Original Research Article

Prevalence of Dysmenorrhea and its Management among Undergraduate Students of the University of Port Harcourt, Nigeria.

Abstract

Background: Dysmenorrhea is a pain felt by women before or during menstruation and is accompanied by some symptoms like headache, dizziness, food cravings, mood swings, and fatigue. Many ways have been adopted for the management of dysmenorrhea. The study aims to evaluate the prevalence of dysmenorrhea and its management among university students.

Method: A total of two hundred (200) female university students were involved in this study. A cross-sectional descriptive study design was used where students were sampled randomly a questionnaire was used to collect data and data obtained were analyzed using IBM SPSS version 26.

Results: The study found that a majority of the population experiences dysmenorrhea during menstruation (81.5%) and the majority of respondents experienced menstrual flow within 4-5 dayswith 37% experiencing severe pain. Symptoms include anxiety, mood swings, tender breasts, food cravings, fatigue, irritating mood, depression, dizziness, vomiting, diarrhea, and headache. Management of dysmenorrhea varies, with 23.5% using synthetic drugs and 1.5% using local and herbal practices.

Conclusion: There wasa high prevalence of dysmenorrhea among the University students and presenting symptoms like mood swings, fatigue, and diarrhea, with most using local/herbal medication.

Keywords: dysmenorrhea, women, headache, dizziness, university students

1.0 Introduction

Menstruation is the monthly shedding of the lining of your uterus. Is a natural phenomenon that occurs throughout the reproductive years of every woman and most often it is accompanied by pain [1]. This pain varies in individuals but collectively the pain is termed dysmenorrhea.

Dysmenorrhea is a painful menstruation [2]. It is a common condition experienced by many women and can range in severity from mild discomfort to debilitating pain which could have significant impacts on their daily activities and disturb their productivity at home, school, or workplace.

Dysmenorrhea is associated with many factors, including behavioral and psychological aspects [3], Symptoms include cramping or pain in the lower abdomen, low back pain, pain spreading down the legs, nausea, vomiting, diarrhea, fatigue, weakness, fainting, or headaches [4]. Dysmenorrhea is classified into two; primary and secondary dysmenorrhea where primary dysmenorrhea is menstrual pain that's not a symptom of an underlying gynecologic disorder but is related to the normal process of menstruation [5]. Primary dysmenorrhea is the most common type of dysmenorrhea, affecting more than 50% of women, and quite severe in about 10%. it is most common in late adolescence and the early 20s. while secondary dysmenorrheais menstrual pain that is generally related to some kind of gynecologic disorder. Most of these disorders can be easily treated with medications or surgery. Secondary dysmenorrhea is more likely to affect women during adulthood [5].

Over the years, individuals have used either pharmacological or non-pharmacological methods to relieve pain during the menstruation period [6]. The non-pharmacological methods used include fatty diet restriction, herbal remedies, exercise, and heat application while the medications used to relieve pain include nonsteroidal anti-inflammatory drugs (NSAIDs) as first-line therapy, combined contraceptives, antispasmodics, and vitamins [6]. The prevalence of either of these methods used by individuals has become the object of this study. Though studies on the prevalence of dysmenorrhea abound in our communities; 78.1% in Ogun State [7], 62% in Oyo State [8], 58% in Osun State [9], 60-64% in Ile-Ife [10,11], and 69.8% in Maiduguri [12]. Also, some studies that had been carried out in other countries have shown the prevalence of dysmenorrhea shown 85.6% in Kuwait [13],79.4% in Saudi Arabia [14], 84.2% in India [15],74.8% in Spanish [16] and the prevalence of primary dysmenorrhea was 80.9% in Lebanon [17] and 92% in Riyadh [18].

literature review on the Prevalence of dysmenorrhea varies greatly across different populations. Therefore, the present study aims to evaluate the prevalence of dysmenorrhea and the possible strategies or methods used to manage the pain among the female university Students of the

University of Port Harcourt, Nigeria. To improve the quality of life and productivity of women experiencing dysmenorrhea.

2.0 Materials and Method

2.1 Study Design

The study adopted a cross-sectional study design that was used to generate data from university students, a total of two hundred (200) female students were involved in the study, drawn from different levels of undergraduate programs. A multistage randomsampling technique was usedwhere the sample size was determined using the Cochran formula of a descriptive survey [19, 20] $Sample\ size = \frac{Z_{1-\propto/2^2}\ p(1-p)}{d^2}$

Where

$Z_{1-\propto/2}$ = Standard normal variate (at 5% type 1 error) = 1.96

p = expected proportion of respondents (15%)

d = absolute error = 0.05$Sample\ Size = \frac{1.96^2 \times 0.15(1-0.15)}{0.05^2} = 195.92$

For the study, the sample size was rounded up to 200. The study was carried out at the University of Port Harcourt, Port Harcourt, Nigeria. Among students within the designated age interval of 18-26 years.

