

# Knowledge, Attitude, and Healthcare-Seeking Behavior Towards Dysmenorrhea among Female Students of a Private University in Ogun State, Nigeria

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## ABSTRACT

**Background:** Dysmenorrhea, especially when it is severe, has been associated with a restriction of activity and absence from school or work. Despite this substantial effect on their quality of life and general wellbeing, few women and adolescents with dysmenorrhea seek treatment as they believe it would not help. **Aim:** The objective of this study was to assess the knowledge, attitude, and healthcare-seeking behavior towards dysmenorrhea among female students of a Private University in Ogun State, Nigeria. **Subjects and Methods:** Using a descriptive study design, 315 female students were randomly selected to participate in the study. Participants were given structured questionnaire to complete. Data collected were analyzed using Statistical Package for Social Sciences (SPSS) 16.0 and were presented in tables reporting frequency counts and percentages. Statistical significant tests were conducted using chi-square. **Result:** Dysmenorrhea was reported in 78.1% (242/310) with majority ignoring the pain. Less than average 40.6% (126/310) of the participants had high knowledge about dysmenorrhea and 63.5% (197/310) had negative attitude towards dysmenorrhea. Major effects of dysmenorrhea included restriction from physical activities in 77.2% (187/242) and social withdrawal in 59.1% (143/242). Findings revealed a statistically significant relationship between the age of respondents and their healthcare-seeking behavior towards dysmenorrhea ( $P < 0.01$ ). **Conclusion:** Findings from this study indicate the need to design regular reproductive health programs for female undergraduates including information on how to monitor and manage menstrual problems.

**KEY WORDS:** Adolescents, attitude, dysmenorrhea, healthcare-seeking behavior, knowledge

## INTRODUCTION

Menstruation is a natural phenomenon that occurs throughout the reproductive years of every woman. Most females experience some degree of pain and discomfort during their menstrual periods which could have significant impacts on their daily activities and disturb their productivity at home or work place.<sup>[1]</sup> Dysmenorrhea manifests usually as pain or cramping sensation in the lower abdomen which may be accompanied by headache, dizziness, diarrhea, bloated feeling, nausea, vomiting, backache, breast tenderness, and leg pain.<sup>[2-5]</sup> These symptoms are reported to be the most common reasons for gynecologic visits among female adolescents and young women.<sup>[6,7]</sup>

Primary dysmenorrhea is primarily associated with normal ovulatory cycle and with no pelvic pathology.<sup>[8]</sup> Secondary dysmenorrhea is associated with some pelvic pathology and it constitutes approximately 10% of the reported cases and its most frequent reasons are: Endometriosis, pelvic inflammatory diseases, congenital Mullerian anomalies, and ovarian cysts.<sup>[8,9]</sup> The prevalence of dysmenorrhea varies greatly across different populations and ethnic groups.<sup>[4]</sup> The prevalence in Nigeria has been reported in many studies as 62% in Oyo State,<sup>[10]</sup> 58% in Osun State,<sup>[11]</sup> 60–64% in Ile-Ife,<sup>[12,13]</sup> and 69.8% in Maiduguri.<sup>[14]</sup> Studies from other countries have shown prevalence of 73.2–85.5% in Iran,<sup>[15]</sup> 62% in India,<sup>[16]</sup> 75% in Egypt,<sup>[6]</sup> 74.3% in Lebanon,<sup>[17]</sup> 84.2% in Thailand,<sup>[18]</sup> 74.1% in Tanzania,<sup>[4]</sup> 76% in Malaysia,<sup>[19]</sup> 72% in Ethiopia,<sup>[20]</sup> and 84% in Sri Lanka.<sup>[21]</sup>

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school or work. Despite this substantial effect on their quality of life and general wellbeing, few women and adolescents with dysmenorrhea seek treatment as they believe it would not help.<sup>[19]</sup> Dysmenorrhea has a debilitating effect on the quality of life among affected female adolescents and young adults and it is associated with misconceptions that could result in drastic actions with fatal consequences.<sup>[2]</sup> The impact of dysmenorrhea has been studied by various researchers. Common effects include poor concentration, absenteeism, social withdrawal, decreased academic performance, and regrets.<sup>[5,19,22-25]</sup>

