

# Management Of Dysmenorrhoea Among Medical Students

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## Abstract

A cross-sectional descriptive study, was carried out among the medical students of the College of Medicine, Ladoké Akintola University of Technology, Osogbo in South-Western Nigeria. Structured questionnaires were used to assess management options of dysmenorrhoea among them. Overwhelming majority decided to live with the condition without seeking medical help from health professionals despite incapacitating effects of the condition. Self-medication is rampant among them. There is need for health education on effective management of dysmenorrhoea to prevent economic and social loss that had been identified with this condition.

## INTRODUCTION

Primary dysmenorrhoea, which is defined as painful menses in women with normal pelvic anatomy, usually begins during adolescence. It is characterized by crampy pelvic pain beginning shortly before or at the onset of menses and lasting one to three days. Dysmenorrhoea also may be secondary to pelvic organ pathology.

The prevalence is difficult to determine because of different definitions of the condition- prevalence estimates vary from 45% to 95%. However, dysmenorrhoea seems to be the most common gynaecological condition in women regardless of age and nationality<sup>1,2</sup>. Dysmenorrhoea especially when it is severe is associated with a restriction of activity and absence from school or work<sup>3</sup>, yet despite this substantial effect on their quality of life and general wellbeing, few women with dysmenorrhoea seek treatment as they believe it would not help<sup>4</sup>. Although dysmenorrhoea affects women of reproductive age, it has been observed that it can improve after childbirth<sup>5,6</sup>. The severity is significantly associated with duration of menstrual flow, younger average menarche, smoking, obesity, and alcohol consumption; high levels of stress can also greatly increase the incidence of dysmenorrhoea, as can depression, anxiety and disruption of social network<sup>2,7,8,9,10,11</sup>. Its pathogenesis is not always understood. Prostaglandins seem to be intimately involved in primary dysmenorrhoea although it is difficult to understand the underlying cause for their excessive secretion. Vasopressin also may play a role by increasing uterine contractility and ischaemic pain as a result of vasoconstriction<sup>6,8</sup>. The main aim of diagnosis is to

distinguish those cases with secondary dysmenorrhoea due to endometriosis and chronic pelvic inflammatory disease. A focused history and physical examination are usually sufficient to diagnose primary dysmenorrhoea. A multidisciplinary approach involving a combination of life style, medications, and allied health services should be used to limit the impact of this condition on activities of daily living. In some circumstances surgery is required to offer the desired relief<sup>12</sup>. Treatments such as paracetamol, aspirin, and non-steroidal anti-inflammatory drugs (NSAIDs) work by reducing the activity of cyclo-oxygenase pathways, thus inhibiting prostaglandins production<sup>13,14</sup>. Treatments such as the combined oral contraceptive drugs work by inhibiting ovulation. Simple analgesics such as aspirin and paracetamol may be useful as a starting point especially when NSAIDs are contraindicated. However, randomized controlled trials found no significant difference in pain relief between paracetamol and placebo<sup>1,14,15</sup>. NSAIDs are the best established initial therapy for dysmenorrhoea<sup>16</sup> and all NSAIDs are equal in efficacy<sup>14,17</sup>. Physical exercise may relieve dysmenorrhoea, although studies were unable to confirm this result<sup>16</sup>. Physical treatments like acupuncture, acupressure, transcutaneous nerve stimulation (TENS), topical heated patch, spinal manipulation had been used in the treatment of dysmenorrhoea. However, their efficacy is doubtful<sup>18,19</sup>. In rare instances, a surgical approach may be considered for women with severe refractory dysmenorrhoea<sup>20</sup>. Supplements such as thiamine, omega-3 polyunsaturated fatty acids and vitamin E have also been used for the treatment of dysmenorrhoea and their effectiveness has been

substantiated <sup>16,21,22</sup> . Oral contraceptive pills as well as depo-medroxyprogesterone acetate, levonorgestrel intrauterine device have all been found to effectively relieve painful menstruation <sup>23,24</sup> .

Despite the wide range of options available for the treatment of dysmenorrhoea, it has been found that the available prescription treatments were underused <sup>25</sup> . The aim of this study is to see how female medical students who were supposed to be aware of these available prescription treatments manage dysmenorrhoea.

**METHOD**

Data was collected through a self-administered questionnaire to clinical students of the College of Health Sciences, Ladoke Akintola University of Technology, Osogbo, Osun State, Nigeria. The study objective was explained to the participants, verbal consent obtained and questionnaires were filled and returned promptly. Summary statistics using percentages for qualitative variables, and means and standard deviation for quantitative variables were used. Chi-square test was used to measure association, all put at 5% significance level. SPSS version 11 was used for statistical analysis.

