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Original

Health-seeking behavior for dysmenorrhea among nursing and midwifery students in ghana: Patterns and associated factors

Bayor Surazu [1, *], Ekuwa Dede Ackon [2], Esther Dodd [3], Edinam Zico Ansah [4] Barbara Baaba Baidoo [5], Ernestina Afro Newman [6], Mavis Oboh [7]

[1] Nursing and Midwifery Training College, Zuarungu, Ghana
[2] College of Community Health Nursing, Winneba, Ghana
[3] Kokofu Nursing Training College, Kokofu, Ghana
[4] Osudoku district hospital, Dodowa, Ghana
[5] Narhbita College, Tema, Ghana.
[6] Pantang Nursing and Midwifery Training College, Accra, Ghana.
[7] 37 Military Hospital, Ghana.

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Abstract

Background: Dysmenorrhea is prevalent among young women, yet professional healthcare seeking remains suboptimal. This study evaluated healthcare-seeking behaviors and associated barriers among nursing and midwifery students who will serve as future healthcare providers.

Methods: A descriptive cross-sectional study was conducted among 337 female nursing and midwifery students across three health-training institutions in Ghana, recruited via stratified random sampling. Data collected via pre-tested, self-administered questionnaires were analyzed using chi-square tests and multivariable logistic regression in SPSS v29.0. Crude and adjusted odds ratios (COR, AOR) with 95% confidence intervals (CI) were calculated.

Results: Overall, 49.9% of participants had never sought medical care for dysmenorrhea. Key barriers included pain normalization, financial constraints, knowledge deficits, and fear of procedures. A composite knowledge and perception related barrier was significantly associated with healthcare-seeking behavior ($\chi^2 = 17.60$, $p < 0.001$; AOR = 2.66, 95% CI: 1.50–4.72). Financial barriers were significant in unadjusted analysis (COR = 1.85, 95% CI: 1.13–3.01; p = 0.013) but attenuated after adjustment was no longer statistically significant. Healthcare workers' perceived knowledge and attitudes were also significantly associated with care seeking ($\chi^2 = 3.44$, p = 0.046).

Conclusion: Nearly half of the trainees did not seek care for dysmenorrhea, largely driven by symptom normalization and perceptual barriers. Educational interventions targeting pain misconceptions and clarifying clinical evaluation thresholds are warranted. Longitudinal studies are needed to confirm causality.

Keywords: Dysmenorrhea, Ghana; Healthcare-seeking behavior, Menstrual health Midwifery students, Nursing students

***Correspondence author:** Dr. Bayor Surazu, **Email:** Surajah92@gmail.com , **ORCID:** 0000-0001-6525-1038

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Introduction

Menstruation is a normal physiological process, but menstrual pain is common among adolescents and young women. Pain occurring in the absence of an identifiable pelvic pathology is generally classified as primary dysmenorrhea (1, 2). Reported prevalence varies across populations, with estimates of 92.3% in Saudi Arabia, 64.7% in Ethiopia, and 75.2% in Nigeria (1, 3, 4). Studies from Ghana have also reported a substantial burden, with prevalence estimates ranging from approximately 68% to 74% in adolescent and university populations and higher estimates among some student groups (5).

Dysmenorrhea can interfere with daily activities, education, sleep, and social functioning. Common manifestations include lower-abdominal cramping that may radiate to the back or thighs, fatigue, headache or migraine, gastrointestinal symptoms, sleep disturbance, and emotional changes (6). Although the condition is common, pain that is severe or disruptive should not simply be accepted as an unavoidable part of menstruation (7).

A range of effective management options is available. These include non-pharmacological measures such as heat, massage, relaxation techniques, and selected lifestyle measures, as well as pharmacological treatment including non-steroidal anti-inflammatory drugs and, when clinically appropriate, hormonal contraceptives (8, 9). Despite the availability of treatment, many women manage symptoms themselves or tolerate substantial pain without seeking professional care (10).

Previous studies, including research from northern Ghana, suggest that normalization of menstrual pain is an important barrier to care-seeking. Other reported barriers include limited knowledge of available treatment, financial concerns, perceived inaccessibility of services, previous negative healthcare experiences, family or peer influence, and preference for self-management (5, 9).