In many parts of the middle- and low-income countries, a culture of silence surrounds the topic of menstruation and related issues; as a result many young girls lack appropriate and sufficient information regarding menstruation. A previous study conducted in Nigeria revealed that adolescents have knowledge deficit regarding menstruation and dysmenorrhea.<sup>[11]</sup> Adolescent receive information regarding menstruation from different sources. Mothers are the major source of information.<sup>[19,21]</sup> However, a study has shown that only 2% reported receiving information about menstruation from their healthcare providers.<sup>[26]</sup> With regards to the healthcare-seeking behaviors of adolescents when experiencing dysmenorrhea, few studies have reported that majority of the adolescent girls did nothing about their pain,<sup>[22,23]</sup> and only few consulted a medical personnel.<sup>[6,19,25,27-29]</sup> Studies have reported that majority of the adolescent girls self-medicate<sup>[6,23]</sup> with nonsteroidal anti-inflammatory drugs (NSAIDs) and paracetamol being the most commonly used medications.<sup>[4,24,30]</sup> Some girls even go to the extent of using these medications in nontherapeutic doses for quick pain relief.<sup>[5]</sup> Some nonpharmacological methods have also been adopted by female adolescent to relieve their pains. Some studies have reported that all female adolescents use nonpharmacological remedies such as sleeping and heat application.<sup>[5,31]</sup> In addition, Aziato *et al.*,<sup>[31]</sup> in their qualitative study among students in Ghana, reported that participants employed exercise, water and diet therapy, as well as the use of herbal medications in managing their dysmenorrhea.

Majority of the undergraduate females are usually within the adolescent and young adulthood period where they face a lot of challenges relating to puberty and mastery of reproductive life issues. Such challenges may diminish their opportunities for successful educational and psychosocial health during this period of growth. Therefore, determining the knowledge, attitude, and healthcare-seeking behavior of female students is a prerequisite for planning interventions that seek to improve the management of dysmenorrhea among female students.

The specific objectives for this study were:

- To determine the knowledge of female students in Babcock University about dysmenorrhea
- To determine the attitude of female students in Babcock University towards dysmenorrhea
- To determine the healthcare-seeking behavior towards dysmenorrhea of female students in Babcock University.

## SUBJECTS AND METHODS

This was a descriptive study conducted among female undergraduate students of Babcock University located in the southwestern region of Nigeria. At the time of this study, there were about 1,482 registered female students residing in each of the 10 female hostels in Babcock University. For the purpose of determining the sample size, Yamane's formula was used to derive a sample size of 315 at 95% confidence level and 5% level of precision. Identification number was assigned to each of the students according to their serial numbers on the overall hostel register, while a computer software (Softloto random number generator) was used to generate 315 random numbers. Students whose numbers were generated formed the participants of this study. After obtaining an ethical clearance from the Ethical Review Board of Babcock University, respondents were informed about the purpose of the study. Participants were assured of confidentiality as well as their right to withdraw from the study at any time without any consequence and that the data would be used solely for the purpose of academic research.

Tool for data collection was a structured questionnaire which was validated by experts and pretested yielding a validity value of 0.82 using Spearman's formula. Respondents completed the structured questionnaire which composed of questions regarding sociodemographic data, knowledge, attitude, and healthcare-seeking behavior towards dysmenorrhea. For the knowledge outcome; correct responses were scored as 1, while incorrect responses were scored as 0. The maximum obtainable knowledge score was 8, scores  $\leq 3$  were classified as low knowledge, 4–6 as moderate knowledge and scores  $\geq 7$  were classified as high knowledge. For attitudinal outcome; correct responses were scored as 1, while incorrect responses were scored as 0. The maximum obtainable attitudinal score was 5, scores  $\leq 2$  were classified as negative, while scores 3 were classified as positive attitude. Data were analyzed and presented in tables reporting frequency counts and percentage. The chi-square test was used to determine association between participants' knowledge and attitude towards dysmenorrhea as well as association between participants' age and healthcare-seeking behavior towards dysmenorrhea at 0.05 level of significance. Statistical Package for Social Sciences (SPSS) software version 16.0 (Chicago II, USA) was used for data analysis.