**RESULT**

There were 226 respondents; their age range between 20 and 35 years, and mean age was 25.7years (SD ± 2.0). The age at menarche was between 10 and 19 years, and the mean menarcheal age of the students was 13.4 years (SD± 1.5); the duration of menstrual flow was between 2 and 7 days, with a mean of 4.7days (SD± 1.0), and the menstrual cycle length was between 21 and 35 days, with a mean of 29 (SD± 2.0). A total of 221 (97.8% ) of the respondents had a regular menstrual cycle, while 5 (2.2%) had irregular menses. One hundred and eighty-one (80.1%) of the respondents experiences dysmenorrhoea while 45 (19.9%) does not. Of those that experiences dysmenorrhoea 55 (30.4%), 77 (42.5%) and 49 (27.1%) had mild, moderate, and severe dysmenorrhoea, respectively. Sixty-four (35.6%) of those that experiences dysmenorrhoea did not take any treatment, while 3 (1.7%) and 113 (62.8%) managed dysmenorrhoea with physical exercise and medication, respectively. Paracetamol was taken by 57 (48.3%) of the medication group, while 5 (4.2%) took coproxamol, and NSAIDS was the drug of choice by 56 (47.5%). Sixteen (55.2%) of those had no treatment did so because they have aversion for drugs, while 11 (37.9%) believed dysmenorrhoea should be endured, and 2 (6.9%) because

they were allergic to commonly used analgesics. Of those had treatment, 35 (54.7%) experienced mild dysmenorrhoea, while 29(45.3%) had moderate to severe dysmenorrhoea. Mild dysmenorrhoea was experienced by one (33.3%) of those that managed dysmenorrhoea by physical exercise, while 2 (66.7%) had moderate to severe. Table 1.

**Figure 1**

Table 1: Dysmenorrhoea and Treatment Options

	Frequency	%
<b>Presence of dysmenorrhoea</b>		
Yes	181	80.1
No	45	19.9
<b>Severity of Dysmenorrhoea</b>		
Mild	55	30.4
Moderate	77	42.5
Severe	49	27.1
<b>Treatment Options</b>		
No treatment	64	35.6
Physical Exercise	3	1.7
Medications	113	62.8
<b>Types of Medication</b>		
Paracetamol	57	48.3
Coproxamol	5	4.2
NSAIDS	56	47.5

Many, 95 (84.1%) of the students that managed dysmenorrhoea with medication experienced moderate to severe dysmenorrhoea, while 18(15.9%) had mild dysmenorrhoea, statistically significant ( $\chi^2=29.24$ ;  $df = 2$ , and  $P = 0.00$ ). Fifteen (26.3%), and 42 (73.7%) of the students that took paracetamol had mild, and moderate to severe dysmenorrhoea, respectively; all, 5 (100.0%) of the student that took coproxamol had moderate to severe dysmenorrhoea. Moderate to severe dysmenorrhoea was experienced by most, 50 (89.3%) of the student that took NSAIDS, while 6 (10.7%) had mild dysmenorrhoea; not statistically significant ( $\chi^2 = 5.83$ ,  $df = 2$ ,  $P = 0.05$ ). Those who had moderate to severe dysmenorrhoea were more

likely to use coproxamol (OR = 1303.54, CI = 0.00 -1.32, P = 0.79) and NSAIDS (OR = 2.98, CI = 1.06 - 8.35, P = 0.04) than those with mild dysmenorrhoea. Also, those who had moderate to severe dysmenorrhoea were more likely to use medication (OR = 6.37, CI = 3.15-12.88, P < 0.001) and physical exercise (OR = 2.41, CI = 0.208-29.98, P= 0.48) compared to those with mild dysmenorrhoea

Most, 148 (84.1%) of the students who experienced dysmenorrhoea never consulted a medical doctor because of dysmenorrhoea, and 28 (15.9%) consulted a medical doctor. Of those that consulted a doctor, 20(74.1%) had analgesic prescribed, while 8 (25.9%) were reassured. Most 26(92.9%) of those that consulted a medical doctor experienced moderate to severe dysmenorrhoea, while 2 (7.1%) had mild dysmenorrhoea, statistically significant ( $\chi^2 = 8.68$ ,  $df = 1$ ,  $P = 0.00$ ). Further analysis revealed that those who had moderate to severe dysmenorrhoea were more likely to see a medical doctor for treatment compared to those who had mild dysmenorrhoea (OR = 7.04, CI = 1.61-30.85, P=0.01). Table 2.