Nursing and midwifery students represent an important population in this context. They are young women who may experience dysmenorrhea while also being future healthcare providers and educators. Their own understanding of menstrual pain and decisions about seeking care may therefore have implications for both personal health and future professional practice. However, evidence concerning healthcare-seeking behavior and its associated factors among nursing and midwifery students in Ghana remains limited.

This study therefore examined healthcare-seeking behavior for primary dysmenorrhea and explored individual, socioeconomic, healthcare-worker, and service-access factors associated with care-seeking among female nursing and midwifery students in three geographically diverse health-training institutions in Ghana.

Materials and Methods

Study design, setting, and participants

A descriptive cross-sectional study was conducted among female nursing and midwifery students at three health-training institutions in Ghana: Nursing and Midwifery Training College, Zuarungu (Upper East Region), Kokofu Nurses Training College (Ashanti Region), and College of Community Health Nursing, Winneba (Central Region). The institutions were selected to provide representation from the northern, middle, and southern belts of the country.

Female students aged 15–35 years who had completed at least one year of training were eligible. Students with known chronic medical conditions, those undertaking clinical placement during the data-collection period, and those who declined participation were excluded.

Sample size and sampling

The minimum sample size was calculated using Yamane's formula, based on a population of 1,679 and a precision level of 0.05, yielding a minimum sample of 323 participants. The final sample comprised 337 students. Stratified random sampling was used, with proportional allocation across the three institutions. The institutional allocations were 95 students from Kokofu, 94 from Zuarungu, and 135 from Winneba. Within each institution, eligible students were selected using simple random sampling.

Data collection instrument and procedure

Data were collected using a structured, self-administered questionnaire. The instrument was pre-tested among 30 students to assess clarity and comprehensibility, and revisions were made before the main survey. A standardized coding scheme was used for data entry and quality checking, and completed questionnaires were reviewed for completeness before analysis.

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Variables and operational definitions

The primary outcome was healthcare-seeking behavior for menstrual pain. For the descriptive analysis, frequency of seeking medical care was reported. For inferential analysis, healthcare-seeking behavior was treated as a dichotomous outcome.

A composite variable originally labelled 'inadequate knowledge' combined normalization of dysmenorrhea, lack of knowledge about available care, and fear of medical procedures.

Statistical analysis

Data were analyzed using IBM SPSS Statistics version 29.0. Frequencies and percentages were used to summarize categorical variables, while means and standard deviations were used where appropriate. Associations between categorical variables and healthcare-seeking behavior were assessed using chi-square tests. Logistic regression was used to estimate crude and adjusted odds ratios with 95% confidence intervals. The adjusted model included the variables specified in the original analysis. Statistical significance was set at $p < 0.05$.

Ethical considerations

Authorization to conduct the study was obtained from the Research and Publications Committee of the College. In accordance with local Ghanaian practice for this category of research, formal ethical clearance was waived. Institutional permission was also secured from the participating health-training institutions. Written informed consent was obtained from all eligible participants prior to data collection. Participation was voluntary, confidentiality was assured, and participants were informed of their right to decline or withdraw at any time without penalty.

Results

Participant characteristics

A total of 337 female nursing and midwifery students participated. Most participants were aged 22–26 years (58.8%), followed by those aged 18–21 years (30.9%). Most were nulliparous (88.7%), single (92.9%), and full-time students (98.2%). Participants were recruited from Winneba (38.6%), Zuarungu (32.3%), and Kokofu (29.1%). The distribution of healthcare-seeking frequency showed that 168 participants (49.9%) reported never seeking medical care for menstrual pain, 95 (28.2%) reported seeking care rarely (1–2 times/year), 40 (11.9%) occasionally (3–5 times/year), and 34 (10.1%) regularly (>5 times/year). Healthcare providers were the most frequently reported source of information about dysmenorrhea (51.9%), followed by family or friends (22.3%) and the internet or social media (20.2%) (Table1).

Household income was below GHC 500 for 210 participants (62.3%), and 268 (79.5%) reported health-insurance coverage (Table 2).

Barriers to healthcare-seeking

Among the reported individual-level barriers, considering dysmenorrhea to be normal was the most frequently reported reason (39.8%), followed by financial constraints (20.8%), lack of knowledge about available care (12.2%), fear of medical procedures (8.3%), and other reasons (19.0%).

However, these frequencies sum to the full sample rather than the 169 participants described elsewhere as non-seekers. The denominator and questionnaire routing must therefore be verified against the original dataset before publication; the figures should not be described as reasons 'among non-seekers' unless that denominator is confirmed.