## RESULTS

There was 98.4% (310/315) response rate in this study.

Table 1 shows that the majority, 36.7% (114/310) of the participants were between the ages of 16–18 years, 84.8% (263/310) were Christians, 43.5% (135/310) were from the Yoruba tribe, and 28.4% (88/310) were in 100 level. The mean (standard deviation (SD)) of age at menarche was 10.7(0.1).

Figure 1 shows that dysmenorrhea was reported in 78.1% (242/310) of the participants.

Table 2 shows the self-care practices of participants. Majority, 46.4% (144/242) of the participants reported that they usually ignored the pain, 29.4% (91/310) practiced self-medication, 16.4% (51/310) used home remedies, while only 7.9% (24/310) consulted a healthcare provider. However, none of the participants engaged in physical exercise.

Table 3 shows that majority, 77.2% (187/242) of the participants experienced restrictions in physical activities during their menstrual period. Absenteeism was observed among 46.3% (112/242), 59.1% (143/242) had social

withdrawal, 46.7% (113/242) reported poor concentration, and 36.8% (87/242) reported decrease in academic performance. Note: Participants were permitted to select more than one effects as it applied to them.

Table 4 shows the chi-square analysis of association between the level of knowledge and attitude of female students towards dysmenorrhea. Majority (40.6%,126/310) of the participants had adequate knowledge about dysmenorrhea, 36.5% (113/310) had moderate knowledge, and 22.9% (71/310) had low knowledge. However, majority (63.5%,197/310) of participants had negative attitude towards dysmenorrhea, while 36.5% (113/310) had positive attitude towards dysmenorrhea. Participants knowledge level did not show any significant association with their attitude towards dysmenorrhea ( $P = 0.7$ ).

Table 5 shows that there was a statistically significant relationship between participants' age and

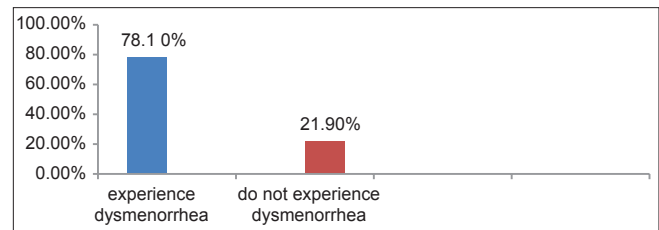


Figure 1: Prevalence of dysmenorrhea (n = 310)

**Table 1: Sociodemographic characteristics of respondents (n=310)**

Variables	Frequency	Percentage
Age (years)		
13-15	21	6.7
16-18	114	36.7
19-21	126	40.6
22-25	49	15.8
Religion		
Christianity	263	84.8
Islam	43	13.9
Traditional	4	1.3
Ethnicity		
Igbo	64	20.6
Hausa	88	28.4
Yoruba	135	43.5
Others	23	7.4
Academic level		
100 level	88	28.4
200 level	37	11.9
300 level	60	19.4
400 level	75	24.2
500 level	50	16.1
Age at menarche		
9-11 years	71	22.9
12-14 years	167	53.9
15-17 years	72	23.2

**Table 2: Usual self-care practices of respondents towards dysmenorrheal (n=310)**

Variables	Frequency	Percentage
Ignore the pain	144	46.4
Self-medicate with over the counter drugs	91	29.4
Physical exercise	0	0
Use home remedies	51	16.4
Consult a health care provider	24	7.8

**Table 3: Effects of dysmenorrhea on participants (n=242)**

Effects	Frequency (%)
Absenteeism	112 (46.3%)
Restriction in physical activities	187 (77.2%)
Poor concentration	113 (46.7%)
Social withdrawal	143 (59.1%)
Decreased academic performance	89 (36.8%)

**Table 4: Relationship between level of knowledge about dysmenorrhea and attitude towards dysmenorrhea (n=310)**

Knowledge	Attitude		Chi-square value	df	P
	Positive	Negative			
Low knowledge	29	42	0.804	2	0.70
Moderate knowledge	39	74			
High Knowledge	45	81			

df – Degrees of freedom

**Table 5: Relationship between age of respondents and healthcare-seeking behavior towards dysmenorrheal**

Age (years)	Healthcare-seeking behavior				Chi-square value	df	P
	Self-medicate	Consult healthcare providers	Use home remedies	Ignore the pain			
13-15	1	0	1	19	27.765	9	<0.01
16-18	27	11	17	59			
19-20	47	10	26	43			
22-25	16	3	7	23			

df – Degrees of freedom

healthcare-seeking behaviors towards dysmenorrhea ( $P < 0.01$ ).