2.2 Study Criteria

Only respondents who have declared their consent to participate in the study and of age (currently undergoing or understand what dysmenorrhea is all about) was allowed to participate in the study while respondent yet to experience menarche (less than designated age) were excluded from the study.

2.3 Method of Data Collection

For this study, data were collected using a descriptive questionnaire where it was divided into sections A, B, C, and D; Section, A set to obtain the socio-demography of the respondents, section B; knowledge of dysmenorrhea, section C; possible symptoms experienced, and Section

D; managerial procedure taken. All respondents declared their consent to participate, questionnaire was administered and retrieved.

2.4. Statistical Analysis

Data were retrieved from every respondent and entered into a Microsoft spreadsheet (excel package) and International Business Machine of Statistical Package for Social Science (IBM SPSS version 26). Results were presented as frequency and percentage and chi-square was used as an inferential statistic and probability less than 0.05 ($p<0.05$) was considered statistically significant.

3.0 Results

The demographic characteristics of the participants were presented in fig. 1, 2, and 3 which show the age range, marital statu,s and level of the students. In the Table 1, the nulliparous were 96.5% while multiparous were 3.5%. Those who experienced dysmenorrhea were 81.5% while 18.5% of the total population does not experience dysmenorrhea during menstruation, 74.5% claim that dysmenorrhea abounds in their families. The majority of the respondents observed their menstrual flow within 4-5 days (72.5%), and it was followed by 2-3 days (13%), 6-7 days (12%) and only 2.5% observed it after 7 days. The study evaluated different categories of pain felt during menstruation, 37% of the total population had severe pain, 30% mild and 33% showed moderate pain though over 92% felt the pain within their waist/hip region. 83.5% of the total population experience dysmenorrhea during their menstruation and only 16.5% claim to experience dysmenorrhea a week or days beforethe menstrual period.

Table 2, shows the symptoms of dysmenorrhea and it was observed that anxiety 55%, mood swings 92%, tender breasts 70.5%, food craving 63.5%, fatigue 83.5%, irritating mood 84.5%, depression 40%, dizziness 54.5%, vomiting 15.5%, diarrhea 59.5%, and headache 50% of the total population respectively.

Table 3 illustrates the management of dysmenorrhea and how they manage dysmenorrhea and it shows that 23.5% of the population uses synthetic drugs and 1.5% uses local and herbal medical practices. Of respondents who manage dysmenorrhea using local and herbal medical practices, 37% claim they manage it by drinking warm water, 5% claim they do exercise, 8% manage

dysmenorrhea by reducing sugary substance while those that use synthetic/therapeutic, 19% uses paracetamol, 8% uses felvin, 9.5% uses buscopan and 4% uses ibuprofen.

4.0 Discussion

Dysmenorrhea, or painful menstrual cramps, is a prevalent problem among female university students. Although the prevalence varies, research reveals that a considerable number of female students suffer from dysmenorrhea during their menstrual periods. In this study, the frequency of dysmenorrhea was 81.5% among the respondents. Studies conducted among Northern Ghana university students by Ameade et al., [21], reported similar prevalence rates of 83.6%, Ezebialu et al., [22] also reported that the prevalence of dysmenorrhea was 82.2% among Nigerian undergraduate students. In Nigeria prevalence of dysmenorrhea has been reported at 78.1% in Ogun State [7], 62% in Oyo State [8], 58% in Osun State [9], 60-64% in Ile-Ife [10,11], and 69.8% in Maiduguri [12]. These studies have agreed with our study that dysmenorrhea is prevalent among women in their reproductive years though studies have also been conducted aside Nigeria, and it showed that 85.6% in Kuwait [13],79.4% in Saudi Arabia [14], 84.2% in India [15],74.8% in Spanish [16] 89.4% in Al-Asadi, [23] 84.2% in Lithuania [24], 88% in Australia [25], 85.1% in Palestine [26], 83.6% in Northern Ghana [27] and 84.1% in Italy [28], 68.7% in China [29], 74.8% in Spain [16], 94% in Oman [30], 98.4% in Iran [32] and 95% in Turkey [32], 80.9% in Lebanon [17] and 92% in Riyadh [18]. Our findings agree with the findings of these studies that dysmenorrhea abounds in women in their reproductive years.

