European Journal of Molecular & Clinical Medicine

ISSN 2515-8260 Volume 8, Issue 1, Summer 2021

ORIGINAL RESEARCH

ASSESSMENT OF PATTERN OF SELF- MEDICATION IN PRIMARY DYSMENORRHEA IN MEDICAL AND NURSING STUDENTS

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ABSTRACT

Background: Self-medication for primary dysmenorrhea is common with an incidence of 38–80% due to easy accessibility to over-the-counter drugs. The present study was conducted to assess pattern of self- medication in primary dysmenorrhea in medical and nursing students.

Materials & Methods: 350 medical and nursing under-graduate students were enrolled. Parameters such as regularity of menstrual cycle, duration of menstrual discomfort, symptoms of primary dysmenorrhea, severity of pain assessment, self-medication used to relieve pain and awareness of self-medication was recorded.

Results: Out of 350 subjects, 190 were medical and 160 were nursing students. The difference was significant (P< 0.05). Among 190 medical students, 120 and among 160 nursing students, 75 showed self- medication. The difference was significant (P< 0.05). Medication used by medical and nursing students was mefenamic acid in 45% and 25%, paracetamol in 12% and 30%, ibuprofen in 13% and 5%, mefenamic acid+ dicyclomine in 12% and 13%, diclofenac in 8% and 12% and others in 10% and 15% respectively. The difference was significant (P< 0.05). Pain length was 1-2 days seen in 40%, 2-3 days in 35% and entire period in 25%. Pain intensity was mild in 12%, moderate in 52% and severe in 36%. Menstrual symptoms was seen in 67%. Frequency of dysmenorrhea occurrence was more frequently (every month) in 55% and less frequently (once in 3 month) in 45%. The difference was significant (P< 0.05).

Conclusion: There was high prevalence of self- medication among medical and nursing students. Commonly used drug were mefenamic acid and paracetamol.

Key words: menstrual discomfort, dysmenorrhea, self-medication.

Received: 12-01-2021 **Accepted:** 25-02-2021 **Published:** 02-03-2021

I. INTRODUCTION

Primary dysmenorrhea is defined as "painful menses in women with normal pelvic anatomy, usually beginning during adolescence characterized by crampy pelvic pain shortly before or at the onset of menses lasting for 1 to 3 days". Painful uterine contractions and discomfort occur during these cycles mainly felt in lower abdomen but may radiate to back and the thigh. There are primary Dysmenorrhea without pathology and secondary to pelvic pathology.[1]

Self-medication is defined as the use of medication by a patient on her own or on the advice of pharmacist or a layperson instead of consulting a physician. Self-medication for primary dysmenorrhea is common with an incidence of 38–80% due to easy accessibility to over-the-counter drugs. This may lead to inappropriate choice of drugs and inadequate therapeutic dose.

In developing countries like India, easy availability of wide range of drugs coupled with inadequate health services has resulted in increased proportions of drugs used as self-medication compared to prescribed drugs. The present study was conducted to assess pattern of self- medication in primary dysmenorrhea in medical and nursing students.

II. MATERIALS & METHODS

The present study comprised of 350 medical and nursing under-graduate students with primary dysmenorrhea. The consent was obtained from all enrolled patients.

Data such as name, age etc. was recorded. Parameters such as regularity of menstrual cycle, duration of menstrual discomfort, symptoms of primary dysmenorrhea, severity of pain assessment, self-medication used to relieve pain and awareness of self-medication was obtained by using standard questionnaire Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

III. RESULTS

Table I Distribution of subjects

Stream	Number	P value
Medical	190	0.91
Nursing	160	

Table I shows that out of 350 subjects, 190 were medical and 160 were nursing students. The difference was significant (P< 0.05).

Table II Prevalence of self- medication

Stream	Prevalence	P value
Medical	120	0.05
Nursing	75	

Table II shows that among 190 medical students, 120 and among 160 nursing students, 75 showed self- medication. The difference was significant (P< 0.05).