## DISCUSSION

Our result revealed that the mean age at menarche was 10.7 years which was lower compared to the result of other studies that reported a higher average age at menarche.<sup>[4,20,27,32]</sup> Findings from this present study showed that the prevalence of dysmenorrhea was 78.1% among participants. Other studies have reported similar results. Previous studies conducted among Nigerian undergraduate students showed similar prevalence rates.<sup>[33,34]</sup> It is also similar to prevalence rate of 74.4% reported in Ghana,<sup>[35]</sup> 68.7 in China,<sup>[27]</sup> and 74.3% reported in Lebanon.<sup>[17]</sup> However, a higher prevalence was reported in Thailand<sup>[18]</sup> and Jordan.<sup>[36]</sup>

The ability of an individual to seek reproductive health services or self-manage dysmenorrhea is based on the knowledge of the condition. Findings from this study showed that majority of the participants (40.6%) had adequate knowledge about menstruation and dysmenorrhea. This supports the findings from previous Nigerian studies which reported adequate knowledge among participants regarding menstrual disorders and discomfort.<sup>[11,12]</sup> Despite menstruation being highly valued and significant for womanhood, there is a negative attitude towards it. In this study, majority (63.5%) of the participants had negative attitude towards dysmenorrhea. Dysmenorrhea has previously been described in negative terms among adolescents and is significantly associated with negative menstrual experience.<sup>[37]</sup>

Dysmenorrhea is often considered as normal by many healthcare personnel, patients, and parents. This is assumed to have led to the hesitation on the part of the affected individuals to seek medical help. Wong and Khoo<sup>[25]</sup> in their study reported that in spite of high prevalence and enormous impact of dysmenorrhea on the lives of participants, 76.1% of the participants believed that dysmenorrhea was a normal part of female menstrual cycle and only 14.8% sought medical treatment. In the same vein, Sultan *et al.*,<sup>[29]</sup> also reported that only 15% of affected adolescents consulted a physician for the pain. This can also be attributed to the traditional folk beliefs passed from generation which still affects healthcare of millions of women of menstrual age where menstruation is viewed by many as a burden women must bear and so menstrual distress, no matter how excruciating or incapacitating, is considered as an inescapable plight. In spite of the prevalence and severity of dysmenorrhea, most women do not seek medical attention for this condition. For instance, there are a high proportion of participants affected by

dysmenorrhea in this study, but only 7.9% consulted a healthcare provider. This corroborates the findings from several studies which reported that majority of women who suffer from dysmenorrhea do not consult healthcare providers.<sup>[10,17,19,33,35]</sup> This may be due to cultural influence in which menstruation is shrouded in secrecy and is thought to be personal. This suggests that culture may influence the experience and interpretation of symptoms such as pain and the way in which they are treated. To further describe the influence of culture on pain, Lovering (2006)<sup>[38]</sup> reported that cultural background determines how pain is experienced and communicated to others, which is also in agreement with the findings of Aziato and Adejumo (2014)<sup>[39]</sup> who reported that psychosociocultural factors such as personal inclinations and sociocultural background affect perception of pain among individuals. For example, findings of Wijesiri and Suresh<sup>[21]</sup> showed that 70% of participants did not seek medical treatment because they felt embarrassed to discuss their menstruation with another person. However, this corroborates the findings of Chan *et al.*,<sup>[27]</sup> that anxiety about embarrassing questions was a major factor that affected the decision to seek medical care for menstrual problems among Chinese girls. Therefore, adolescents and young women should be educated on the need to seek professional healthcare when they experience dysmenorrhea.

