International Journal of Clinical Obstetrics and Gynaecology

ISSN (P): 2522-6614
ISSN (E): 2522-6622

www.gynaecologyjournal.com
2021; 5(5): 202-205
Received: 05-06-2021
Accepted: 08-07-2021

Dr. Charu Maggo
Intern, Dr. Rajendra Prasad Government Medical College, Sadarpur, Himachal Pradesh, India

Dr. Seema Sharma
Associate Professor, Department of Paediatrics, Dr. Rajendra Prasad Government Medical College, Sadarpur, Himachal Pradesh, India

Dr. Anshul Sharma
Intern, Dr. Rajendra Prasad Government Medical College, Sadarpur, Himachal Pradesh, India

Corresponding Author:
Dr. Charu Maggo
Intern, Dr. Rajendra Prasad Government Medical College, Sadarpur, Himachal Pradesh, India

Impact of dysmenorrhea on budding medical graduates from Sub–Himalayan India

Dr. Charu Maggo, Dr. Seema Sharma and Dr. Anshul Sharma

DOI: https://doi.org/10.33545/gynae.2021.v5.i5d.1039

Abstract
Background: To ascertain the associated risk factors, severity and the impact of dysmenorrhea on life of medical students.
Methodology: A cross sectional study was conducted for three months using a predesigned questionnaire, VAS and BMI was determined for all the participants.
Results: Of the total study sample 113(75.3%) reported having dysmenorrhea which was significantly higher in those who pass clots and had a positive family background of dysmenorrhea ($p = < 0.05$). Of the total girls experiencing dysmenorrhea, a major proportion (56%) was found to suffer from moderate to severe pain, 68.14% girls have moderate to clearly inhibited working ability, 64.6% have few to apparent systemic symptoms. 56.6% girls use analgesics in each cycle. 54% of them reported a loss of > 2 hrs each day primarily due to dysmenorrhea. 13.3% of them reported a loss of even > 20 hrs.
Conclusion: Significant extent of female medical students are found to experience the ill effects of dysmenorrhea of moderate to extreme force. Family history and presence of clots were noteworthy hazard variables for dysmenorrhea.

Keywords: Dysmenorrhea, medical students, VAS

Introduction
Dysmenorrhea means cramping pain accompanying menstruation. It will in general be categorized into 2 sorts - Primary and secondary dysmenorrhea [1]. Primary dysmenorrhea alludes to one that isn't related with any pelvic pathology. It is cramping pain beginning within 2 yrs of menarche. It is associated with nausea, vomiting, diarrhoea, headache & fatigue. Secondary dysmenorrhea is related with the presence of organic pelvic pathology. It is dull aching pain with onset at age of 20-30 years. It is associated with dyspareunia, infertility & menstrual disorders [1]. There is a wide variety in the gauge of dysmenorrhea from studies all throughout the planet, the appraisals moving from 45% to 95% [2]. Its genuine predominance isn't however clearly built up in India. The studies have related many factors to this disorder, which include – younger age, low BMI, early menarche, prolonged menstrual flow, intermenstrual bleeding, family history, coffee and alcohol consumption [3]. It has been accounted for as a typical reason of sickness absenteeism from both classes and work by the female student community [4]. It is a public health problem with high prevalence [5, 6], suffering, and considerable economic loss resulting from decreased productivity, costs of medications and medical care [7]. In spite of the fact that dysmenorrhea is one of the foremost common gynecological issue but there are limited studies on this subject particularly in subhimalayan India. Hence this raises a need to evaluate the associated risk factors, severity and impact of dysmenorrhea.

Materials and Methods
The cross sectional review was directed for a time of 3 months (January 2018 to March 2018) at Dr. Rajendra Prasad Government Medical College, Tanda (Kangra).

Ethics Approval: The study proposal was cleared from institutional ethics committee prior to collecting data. The study was led on a sum of 150 female medical students who consented to willfully take part in the review. The members were guaranteed of the secrecy of their responses after which they provided informed verbal consent that cooperation was intentional.

Procedure: Before the dispersion of poll, focus group discussions in regard to menstruation were led. Students were educated of how the surveys were to be filled in and after that they were approached to stamp a choice pertinent to them.