Regarding healthcare-service barriers, 149 participants (44.2%) reported that lack of knowledge about treatment options was not a barrier, 35 (10.4%) reported a very small barrier, 44 (13.1%) some barrier, 20 (5.9%) a moderate barrier, and 89 (26.4%) a major barrier. For stigma associated with menstrual issues, 172 (51.1%) reported no barrier, 41 (12.2%) a very small barrier, 40 (11.9%) some barrier, 20 (5.9%) a moderate barrier, and 64 (19.0%) a major barrier.

For accessibility of healthcare services, 170 participants (50.5%) reported no barrier, 33 (9.8%) a very small barrier, 4 (1.2%) some barrier, 21 (6.2%) a moderate barrier, and 70 (20.8%) a major barrier. These reported frequencies sum to 298 rather than 337, indicating that missing or unreported response categories may exist. Accordingly, the claim that 262 participants (77.7%) regarded accessibility as no or very small barrier should be verified against the original dataset before publication.

For healthcare-worker attitudes and knowledge, 238 participants (70.6%) reported an influence on their decision to seek care, 56 (16.6%) reported no influence, and 43 (12.8%) were unsure (Table 3).

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Table 1. Sociodemographic characteristics of participants (N = 337)

Variable	n	%
Age (years)		
14–17	2	0.6
18–21	104	30.9
22–26	198	58.8
27–30	28	8.2
31–40	5	1.5
Religion		
Christian	286	84.9
Muslim	50	14.8
Other	1	0.3
Marital status		
Single	313	92.9
Married	24	7.1
Number of children		
None	299	88.7
1	25	7.4
2	11	3.3
3	2	0.6
>3	0	0.0
Health training institution		
Kokofu Nurses Training College	98	29.1
Nursing and Midwifery Training College, Zuarungu	109	32.3
College of Community Health Nursing, Winneba	130	38.6
Household income		
< GHC 500	210	62.3
GHC 500–1,000	76	22.6
GHC 1,000–2,000	36	10.7
> GHC 2,000	15	4.5
Employment status		
Full-time employed	1	0.3
Part-time employed	5	1.5
Student	331	98.2
Health insurance coverage		
Yes	268	79.5
No	69	20.5
Type of health insurance		
Government-sponsored	245	72.7
Employer-sponsored	3	0.9
Private insurance	11	3.3
Other	78	23.1
Out-of-pocket payment (GHC)		
<50	163	48.4
50–100	89	26.4
100–200	48	14.2
>200	37	11.0
Frequency of seeking medical care for menstrual pain		
Never	168	49.9
Rarely (1–2 times/year)	95	28.2
Occasionally (3–5 times/year)	40	11.9
Regularly (>5 times/year)	34	10.1
Primary source of health information		
Healthcare provider	175	51.9
Family/friends	75	22.3
Internet/social media	68	20.2
Books and magazines	13	3.9
Other	6	1.8

Note. GHC = Ghana cedi. Percentages may not total exactly 100% because of rounding.

Table 2. Association of household income and health insurance coverage with health-seeking behavior for primary dysmenorrhea

Variable	Classification	n (%)	χ^2	p
Household income	Low income (≤ GHC 500)	210 (62.3)	0.02	0.87
	High income (> GHC 500)	127 (37.7)		
Health insurance coverage	No insurance	69 (20.5)	0.19	0.66
	With insurance	268 (79.5)		

Note. Health-seeking behavior was analyzed as a dichotomous outcome. Low- and high-income categories were defined using GHC 500 as the cut-off. Health insurance coverage was classified as yes or no according to whether participants reported any form of health insurance. GHC = Ghana cedi.

