

Impact of Dysmenorrhea on Academic Performance and Daily Activities among Female Undergraduate Students in Nigeria

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Abstract—

Background: Dysmenorrhea is a common menstrual disorder among young women and has been shown to negatively affect physical, emotional, and cognitive functioning. Among university students, menstrual pain may significantly interfere with academic engagement and daily activities.

Objective: This study assessed the impact of dysmenorrhea on academic performance and daily activities 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. Data were collected using a structured self-administered questionnaire assessing experience of dysmenorrhea, its perceived impact on academic performance and daily activities, and selected socio-demographic variables. Data were analyzed using SPSS version 29. Descriptive statistics were used to summarize variables, and chi-square test was employed to examine the association between level of knowledge of dysmenorrhea and its academic impact at a 0.05 level of significance.

Results: Among respondents who experienced dysmenorrhea, 84.8% reported absenteeism from lectures, 82.5% reported difficulty concentrating in class, and 79.0% perceived a negative impact on their academic performance. Sleep disturbance (76.4%), emotional distress (71.2%), and reduced participation in physical or social activities (68.9%) were also commonly reported. No statistically significant association was found between level of knowledge of dysmenorrhea and its impact on academic performance ($p = 0.110$).

Conclusion: Dysmenorrhea significantly disrupts academic performance and daily functioning among female undergraduate students. Despite moderate knowledge levels, the academic burden of dysmenorrhea remains substantial. University policies that promote menstrual health support, academic flexibility, and accessible healthcare services are recommended.

Keywords: Dysmenorrhea, Academic Performance, Daily Activities, Female Undergraduates, Nigeria

I. INTRODUCTION

Dysmenorrhea, defined as painful menstruation, is one of the most prevalent gynecological complaints among adolescents and young women. It is characterized by cramping lower abdominal pain that may radiate to the back or thighs and is often accompanied by systemic symptoms such as nausea, fatigue, headache, and emotional disturbances. Dysmenorrhea is classified into primary dysmenorrhea, which occurs without underlying pelvic pathology, and secondary dysmenorrhea, which is associated with identifiable gynecological conditions.

Globally, dysmenorrhea affects between 50% and 90% of menstruating women, with the highest prevalence reported among adolescents and university students. Beyond physical discomfort, dysmenorrhea has been linked to impaired concentration, reduced productivity, absenteeism, and diminished academic performance. These consequences are particularly concerning in academic environments where attendance and cognitive engagement are critical for success.

In low- and middle-income countries such as Nigeria, menstrual health issues are often underreported and inadequately addressed due to cultural taboos, limited health education, and restricted access to healthcare services. While several studies have examined the prevalence of dysmenorrhea, fewer have focused on its specific impact on academic performance and daily activities among undergraduate students, especially within private university settings.

This study therefore aimed to assess the impact of dysmenorrhea on academic performance and daily activities among female undergraduate students in

Nigeria and to examine whether knowledge of dysmenorrhea influences the extent of its academic impact.

II. METHODS

Study Design and Setting

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

Study Population and Sample Size

The study population comprised female undergraduate students aged 18 years and above. A sample size of 257 respondents was determined using the Taro Yamane formula.

Sampling Technique

A multistage sampling technique was employed. Two colleges were selected using simple random sampling, followed by stratified and proportionate sampling across departments and academic levels.

Data Collection Instrument

A structured self-administered questionnaire was used. The instrument included items assessing the experience of dysmenorrhea, its impact on academic performance (absenteeism, concentration, participation, examination performance), and daily activities (sleep, emotional well-being, physical and social activities).

Data Analysis

Data were analyzed using SPSS version 29. Descriptive statistics (frequencies and percentages) were used to summarize responses. Chi-square test was applied to determine the association between knowledge of dysmenorrhea and its impact on academic performance. Statistical significance was set at $p < 0.05$.

Ethical Considerations

Ethical approval was obtained from the university ethics committee. Written informed consent was obtained from all participants. Confidentiality and voluntary participation were ensured.

III. RESULTS

Impact of Dysmenorrhea on Academic Performance

Among respondents who experienced dysmenorrhea, the majority reported negative academic effects. Absenteeism from lectures was reported by 84.8% of respondents, while 82.5% experienced difficulty concentrating during classes. Additionally, 79.0% perceived that dysmenorrhea negatively affected their overall academic performance, including studying, class participation, and examination readiness.

Impact of Dysmenorrhea on Daily Activities

Dysmenorrhea also affected daily functioning beyond academics. Sleep disturbance was reported by 76.4% of respondents, emotional distress by 71.2%, and reduced participation in sports or social activities by 68.9%. These findings indicate that dysmenorrhea exerts multidimensional effects on students' well-being.

Association between Knowledge and Academic Impact

There was no statistically significant association between respondents' level of knowledge of dysmenorrhea and its perceived impact on academic performance ($\chi^2, p = 0.110$).

IV. DISCUSSION

This study demonstrates that dysmenorrhea has a substantial negative impact on both academic performance and daily activities among female undergraduate students. High rates of absenteeism and concentration difficulties observed in this study are consistent with findings from other studies conducted among university students in Nigeria, Ethiopia, and Asia.

The lack of a significant association between knowledge and academic impact suggests that awareness alone may not be sufficient to mitigate the functional consequences of dysmenorrhea. Structural factors such as inadequate access to effective pain management, limited academic flexibility, and insufficient institutional support may contribute to persistent academic impairment despite moderate knowledge levels.

The observed effects on sleep and emotional well-being further highlight the need for a holistic approach to menstrual health management within university settings. Addressing dysmenorrhea is essential not only for academic success but also for

the overall physical and mental health of female students.

V. CONCLUSION

Dysmenorrhea significantly disrupts academic performance and daily activities among female undergraduate students in Nigeria. The high prevalence of absenteeism, concentration difficulties, and sleep disturbance underscores the need for targeted institutional interventions.

VI. RECOMMENDATIONS

Universities should implement menstrual health support programs, strengthen campus health services, and adopt academic flexibility policies for students experiencing severe menstrual pain. Awareness campaigns should be complemented with access to effective treatment and psychosocial support.

Conflict of Interest

The authors declare no conflict of interest.

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