Development of questionnaire: The survey was prepared considering the demand of study and by alluding to previous studies in literature [8, 9]. It included 3 parts (annexure 1). The first part included questions regarding menstrual history. The second part included questions regarding dysmenorrheal status and personal habits. And the third part incorporates VAS (visual analog scale) and inquiries to record the seriousness of dysmenorrhea. Likewise the age of members were recorded, their weight and height were estimated for the computation of BMI. One constraint of the 10 cm line in VAS addressed "unbearable pain" and the other limit represented "no pain at all". The participants were approached to rate the degree of pain by making a stamp on the line. The scores got from the scale were classified as [10]:

Type: Score
Mild dysmenorrhea: 1 to 3
Moderate dysmenorrhea: 4 to 7
Severe dysmenorrhea: 8 to 10

The menstrual bleeding in equivalent stretches between 21 and 35 days was viewed as regular. Menstruation of less than 2 days was viewed as short, between 2 to 6 days as normal and more than 6 days as long [1].
BMI was calculated by the formula: weight (kg) / height (m^2) and was analyzed based on the recommendations from the World Health Organization [11]:
<18 – underweight
18 -24.99 – normal weights
25 – 29.99 – overweight
_>30 – obese

Moreover, the individuals who smoke at slightest one cigarette in a day were viewed as smoker. The people who devour something like 30 g alcohol in seven days as alcohol consumer. Those consuming at least 3 cups of coffee, at least a glass of cola and at least 2 bars of chocolate in a day were considered to be coffee consumer, cola consumer and chocolate consumer respectively. Dysmenorrhea in members' mother or sister was viewed as sure family background of dysmenorrhea [3].

Statistical analysis: it was carried out using chi square. A value of $p < 0.05$ was considered to be statistically significant.