Table 3. Individual- and healthcare service-related barriers to seeking care for primary dysmenorrhea

Variable	n	%
Sought medical care for dysmenorrhea		
Yes	168	49.9
No	169	50.1
Reasons for not seeking medical care		
Considered dysmenorrhea normal	134	39.8
Financial constraints	70	20.8
Lack of knowledge about available care	41	12.2
Fear of medical procedures	28	8.3
Other reasons	64	19.0
Healthcare service-related barriers		
Lack of knowledge about treatment options		
Not a barrier	149	44.2
Very small barrier	35	10.4
Some barrier	44	13.1
Moderate barrier	20	5.9
Major barrier	89	26.4
Stigma associated with menstrual issues		
Not a barrier	172	51.1
Very small barrier	41	12.2
Some barrier	40	11.9
Moderate barrier	20	5.9
Major barrier	64	19.0
Accessibility of healthcare services		
Not a barrier	170	50.5
Very small barrier	33	9.8
Some barrier	4	1.2
Moderate barrier	21	6.2
Major barrier	70	20.8
Attitudes of healthcare workers		
Not a barrier	139	41.3
Very small barrier	29	8.6
Some barrier	37	11.0
Moderate barrier	30	8.9
Major barrier	102	30.3

Note. Percentages for reasons for non-care-seeking appear to have been calculated using the full sample (N = 337), although the narrative describes these as reasons among participants who did not seek care.

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Factors associated with healthcare-seeking behavior

In bivariate analysis, the knowledge- and perception-related barrier was significantly associated with healthcare-seeking behavior (χ^2 = 17.60, p < 0.001). Financial constraints were also associated with the outcome (χ^2 = 6.15, p = 0.013). Household income and health-insurance coverage were not significantly associated with healthcare-seeking (Table 4).

In crude logistic regression, the knowledge- and perception-related barrier was associated with the outcome (COR = 2.53, 95% CI: 1.64–3.94; p < 0.001), as was financial constraint (COR = 1.847, 95% CI: 1.13–3.01; p = 0.013). After adjustment, the association remained statistically significant for the knowledge and perception related barrier (AOR = 2.66, 95% CI: 1.50–4.72; p < 0.001), whereas the association with financial constraints was no longer statistically significant (Table 5).

Most participants (70.6%) reported that healthcare workers' knowledge and attitudes influenced their decision to seek medical care, while 16.6% reported no influence and 12.8% were unsure (Table 6).

Perceived influence of healthcare workers' knowledge and attitudes was significantly associated with healthcare-seeking behavior when 'yes' and 'unsure' responses were combined (χ^2 = 3.44, p = 0.046) (Table 7).

Perceived accessibility and availability of healthcare services were not significantly associated with healthcare-seeking behavior (Table 8).

Table 4. Association of individual-level barriers with health-seeking behavior for primary dysmenorrhea

Individual-level factor	Classification	Total n (%)	χ^2	*p*
Financial constraints	No challenge	92*	6.15	0.013
	Challenge	245*		
Inadequate knowledge	No challenge	168*	17.60	<0.001
	Challenge	169*		

Note. The χ^2 and p-values are reported in the original Results

Table 5. Logistic regression analysis of individual-level barriers associated with health-seeking behavior for primary dysmenorrhea

Predictor	COR (95% CI)	p	AOR (95% CI)	p
Inadequate knowledge				
No challenge (reference)	1.00	—	1.00	—
Challenge	2.53 (1.64–3.94)	<0.001	2.66(1.50–4.72)	<0.001
Financial constraints				
No challenge (reference)	1.00	—	1.00	—
Challenge	1.85 (1.13–3.01)	0.013	0.91 (0.48-1.74)	0.797

Note. COR = crude odds ratio; AOR = adjusted odds ratio; CI = confidence interval. The outcome was health-seeking behavior. The direction of the odds ratios should be explicitly defined according to the coding of the dependent variable. The adjusted model included financial constraints and inadequate knowledge.

Table 6. Perceived influence of healthcare workers' knowledge and attitudes on participants' decisions to seek medical care-

Response	n	%
Yes	238	70.6
No	56	16.6
Unsure	43	12.8

Note. Percentages are based on N = 337

Table 7. Association between healthcare workers' knowledge and attitudes and health-seeking behavior

Healthcare workers' knowledge and attitudes	χ^2	p
Yes/unsure versus no	3.44	0.046

Note. "Yes" and "unsure" responses were combined for the analysis. The χ^2 and p-value are based on the original reported analysis.

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Table 8. Perceived accessibility and availability of healthcare services

Response	n	%
Very easy	90	26.7
Easy	104	30.9
Neutral	79	23.4
Difficult	49	14.5
Very difficult	15	4.5

Note. Percentages are based on N = 337.

Discussion

This study examined healthcare-seeking behavior for dysmenorrhea among nursing and midwifery students from three health-training institutions in Ghana. Approximately half of the participants reported never seeking medical care for menstrual pain. The most frequently reported barrier was normalization of dysmenorrhea, followed by financial constraints, lack of knowledge about available care, and fear of medical procedures. The findings suggest that healthcare-seeking may be shaped not only by the availability of services but also by how menstrual pain is understood and perceived.