Table III Preferred medication for self- medication

Medication	Medical	Nursing	P value
Mefenamic acid	45%	25%	0.02
Paracetamol	12%	30%	0.01
Ibuprofen	13%	5%	0.05
Mefenamic acid+ dicyclomine	12%	13%	1
Diclofenac	8%	12%	0.12
Others	10%	15%	0.17

Table III, graph I shows that medication used by medical and nursing students was mefenamic acid in 45% and 25%, paracetamol in 12% and 30%, ibuprofen in 13% and 5%, mefenamic acid+ dicyclomine in 12% and 13%, diclofenac in 8% and 12% and others in 10% and 15% respectively. The difference was significant (P< 0.05).

Graph I: Preferred medication for self- medication

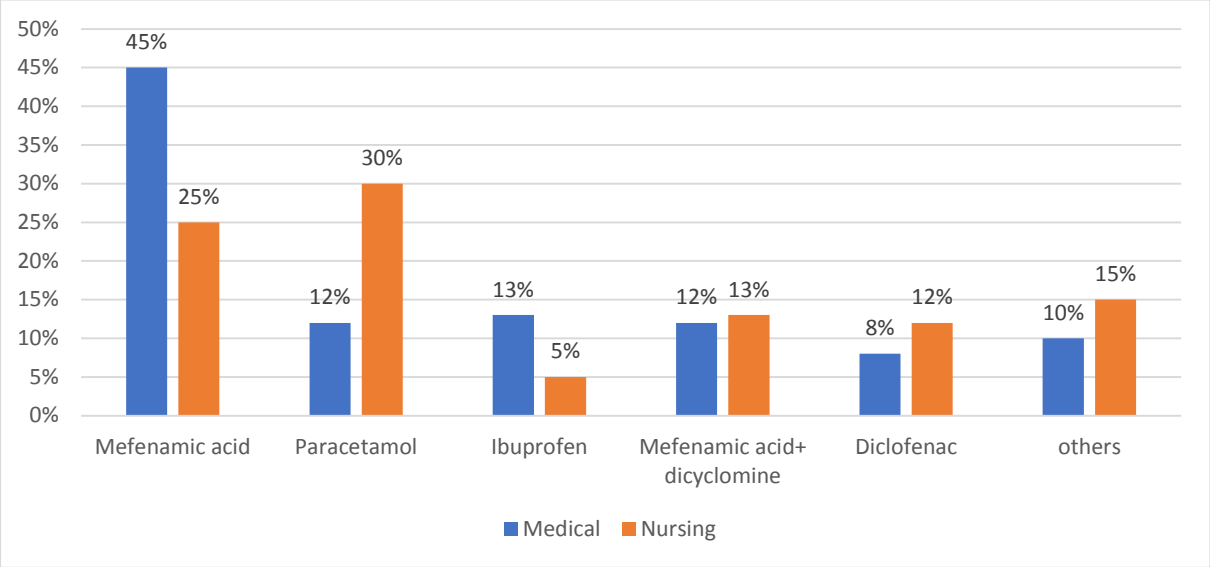


Table IV: Dysmenorrhea and associated features

Parameters	Variables	Percentage	P value
Pain length	1-2 days	40%	0.21
	2-3 days	35%	
	entire period	25%	
Pain intensity	Mild	12%	0.08
	moderate	52%	
	severe	36%	
Menstrual symptoms	yes	67%	0.01
	no	33%	
Frequency of dysmenorrhea occurrence	More frequently (every month)	55%	0.94
	Less frequently (Once in 3 month)	45%	