**Figure 2**

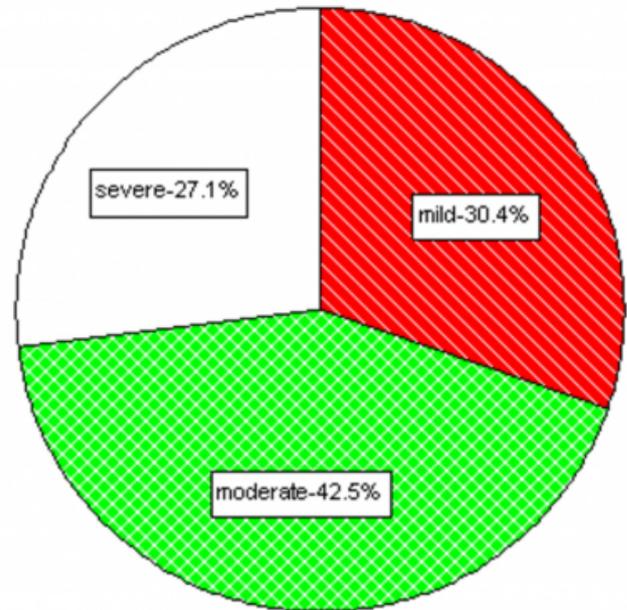
Table 2: Association between treatment options and severity of dysmenorrhoea

Variables	Mild N (%)	Moderate /Severe	X <sup>2</sup>	Df	P
<b>Action taken for Dysmenorrhoea</b>					
Nothing	35(54.7)	29(45.3)	29.24	2	0.000
Physical Exercise	1(33.3)	2(66.7)			
Medication	18(15.9)	95(84.1)			
<b>Types of Medication</b>					
Paracetamol	15(26.3)	42(73.7)			
Coproxamol	-	5(100)			
NSAIDS	6(10.7)	50(89.3)	5.83	2	0.054
<b>Seeing Doctor for Consultation</b>					
Yes	2(7.1)	26(92.9)			
No	52(35.1)	96(64.9)	8.88	1	0.003

**Figure 3**

Figure 1

**SEVERITY OF DYSMENORRHOEA**



**DISCUSSION**

The prevalence of dysmenorrhoea in this study is 80.1% which is within the previously quoted range <sup>1,2,4</sup>, however, it is a slightly higher prevalence when compared to the 75.0% found among the adolescent students in Mansoura, Egypt <sup>11</sup>. The prevalence of dysmenorrhoea is said to be difficult to determine because of different definitions of the condition, and also depending on the measurement method used <sup>4,26</sup>. Dysmenorrhoea was of severe intensity in 26% of the dysmenorrhoea group, hence this percentage may miss classes or have lower scores during dysmenorrhoea, since severe dysmenorrhoea was defined in this study as menstrual pain serious enough to disturb the normal activities. It has been estimated that about 600 million working hours or 2 billion dollars are lost annually in the United States because of incapacitating dysmenorrhoea if adequate relief is not provided <sup>27</sup>.

Medication is usually required for all cases of moderate to severe dysmenorrhoea <sup>7</sup>, therefore, it is not surprising that many of the students (84.1%) that managed dysmenorrhoea with medication experienced moderate to severe intensity, and those who had no treatment, even when it is severe, did so because some of them do react to commonly used analgesics, while others took no action because of the belief that dysmenorrhoea should be endured, and this shows how beliefs and cultural variables can influence the perception

and endurance of menstrual pain<sup>28</sup>. Despite the fact that randomized controlled trials found no significant difference in the pain relief between paracetamol and placebo<sup>1,14,15</sup>, paracetamol was still the drug of choice by many of the students (48.3%) in this study, this may be because of the less gastric irritation with paracetamol, and to avoid other side effects associated with NSAIDs. Oral contraceptive pills and NSAIDs had been said to be the most effective medication for dysmenorrhoea<sup>1,14,15</sup>, NSAIDs, was taken by many of the students who experienced moderate to severe dysmenorrhoea (47.3%); none of the students took oral contraceptive pills for dysmenorrhoea, probably because they had no need for contraception, or because of the general aversion to hormonal agents. Coproxamol (which is a combination of paracetamol and dextropropoxyphene hydrochloride), which has some sedative effect was the drug of choice by 4.2% of the students who experienced moderate to severe dysmenorrhoea; coproxamol may not be an effective agent for the relief of severe dysmenorrhoea, but the mild sedative effect may be the reason for its choice; furthermore, coproxamol was recommended for the relief of mild to moderate pain by the maker. Only 15.9% of the study group consulted a medical doctor because of dysmenorrhoea, hence self medication was the norm in the majority of the students, and this had been the trend found in previous studies that most patient did not seek medical advice but do treat themselves<sup>4,11</sup>. Although no study has convincingly demonstrated the efficacy of physical exercise in relieving dysmenorrhoea, a small percentage of the students (1.7%) still claimed relief with exercise. None of the students had surgical treatment for dysmenorrhoea; this may be because of the general aversion to surgery or due to the belief that most treatment for dysmenorrhoea would not help<sup>4</sup>.

This study showed that dysmenorrhoea is an extremely common and sometimes a debilitating condition among the medical students, and that the available prescription treatments were underused despite having the knowledge of these prescriptions.

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