

Prevalence and Knowledge of Dysmenorrhea among Female Undergraduate Students in a Nigerian Private University

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Abstract-

Background: Dysmenorrhea is one of the most prevalent gynecological problems affecting young women and is a leading cause of discomfort, reduced productivity, and impaired quality of life. Despite its high occurrence, knowledge gaps and misconceptions about dysmenorrhea persist among university students, particularly in low- and middle-income countries.

Objective: This study assessed the prevalence of dysmenorrhea and the level of knowledge regarding the condition among female undergraduate students in a Nigerian private university.

Methods: A descriptive cross-sectional study was conducted among 257 female undergraduate students of Joseph Ayo Babalola University, Ikeji-Arakeji, Osun State, Nigeria. Participants were selected using a multistage sampling technique. Data were collected using a structured self-administered questionnaire assessing socio-demographic characteristics, experience of dysmenorrhea, and knowledge of dysmenorrhea. Data were analyzed using SPSS version 29. Descriptive statistics were used to summarize variables, while chi-square test was employed to examine the association between age and knowledge of dysmenorrhea at a 0.05 level of significance.

Results: The prevalence of dysmenorrhea among respondents was 56.4%. The overall knowledge of dysmenorrhea was moderate, with a mean knowledge score of 2.27 and an overall knowledge rate of 61.3%. Majority of respondents correctly identified dysmenorrhea as painful menstruation and recognized its classification into primary and secondary types. A statistically significant association was found between respondents' age and level of knowledge of dysmenorrhea ($p = 0.002$).

Conclusion: Dysmenorrhea is common among female undergraduates in this private university, and although the level of knowledge was moderate, important gaps remain. Age significantly influenced knowledge levels. Integrating menstrual health education into university health services is recommended to improve awareness and promote appropriate health-seeking behavior.

Keywords: Dysmenorrhea, Knowledge, Prevalence, Female Undergraduates, Menstrual Health

I. INTRODUCTION

Dysmenorrhea, commonly referred to as painful menstruation, is a frequent gynecological complaint among adolescent girls and women of reproductive age. It is characterized by recurrent lower abdominal pain that occurs before or during menstruation and may be accompanied by symptoms such as nausea, headache, fatigue, diarrhea, and back pain. Dysmenorrhea is broadly classified into primary dysmenorrhea, which occurs in the absence of identifiable pelvic pathology, and secondary dysmenorrhea, which is associated with underlying gynecological conditions such as endometriosis and pelvic inflammatory disease.

Globally, dysmenorrhea affects between 50% and 90% of menstruating females, with adolescents and young adults reporting the highest prevalence. University students are particularly vulnerable due to academic stress, lifestyle factors, and limited access to accurate menstrual health information. Dysmenorrhea has been associated with absenteeism from lectures, reduced concentration, and diminished academic engagement, making it a public health and educational concern.

Knowledge about dysmenorrhea plays a crucial role in how young women perceive menstrual pain, adopt coping strategies, and seek medical care. In many developing settings, cultural taboos, misconceptions, and inadequate reproductive health education contribute to poor understanding of menstrual disorders. Although some studies in Nigeria have explored dysmenorrhea among secondary school students and public university undergraduates, evidence from private university settings remains limited.

This study therefore aimed to determine the prevalence of dysmenorrhea and assess the level of knowledge regarding the condition among female undergraduate students in a Nigerian private university, as well as examine the relationship between age and knowledge of dysmenorrhea.

II. METHODS

Study Design and Setting

A descriptive cross-sectional study was conducted at Joseph Ayo Babalola University (JABU), a private, fully residential university located in Ikeji-Arakeji, Osun State, Nigeria.

Study Population

The study population comprised female undergraduate students aged 18 years and above enrolled in selected colleges of the university.

Sample Size and Sampling Technique

A sample size of 257 was determined using the Taro Yamane formula. A multistage sampling technique was employed. Two colleges (College of Health Sciences and College of Law) were selected by simple random sampling. Proportionate and stratified sampling methods were then used to select respondents across departments and academic levels.

Data Collection Instrument

Data were collected using a structured self-administered questionnaire consisting of three sections: socio-demographic characteristics, experience of dysmenorrhea, and knowledge of dysmenorrhea. Knowledge items were rated on a Likert scale and summarized into overall knowledge scores.

Data Analysis

Data were analyzed using SPSS version 29. Descriptive statistics such as frequencies, percentages, means, and standard deviations were used. Knowledge scores were categorized into levels. Chi-square test was used to assess the association between age and knowledge of dysmenorrhea. Statistical significance was set at $p < 0.05$.

Ethical Considerations

Ethical approval was obtained from the relevant ethics committee of the university. Informed consent was obtained from all participants. Confidentiality and anonymity were ensured throughout the study.

III. RESULTS

Socio-Demographic Characteristics

The mean age of respondents was predominantly between 26 and 30 years. Most respondents were single and of Yoruba ethnicity. Over half of the participants reported experiencing dysmenorrhea.

Prevalence of Dysmenorrhea

Out of the 257 respondents, 145 (56.4%) reported experiencing dysmenorrhea, while 112 (43.6%) reported no history of menstrual pain.

Knowledge of Dysmenorrhea

The overall knowledge of dysmenorrhea among respondents was moderate, with a mean score of 2.27. Majority of respondents correctly identified dysmenorrhea as painful menstruation and acknowledged that it has primary and secondary forms. However, misconceptions regarding causes and non-pharmacological management were observed.

Association between Age and Knowledge of Dysmenorrhea

A statistically significant association was observed between age and level of knowledge of dysmenorrhea (χ^2 , $p = 0.002$), indicating that older students were more likely to have better knowledge of the condition.

IV. DISCUSSION

This study found that more than half of the female undergraduate students experienced dysmenorrhea, confirming its high prevalence among young women. The observed prevalence is consistent with findings from similar studies conducted among university students in Nigeria and other developing countries.

The moderate level of knowledge observed suggests that while many students are aware of dysmenorrhea, important gaps and misconceptions persist. This may be attributed to inadequate menstrual health education and reliance on informal information sources such as peers and the internet.

The significant association between age and knowledge implies that increased exposure, maturity, and possibly prior health education contribute to better understanding of menstrual health. This highlights the need for early and structured menstrual

health education interventions targeting younger undergraduates.

V. CONCLUSION

Dysmenorrhea is highly prevalent among female undergraduate students in this Nigerian private university. Although the overall level of knowledge was moderate, gaps remain, particularly among younger students. Age was a significant determinant of knowledge of dysmenorrhea.

VI. RECOMMENDATIONS

Universities should integrate menstrual health education into campus health programs and orientation activities. University health centers should provide targeted counseling and educational materials to improve students' understanding of dysmenorrhea and promote appropriate health-seeking behavior. Further studies across multiple private institutions are recommended to enhance generalizability.

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Conflict of Interest

The authors declare no conflict of interest.

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