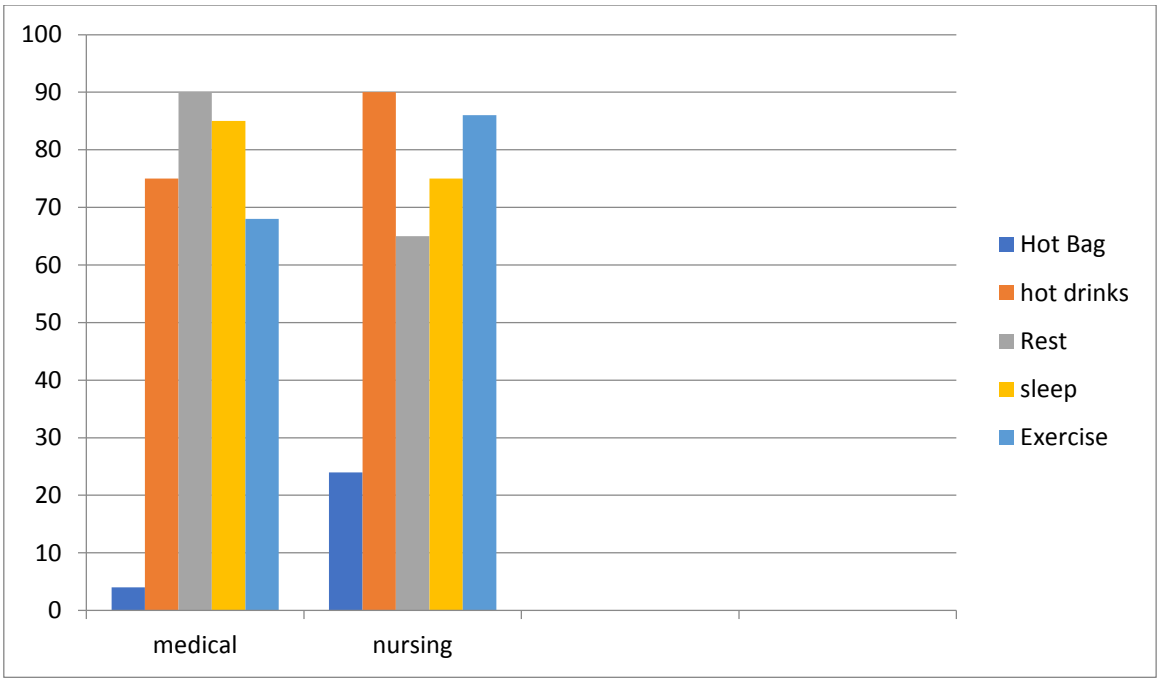
Table IV shows that pain length was 1-2 days seen in 40%, 2-3 days in 35% and entire period in 25%. Pain intensity was mild in 12%, moderate in 52% and severe in 36%. Menstrual symptoms was seen in 67%. Frequency of dysmenorrhea occurrence was more frequently (every month) in 55% and less frequently (once in 3 month) in 45%. The difference was significant (P< 0.05).

Table V: Measures to relieve pain

Students	Medical	Nursing
Non Pharmacological Methods	54%	90%

Non-pharmacological measures were used for pain relief by nursing (90%), and medical students (54%) as shown in Table 4.

Graph 2: Measures to relieve pain among nursing and medical students



The nonpharmacological measure by nursing students were hot bag, hot drinks but medical students favoured rest and sleep as shown in Graph 2.

Discussion

Self-medication is a widespread practice in the world, particularly in economically deprived communities.[8] Self-medication has positive and negative outcomes on the individuals and health-care systems. Self-medication helps the patients by encouraging patients to take responsibility and builds confidence to manage their own health and even save time and consultation fee.[9] The present study was conducted to assess pattern of self- medication in primary dysmenorrhea in medical and nursing students.

We found that out of 350 subjects, 190 were medical and 160 were nursing students. Bharati et al[10] found out prevalence of self-medication practice in primary dysmenorrhea among medical and nursing undergraduate students. A total of 269 female medical and nursing students with complaints of dysmenorrhea were enrolled and the remedial methods used by them such as self-medication, medical advice and home remedies for dysmenorrhea were asked using an online questionnaire delivered to participants. Self-medication practice for dysmenorrhea was reported in 175 (65%) of students. The prevalence of mild or moderate pain was commonly present in age group 21-25 years. Commonly used drugs for self-medication was mefenamic acid 121 (48%), followed by ibuprofen 51 (20.3%) and paracetamol 41 (16.3%).