The present study revealed that the prevalence of dysmenorrhea was higher among female students who had a family history of dysmenorrhea (74.5%). Similar results were disclosed in a study that reported inconsistent with 65.6% and 60.7% of the students had a family history of dysmenorrhea by El-Mawgod et al., [33] and Ali et al., [14] respectively. Though our study claims that 30% experienced mild pain, 33% had moderate pain, and 37% had severe pain. Our findings agree with Ali et al., [14], in their report, they showed that the majority of the study population experiences moderate pain followed by severe pain the students suffered from mild, moderate, and severe pain, respectively. Alsaleem, [34] also disagrees with our findings that only a few had severe pain. Even a study by Fernández-Martínez et al.,[16] further agrees with the present study that moderate pain and severe pain are experienced more by women. This indicated

that dysmenorrhea can be considered one of the most common health problems that may affect the health, psychological status, and daily activities of female students at the university level

Women who experienced dysmenorrhea during menstruation were accounted for in the present study (83.5%) and 16.5% experienced dysmenorrhea week/day to menstrual periods. Our findings agree with a similar result by Ali et al., [14], it was observed that some women highly experienced pain in their waist/hip at the rate of 92%, leg (3%), and back (5%,) and this had a similar result with Al-Matouq et al., [13]. This indicates that most students may be incapacitated in one way or the other as a result of dysmenorrhea. To confirm this, the majority reported that dysmenorrhea has limitations on their activities. This agrees with the studies of Burnett et al.,[35], Armour et al.,[36], and Tu and Hellman, [37] that posited that symptoms of dysmenorrhea have asignificant impact on the quality of life and limitation on activities which shows in case of this study that mood swings have the e highest rate of 92%. 55% of anxiety, 70.5% of tender breasts, 63.5% of food cravings, 83.5% of fatigue, 84.5% of irritating mood, 40% of depression,54.5% of dizziness, 15.5% of vomiting, 59.5% of diarrhea and 50% of headache and agreed with the Aktas, [38] and Fernández-Martínez et al., [16].

The present study evaluates the different methods of managing dysmenorrhea, it was observed in this study that 37% of the population drink warm water, 5% manage dysmenorrhea through physical exercise, 8% reduce sugary substances and 2.5% takes herbs and bitter substance. Omidvar et al., [39] agree with the present study on the various ways of dysmenorrhea management. Of women that use synthetic/therapeutic, 19% use paracetamol, 8% use felvin, 9.5% of buscopan, and 4% of Ibuprofen. It shows a significant difference. The findings agree with Ali et al.,[14] andOmidvar et al., [39].

The above-discussed study has shown some similarities and differences in the prevalence and management of dysmenorrhea among university students. The difference could be attributed to race, lifestyle and methodology.

Conclusion

The prevalence of dysmenorrhea is higher among the university students of Port Harcourt, Nigeria and the symptoms range from mood swings, fatigue, irritating mood, tender breasts, food

cravings, dizziness, diarrhea, and headache. The majority of the respondents use local/herbal medication to manage dysmenorrhea rather than taking synthetic drugs.

Consent

As per international standards or university standards, respondents' written consent has been collected and preserved by the authors

Ethical Consideration

This study was approved by the faculty research and ethical committee of Basic Medical Sciences, University of Port Harcourt, Nigeria.