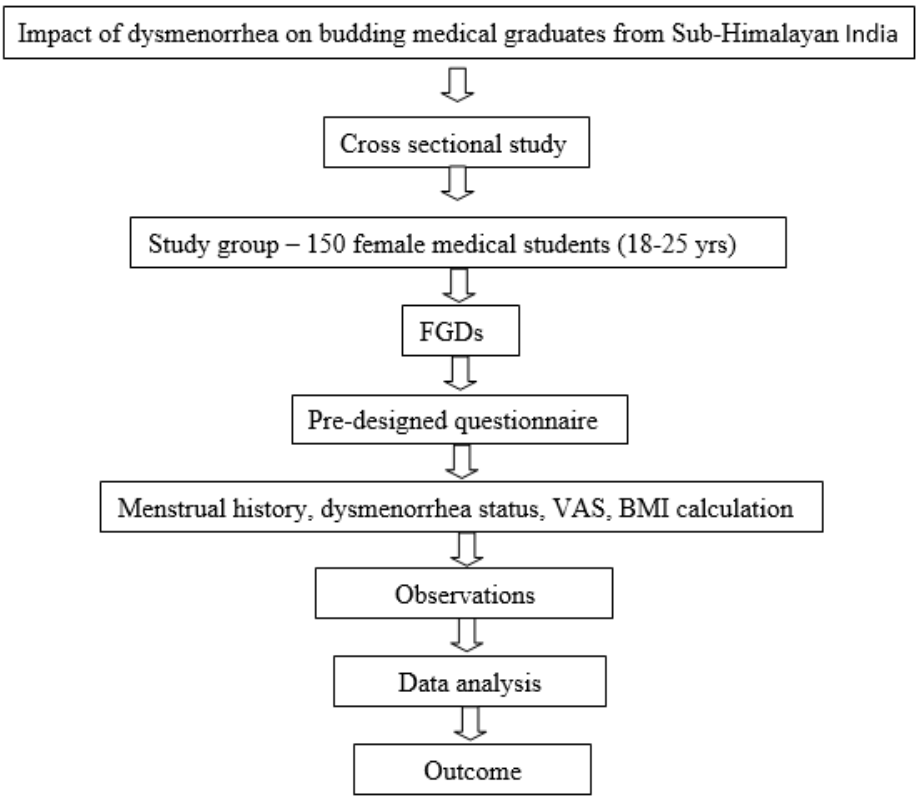

Fig 1: Study design

Results

We have conducted this study at our tertiary care health centre to find out impact of dysmenorrhea on lives of medical students. Our study was conducted for three months and study group comprised of 150 female medical students. The average age of participants was 21.4 yrs, extending from 18 to 25 yrs. Majority of participants (60 %) were in the age group of 20 to 22 yrs. The mean BMI of participants was 21.15 kg/m^2. More than half of the participants (69.3%) had a normal BMI (18 – 24.99). Dysmenorrhea was detailed by 75 % (113) of the total participants. The average age of menarche was 13 years and a larger part of them (92%) had menarche in age of 11 to 16 years, remaining 7.3% start menstruating before 11 years & 0.6% of them had menarche after 16 years.
The duration of cycle of participants on an average was that of 29.36 days with majority of them (95.3%) having an interval between 21 to 35 days. 2% of participants had an interval of <21 days and 2.6 % had an interval of >35 days. The average duration of flow was found to be 4.6 days with majority of girls (94.6%) having flow between 2 to 5 days. 5.3% girls had duration of > 6 days and no girl had duration of < 2 days.
Maximum participants (88.6%) have moderate menstrual flow.

Only 2.6% girls experience intermenstrual bleeding. 30.6 % girls have a history of passing clots. 26 % girls have a positive family history of dysmenorrhea. Regarding consumption of cigarette, alcohol, coffee, cola and chocolate, it was found to be negative in 98.6%, 92%, 96%, 99.3% and 93.3% respectively.

Table 2: Characteristics of participants

Characteristics	Dysmenorrhea % {n=113}	No Dysmenorrhea % {n=37}	Total % {n=150}
BMI (18-24.9)	69.0	70.2	69.3
Menarche (10-16 yrs)	91.1	94.5	92
Duration of flow (2-5 days)	94.6	94.5	94.6
Flow (moderate)	89.3	86.4	88.6
Metrorrhagia	3.5	0	2.7
*Clots	35.3	16.2	30.6
*Family history	31.8	8.1	26
Smoking	4.4	0	2.7
Consuming alcohol	8.0	8.1	8.0

*Marked characters are found to be statistically significant (p value <0.05)

Odds ratio for clots = 2.8
Odds ratio for positive family history = 5.3
According to visual analog scale recordings, 16%, 40%, 19.3% girls experience severe, moderate and mild pain respectively.

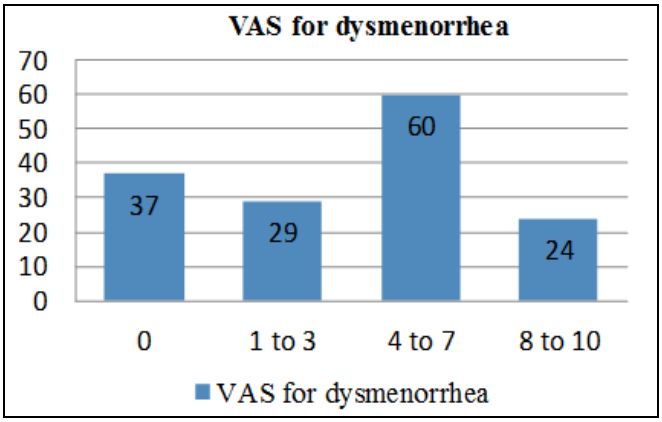

Fig 2: VAS for dysmenorrhea

Also it was found that 68.14% of girls have moderate to clearly inhibited working ability. 64.6 % have few to apparent systemic symptoms. 56.6% require analgesics in every cycle.