We observed that among 190 medical students, 120 and among 160 nursing students, 75 showed self- medication. Pain length was 1-2 days seen in 40%, 2-3 days in 35% and entire period in 25%. Menstrual symptoms was seen in 67%. Frequency of dysmenorrhea occurrence was more frequently (every month) in 55% and less frequently (once in 3 month) in 45%. Anand et al[11] assessed the pattern of self-medication for dysmenorrhea among students and compare it between medical and non-medical students. A total of 240 students (93 medical, 84 nursing, and 63 non-medical) were included in the study. The mean age was 20.1±1.8 years (medical), 20.4±1.4 years (nursing), and 21.9±1.8 years (non-medical). 46% medical, 29% non-medical, and 10% nursing students used drugs to control pain. Most commonly used drugs were mefenamic acid + dicyclomine and mefenamic acid. 56% of medical and all non-medical and nursing students did not have knowledge of side effects of drugs. Among the eight nursing students, six self-administered the drug but 54% and 56% of medical and nonmedical students, respectively, followed doctor's advice to use the pain medications. 40% of medical students self-medicated themselves.

We found that medication used by medical and nursing students was mefenamic acid in 45% and 25%, paracetamol in 12% and 30%, ibuprofen in 13% and 5%, mefenamic acid+ dicyclomine in 12% and 13%, diclofenac in 8% and 12% and others in 10% and 15% respectively. Use of non-pharmacological measures such as hot bag or bath or taking rest or sleeping may not always be practically possible in all circumstances as during college hours or traveling, even though these may be safer to follow than NSAIDs with or without a prescription. During such situations, medications can be used for acute pain relief. Hence, knowledge among all students regarding use of NSAIDs for dysmenorrhea and their side effects may be necessary. Thus, creating awareness regarding the use and adverse effects of NSAIDs by the physician during prescription for dysmenorrhea may be helpful.[12]

Chen L et al[13] evaluated that of the 2555 girls, 1306 had experienced PD, representing a 51.1% prevalence. In addition, the prevalence rates of mild, moderate and severe pain in PD were 18.1%, 27.7% and 5.4%, respectively. The most common symptoms associated with PD were cramps (96.9%), weakness (70.0%), backache (65.1%), facial blemishes (55.3%) and irritability (55.3%). Commonly used self-care strategies for managing PD comprised reducing physical activity (94.6%), keeping warm (84.6%), communicating dysmenorrhea with friends or classmates (79.0%), drinking warm beverages (75.7%) and avoiding cold drinks and foods (74.2%). In addition, only 34.8% self-medicated with Western medicine (15.6%), traditional Chinese medicine (8.6%), or both (10.6%). Medical advice was sought by 27.4% of subjects from a Western medical doctor (10.3%), a doctor of traditional Chinese

medicine (13.6%), or both (3.5%). Girls who had greater pain severity were more likely to be self-medicated, use complementary therapies (OR=2.64; 95% CI 1.70 to 4.10) and seek medical advice.

Use of non-pharmacological measures such as hot bag or bath or taking rest or sleeping may not always be practically possible in all circumstances as during college hours or traveling, even though these may be safer to follow than NSAIDs with or without a prescription. During such situations, medications can be used for acute pain relief. Hence, knowledge among all students regarding use of NSAIDs for dysmenorrhea and their side effects may be necessary. Thus creating awareness regarding the use and adverse effects of NSAIDs by the physician during prescription for dysmenorrhea may be helpful.

CONCLUSION

From the study we concluded that self medication is very common among medical and nursing students. The commonly used drug were mefenamic acid and Paracetamol. A significant number of students were unaware of the side effects of the self medication. This highlights the importance of creating awareness to minimize the side effects of commonly described drugs for dysmenorrhea.

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