Compared to the findings of a previous study conducted in Nigeria which reported that only 10% of adolescents endured dysmenorrhea,<sup>[10]</sup> almost average (46.3%) of participants in this study endured dysmenorrhea. This corroborates the results from other studies that showed that majority of the participants did nothing about their menstrual pain.<sup>[22,23]</sup> However, only 29.3% of the participants managed themselves with over the counter medications which is not synonymous with the findings of several other studies that showed that majority of females self-medicate with over-the-counter drugs to manage their menstrual pain.<sup>[10,40]</sup> The negative aspect of self-medication is that most people are not cognizant of the side effects and it is also possible that correct dosage may not be used. Adolescents sometimes intentionally use subtherapeutic dosage to initiate quicker pain relief and this pose a lot of dangers to their health. For example, misuse of NSAIDs such as ibuprofen could result in gastrointestinal bleeding or worsen existing case of peptic ulcer. Drug-to-drug interaction is also another potential danger associated with self-medication. Women on contraindicated medications are at increased risk of morbidity and mortality. The use of over-the-counter medication, however, is not peculiar only to menstrual symptoms. This is a common practice in the middle- and low-income countries where there are no stringent laws prohibiting such practices.

Dysmenorrhea is a cause of recurrent short-term school and work absenteeism in women of reproductive age. Approximately 10–15% of women experience monthly menstrual pain severe enough to prevent normal daily functions at work, school, or home.<sup>[34,41]</sup> Although less than average 46.3% of participants in this study reported increased absenteeism from school due to severe menstrual pain, it can have a tremendous impact in their educational outcomes. However, this finding is higher than the findings from a previous study conducted in Ghana where only 9.2% of young women reported missing classes.<sup>[35]</sup> However, it is similar to the results of a study conducted in Sri Lanka where 44% reported being absent from school because of dysmenorrhea.<sup>[21]</sup> School absenteeism due to dysmenorrhea should be adequately addressed as it can affect students' academic performance in examinations. Findings from this study also revealed that poor concentration, social withdrawal, and decreased academic performance are other important negative effects of dysmenorrhea [Table 3]. These effects should be minimized among women by providing adequate health education about proper management of the condition.

No study has convincingly demonstrated the efficacy of physical exercise in relieving menstrual pain. In order to analyze the effect of exercise on dysmenorrhea, Blakey *et al.*,<sup>[42]</sup> in their study reported no association between participating in exercise and primary dysmenorrhea. Coincidentally, none of the participants in the present study reported engaging in physical exercise in order to manage their menstrual pain. Rather, 77.2% reported physical restrictions due to the severity of the pain. This is similar to findings among females in Baghdad that reported restriction of physical activities in 84.2% of the participants during menstruation.<sup>[40]</sup> This is in contrast to findings of a previously cited study which reported that exercise was one of the measures used in managing dysmenorrhea. However, Ogunfowokan and Babatunde<sup>[11]</sup> found in her study that physical activities and positioning such as walking around and prone positioning was effective in managing primary dysmenorrhea. The findings imply the need for educating adolescent girls on effective management of dysmenorrhea since a high prevalence rate was observed. Both pharmacological and nonpharmacological measures can be provided to the adolescents so that they will be able to function effectively in their daily activities and not be limited by the pain they experience during their monthly menstrual cycle.

### Limitations

The respondents were selected from only one educational institution which limits the generalizability of the result to other settings. Furthermore, use of self-reported questionnaires may have led to an overestimation of some of the findings due to variance observed in different methods.

## CONCLUSION AND RECOMMENDATIONS

High proportion of Babcock University female adolescents had dysmenorrhea with a significant number missing schools, social and physical activities, having poor concentration, and consequent decreased academic performance. The students also had negative attitude towards dysmenorrhea, highlighting its importance as a public health issue. Reproductive health education should not only focus on primary and secondary school adolescents but also focus on university undergraduates. Education should also be extended to parents, school peer leaders, and hostel administrators in order to address the reproductive health needs of the female students. Appropriate counseling and management should be instituted among female students to help them cope with the challenges of dysmenorrhea. Information, education, and support combined with clinical management of menstrual problems should be core elements of reproductive health programs.

## ACKNOWLEDGMENT

We are very thankful to all the participants who willingly devoted their time to complete the questionnaire. We also are grateful to the hall administrators for giving us the platform to conduct this study.

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**How to cite this article:\*\*\***

**Source of Support:** Nil, **Conflict of Interest:** None declared