The prominence of normalization is important. Although dysmenorrhea is common, severe or disruptive menstrual pain should not automatically be regarded as an unavoidable feature of menstruation. When pain is normalized, students may tolerate symptoms, rely on self-management, or delay professional assessment. Similar patterns have been reported in previous studies in which women described menstrual pain as an expected part of womanhood and consequently did not seek formal care (5, 11).

The knowledge- and perception-related barrier was significantly associated with healthcare-seeking behavior in both crude and adjusted analyses. However, this finding should not be interpreted as an isolated effect of factual knowledge because the composite measure included normalization of pain, knowledge about available care, and fear of medical procedures. These are conceptually distinct constructs involving knowledge, beliefs, and attitudes. The association therefore supports the importance of addressing several dimensions of menstrual-health literacy rather than suggesting that knowledge alone determines care-seeking.

Financial constraints were associated with healthcare-seeking behavior in crude analysis but not after adjustment. This attenuation suggests that the crude relationship was not independently supported in the multivariable model. The relatively high proportion of participants with health-insurance coverage may have reduced variability in formal healthcare access, although this explanation cannot be established from the present data.

Healthcare-worker knowledge and attitudes were also associated with healthcare-seeking behavior. This finding highlights the interpersonal component of menstrual healthcare. Students may be more willing to seek care when they expect healthcare professionals to listen to their concerns, take menstrual pain seriously, communicate respectfully, and provide evidence-informed guidance. However, the finding should be interpreted cautiously because 'yes' and 'unsure' responses were combined. These categories are not conceptually equivalent, and the underlying two-way cell counts were not available in the supplied material.

Perceived accessibility and availability of healthcare services were not significantly associated with healthcare-seeking behavior. Although some participants reported substantial access-related concerns, the overall association was not statistically significant. This suggests that physical access alone may not explain care-seeking differences in this population. Nevertheless, the absence of statistical significance should not be interpreted as evidence that access is unimportant, particularly because the available accessibility data contain a discrepancy in the reported response totals that requires verification.

The findings have practical implications for nursing and midwifery education. Menstrual-health education should distinguish between common menstrual discomfort and pain that warrants clinical assessment. Students should receive clear information about evidence-based treatment options, when to seek professional evaluation, and what to expect during assessment. Healthcare professionals should also be encouraged to use respectful, non-stigmatizing communication when discussing menstrual symptoms.

Because the participants are future healthcare providers, strengthening their menstrual-health literacy may have a dual benefit: supporting their own health-seeking decisions and improving their future ability to counsel patients. However, these implications are

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based on observed associations and should not be interpreted as evidence that an educational intervention would necessarily increase healthcare-seeking behavior.

Strengths and limitations

A key strength of the study is the inclusion of students from three health-training institutions located in different geographical regions of Ghana. Stratified random sampling with proportional allocation also helped ensure representation from the participating institutions. The study further considered individual, socioeconomic, healthcare-worker, and service-access factors.

Several limitations should be considered. First, the cross-sectional design prevents conclusions about temporality or causality. Second, self-reported information may be affected by recall and social-desirability bias. Third, the study population consisted exclusively of nursing and midwifery students, limiting generalizability to young women outside health-training institutions. Fourth, the knowledge-related composite combines knowledge, perceptions, and fear, limiting construct validity. Fifth, combining 'yes' and 'unsure' responses for healthcare-worker influence reduces interpretability.

Conclusion

Approximately half of the nursing and midwifery students reported never seeking professional care for menstrual pain. Normalization of dysmenorrhea was the most frequently reported individual-level barrier, while knowledge and perception-related barriers were significantly associated with healthcare-seeking behavior after adjustment. Financial constraints were associated with the outcome in crude analysis but not after adjustment. Perceived healthcare-worker knowledge and attitudes were also associated with care-seeking, whereas perceived accessibility and availability were not.

These findings support the need for targeted menstrual-health education that addresses the normalization of disruptive menstrual pain, improves awareness of available management options, and reduces concerns about seeking professional care. Respectful and supportive communication by healthcare professionals may also help create a more acceptable care environment.

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Conflicts of Interest

The authors declare no competing interests.

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