their Knowledge, and Practice toward it. Journal of Community Health Research. 2012; 1(2): 93-98.
- 8) Lakkawar NJ, et.al. A Study of Menstrual Disorders in Medical Students and its Correlation with Biological Variables. Sch. J. App. Med. Sci., 2014; 2(6):3165-3175.
- 9) Parker M, Sneddon A, 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. 2010;117:185–192.
- 10) Aref N, Farzana Rizwan F, Abbas MM. Frequency of Different Menstrual Disorders among Female Medical Students at Taif Medical College. World Journal of Medical Sciences .2015;12 (2): 109-114.
- 11) Patel V, Tanksale V, Sahasrabhojane M, Gupte S, Nevrekar P. The burden and determinants of dysmenorrhea: A population-based survey of 2262 women in Goa, India. BJOG. 2006;113:453–63.
- 12) Sinha S, Srivastava JP, Sachan B, Singh RB. A cross-sectional study of awareness regarding dog bite and its management in rural community of Maharashtra. Int J Community Med Public Health 2016;3:1200-3.
- 13) Shrotriya C, Ray A, Ray S, Thomas GA. Menstrual characteristics and prevalence and effect of dysmenorrhea on quality of life in medical students. Int J Collab Res Intern Med Public Health. 2012;4:276–94.
- 14) Kural MR et.al. Menstrual characteristics and prevalence of dysmenorrhea in college going girls. J Family Med Prim Care. 2015;4(3):426-431.

Conflict of Interest: None

Source of funding support: Nil

How to cite this article: Rajashree Kotabal, Pralhad Dasar. Study on proportion of menstrual disorder among professional college students in Gadag City – A cross sectional study. Nat J Res Community Med 2018;7(2):77-79.

© Community Medicine Faculties Association-2018

NJRCM: www.commedjournal.in