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Charts and tables

Results

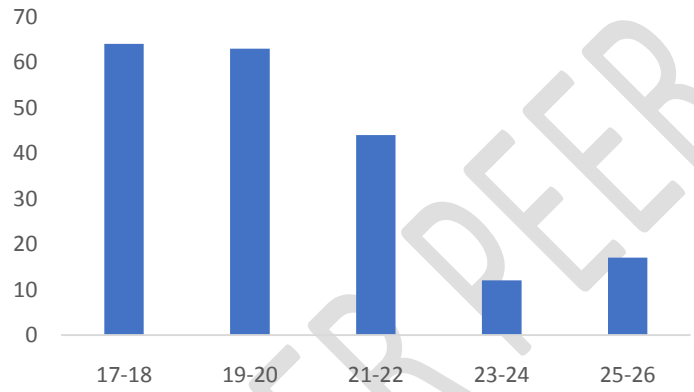

Figure 1, age range

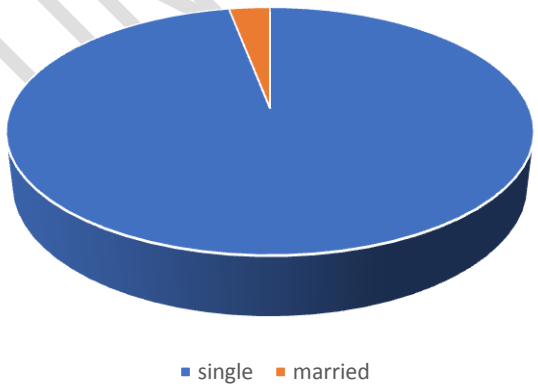

Figure 2, marital status

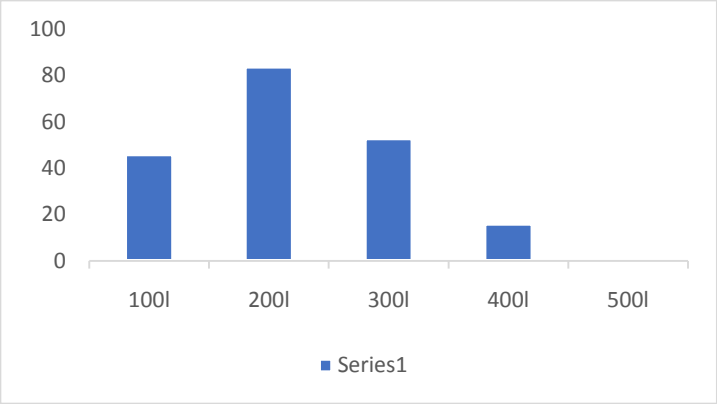

Figure 3, level of student

Table 1, knowledge and prevalence of dysmenorrhea

Variable	Nulliparous		Multiparous		X^2	p-value	Inference
Do you have kids of your own	193 (96.5%)		7 (3.5%)		172.98	0.00	S
	Yes (%)		**No (%)**				
Do have pain during menstruation	163(81.5%)		37 (18.5%)		79.38	0.00	S
Do any family members also notice menstrual pain	149 (74.5%)		51 (25.5%)		48.02	0.00	S
	2-3 days	**4-5 days**	**6-7 days**	**Above 7 days**			
What is the duration of the menstrual period	26 (13%)	145 (72.5%)	24 (12%)	5 (2.5%)	246.04	0.00	S
	Severe	**Mild**	**Moderate**				
How can you categorize the pain during the menstrual period	74 (37%)	60 (30%)	66 (33%)		63.52	0.00	S
	Waist/Hip	**Legs**	**Back**				
Where do you feel the pain	184 (92%)	6 (3%)	10 (5%)		309.88	0.00	S
	DMP		**W/DtMP**				
When does the pain normally occur	167 (83.5%)		33 (16.5%)		89.78	0.00	S

X^2= chi-square,S=significant, DMP=During menstrual period, W/DtMP= weeks/days to menstrual period,

Table 2, symptoms of dysmenorrhea

	Yes	No	X^2	p-value	inference
Anxiety	110 (55%)	90 (45%)	2.00	0.15	NS
Mood swings	184 (92%)	16 (8%)	141.12	0.00	S
Tender breast	141 (70.5%)	59 (29.5%)	33.62	0.00	S
Food craving	127 (63.5%)	73 (36.5%)	14.58	0.00	S
Fatigue	167 (83.5%)	33 (16.5%)	89.78	0.00	S
Irritating mood	169 (84.5%)	31 (15.5%)	95.22	0.00	S
Depression	80 (40%)	120 (60%)	8.00	0.00	S
dizziness	109 (54.5%)	91 (45.5%)	1.62	0.20	NS
Vomiting	31 (15.5%)	169 (84.5%)	95.22	0.00	S
Diarrhea	119 (59.5%)	81 (40.5%)	7.22	0.00	S
Headache	100 (50%)	100 (50%)	0.00	1.00	S

X^2= chi-square S=significant, NS= non-significant, ($p<0.05$)

Table 3, Management of Dysmenorrhea

Variables		None	SD	L/hMP	X^2	p-value	inference
How do you manage the pain		150 (75%)	47 (23.5%)	3 (1.5%)	170.77	0.00	S
What L/hMp do use in the management of pain	None	95 (47.5%)					
	Drinking warm water	74 (37%)					
	Physical exercise	10 (5%)					
	Reduce sugary substance	16 (8%)			172.05	0.00	S
	Taking herbs/bitter substance	5 (2.5%)					
what synthetic/therapeutic practices do you use?	None	119 (59.5%)					
	Paracetamol	38 (19%)			207.15	0.00	S
	Felvin	16 (8%)					
	Bosco pan	19 (9.5%)					
	Ibuprofen	8 (4%)					

X^2= chi-square S=significant, (p<0.05) SD= synthetic drug, L/hMP=local/herbal medical practices