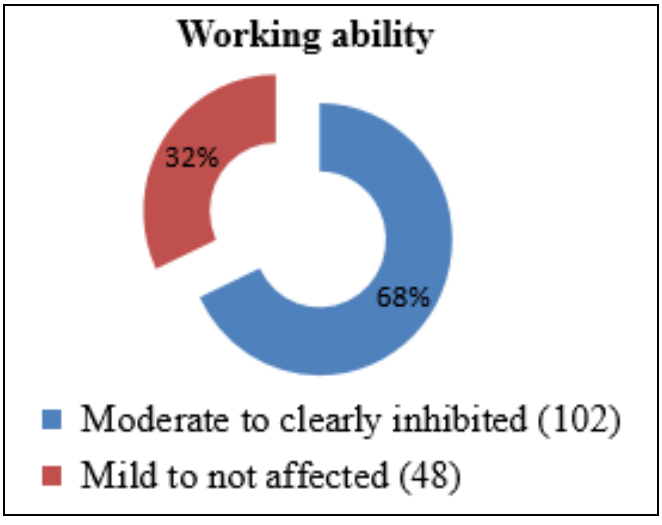

Fig 3: Dysmenorrhea impact on working ability

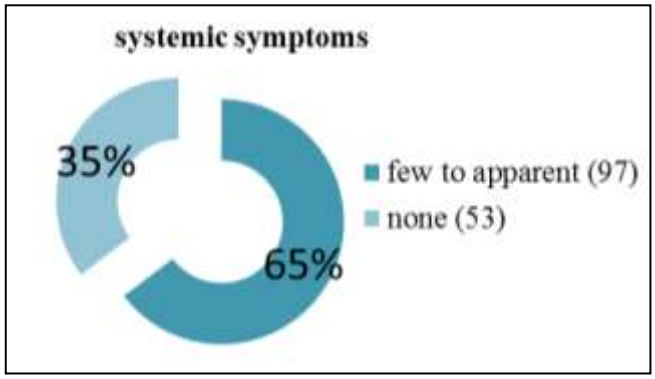

Fig 4: Systemic symptoms with dysmenorrhea

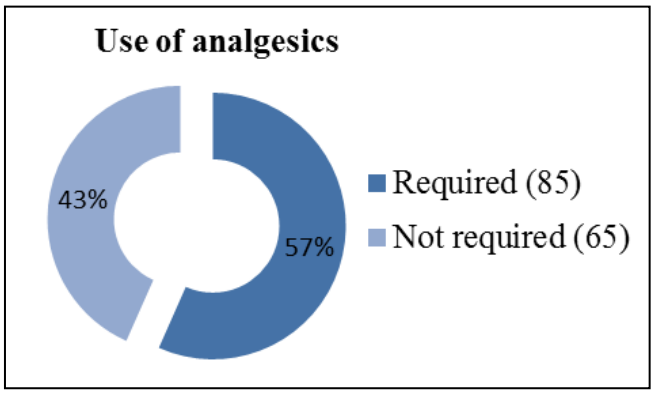

Fig 5: Use of analgesics in dysmenorrhea

54% girls experience a loss of > 2 hours of study each day. Out of which 13.3 % reported a loss of even > 12 hours in a day

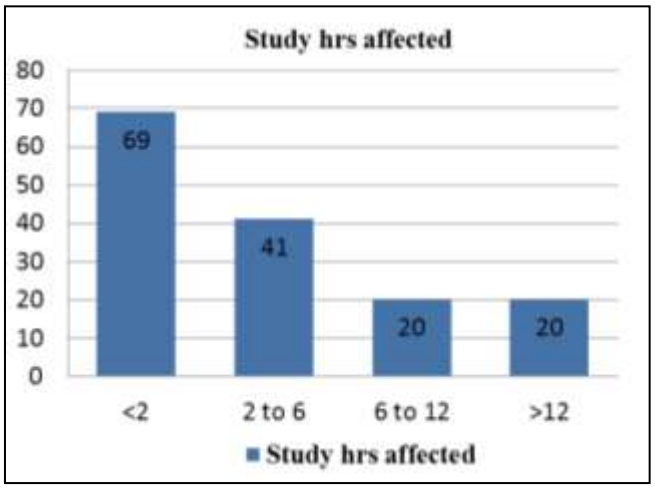

Fig 6: Impact of dysmenorrhea on study hours

Discussion

The current study tracked down a high extent of dysmenorrhea (75%) revealed among female medical students. In this study 56% of girls detailed having moderate to severe intensity of pain during menstruation. Also 54 % of girls had a loss of > 2 hrs of study each day which indicates that dysmenorrhea is still an imperative wellbeing issue and encompasses a negative impact on life of medical students. Majority of girls experiencing dysmenorrhea falls in the age group of 20 to 22 years. Many studies have shown that the predominance of dysmenorrhea diminishes with increment in age [9]. But no such relationship was built up by this study, likely since students in the study group may not be in a higher range of years. Also no link was established with habits like consuming cigarettes, alcohol, cola,

and chocolate as only a few girls have reported the consumption of above products. It has been proposed that early age of menarche lead to longer exposure to uterine prostaglandins which results in higher predominance of dysmenorrhea [12] However since majority of girls in our study has attained menarche between 11 to 16 years, no noteworthy distinction was found in the menarche age between the two groups (presence and absence of dysmenorrhea). 95.3% girls have cycle length of 21 to 35 days which upholds the way that the cycles are regularized by this age. Girls with presence of clots had 2.8 times higher risk of getting dysmenorrhea as differentiated to those who did not report clots. Explanation can be that clots signify excessive blood loss which may be the symptom of hormonal imbalance, uterine fibroids and endometriosis that present as dysmenorrhea.

Also girls with positive family history have 5.3 times more risk of suffering from dysmenorrhea. This could be related with behavior and propensities learned from the mother and may be due to hazard for related conditions such as endometriosis, fibroids & carcinoma which have been demonstrated to have a familial inheritance.

There are sure restrictions of the study, first and foremost it was performed in a single college in a single district and therefore the sample may not be representative of all colleges in Himachal. Moreover the study was done with a determined age group which decreases its applicability to all women. No validation of VAS was done & therefore the pain intensity reported by participants is an approximation of pain intensity rather than an accurate measure. The final restriction is that the nature of self-detailing may have brought about in beneath detailing of the conditions.

Conclusion

To conclude, dysmenorrhea is found to be very common among medical students and have a major impact on their working efficiency. Findings suggest family history & presence of clots as noteworthy hazard components of dysmenorrhea in these girls. Consequently expanded mindfulness with respect to solid indicators might influence the seriousness and impact of dysmenorrhea.

References

1. Padubidri V, Daftary S. Howkin's & Bourne Shaw's Textbook of Gynaecology: Dysmenorrhea, premenstrual syndrome.16th edition. New Delhi; RELX India Private Limited 2015, 471-473.
2. Harlow SD, Park M. A longitudinal study of risk factors for the occurrence, duration and severity of menstrual cramps in a cohort of college women [published correction appears in Br J Obstet Gynaecol 1997;104(3):386. Br J Obstet Gynaecol 1996;103(11):1134-1142. doi:10.1111/j.1471-0528.1996.tb09597.x
3. Unsal A, Ayranci U, Tozun M, Arslan G, Calik E. Prevalence of dysmenorrhea and its effect on quality of life among a group of female university students. Ups J Med Sci 2010;115(2):138-145. doi:10.3109/03009730903457218
4. Dawood MY. Dysmenorrhea. Clin Obstet Gynecol 1990;33(1):168-178. doi:10.1097/00003081-199003000-00023
5. Adeyemi A, Adekanle D. Management of Dysmenorrrhoea among Medical Students. The Internet Journal of Gynecology and Obstetrics 2006;7:1.
6. Banikarim C, Chacko MR, Kelder SH. Prevalence and impact of dysmenorrhea on Hispanic female adolescents. Arch Pediatr Adolesc Med 2000;154(12):1226-1229. doi:10.1001/archpedi.154.12.1226
7. Lentz G, Lobo R, Gershenson D, Katz V. Comprehensive Gynecology. 6 ed Philadelphia: Mosby Elsevier 2012 3 January 2013.
8. Sharma A, Taneja DK, Sharma P, Saha R. Problems related to menstruation and their effect on daily routine of students of a medical college in Delhi, India. Asia Pac J Public Health 2008;20(3):234-241. doi:10.1177/1010539508316939
9. Patel V, Tanksale V, Sahasrabhojanee M, Gupte S, Nevrekar P. The burden and determinants of dysmenorrhea: a population-based survey of 2262 women in Goa, India. BJOG 2006;113(4):453-463. doi:10.1111/j.1471-0528.2006.00874.x
10. Larroy C. Comparing visual-analog and numeric scales for assessing menstrual pain. Behav Med 2002;27(4):179-181. doi:10.1080/08964280209596043
11. Physical Status: The use and interpretation of anthropometry. Report of a WHO Expert Committee. World Health Organ Tech Rep Ser 1995;854:1-452.
12. 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.