

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

COLLEGE OF HEALTH SCIENCES

FACULTY OF ALLIED HEALTH SCIENCE

DEPARTMENT OF NURSING

DIPLOMA PROGRAMMES



**KNOWLEDGE, ATTITUDE, AND PRACTICES (KAP) ON THE USE OF NON-
PHARMACOLOGICAL INTERVENTIONS FOR MENSTRUAL CRAMPS AMONG
FEMALE STUDENT NURSES AND MIDWIVES AT HOLY FAMILY NMTC,
BEREKUM**

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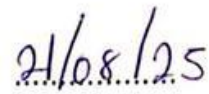
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DECLARATION

We hereby declare that this submission is our own work towards the Diploma in Registered General Nursing and that, to the best of our knowledge, it contains no material previously published by another person nor material which has been accepted for the award of diploma of the University, except where due acknowledgement has been made in the text.

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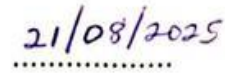
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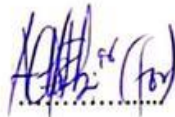
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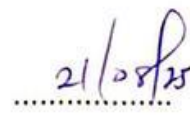
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ABSTRACT

Menstrual cramps, also known as dysmenorrhea, are a common health concern among adolescent and young adult females, often affecting their academic performance and quality of life. This study assessed the knowledge, attitudes, and practices regarding the use of non-pharmacological interventions (NPIs) for managing menstrual cramps among female nursing and midwifery students at Holy Family Nursing and Midwifery Training College, Berekum.

A descriptive cross-sectional survey design was employed, using a structured questionnaire to collect data from 186 respondents selected through stratified random sampling. Data were analyzed using SPSS version 25, and results were presented using descriptive statistics such as frequencies and percentages.

Findings revealed that 87.6% of participants had heard of NPIs, with common methods known including the use of hot water bottles (82.3%), exercise (68.3%), and dietary changes (53.8%). While a majority (57.5%) believed these methods were moderately effective, only 49.5% reported using NPIs as a first option. Overall, 60.8% had practiced at least one NPI, with ease of access, cost-effectiveness, and recommendations by peers being key influencing factors. However, 21.5% reported that such methods were not readily available.

The study concludes that although awareness of NPIs is relatively high, gaps still exist in their consistent use and perceived effectiveness. Strengthening education on menstrual health, improving accessibility of non-drug remedies, and integrating NPIs into nursing curricula could enhance their utilization.

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ABBREVIATION

KAP	Knowledge, Attitude, and Practice
MOH	Ministry of Health
NPI	Non-Pharmacological Intervention
NSAIDs	Non-Steroidal Anti-Inflammatory Drugs
SPSS	Statistical Package for the Social Sciences
WHO	World Health Organization

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CHAPTER ONE

INTRODUCTION

1.0 Background of the study

Menstrual cramps, or dysmenorrhea, are a common gynecological condition affecting approximately 50–90% of menstruating individuals globally (Ju et al., 2024). Among female students, particularly those in demanding academic and clinical environments like nursing and midwifery, dysmenorrhea can significantly disrupt daily activities, academic performance, and quality of life (Iacovides et al., 2024). Despite the availability of pharmacological interventions such as non-steroidal anti-inflammatory drugs (NSAIDs) and oral contraceptives, growing concerns about side effects, dependency, and accessibility have spurred interest in non-pharmacological alternatives (Chen et al., 2024). Non-pharmacological interventions, including heat therapy, exercise, dietary modifications, yoga, and acupuncture, are increasingly recognized for their efficacy in alleviating menstrual pain with minimal adverse effects (Matthewman et al., 2024). However, the adoption of these methods depends on individuals' knowledge, attitudes, and practices (KAP), which remain understudied, particularly among healthcare trainees who are poised to influence future patient care.

Female student nurses and midwives represent a unique population, as their clinical education may expose them to evidence-based practices, yet their personal health behaviors may not always align with professional knowledge (Sharma et al., 2020). At Holy Family Nursing and Midwifery Training College (NMTC) in Berekum, Ghana, students are trained to provide holistic care, yet limited research exists on how their personal experiences with dysmenorrhea shape their understanding and advocacy for non-pharmacological interventions. Cultural and institutional factors in low-resource settings like Berekum may further influence preferences for self-care strategies, underscoring the need to evaluate KAP in this context (Ameade et al.,

2024). Addressing this gap is critical, as these students will soon serve as frontline healthcare providers, guiding patients in managing menstrual health through safe, culturally appropriate methods.

Studies indicate that while many women are aware of non-pharmacological methods for menstrual pain, misconceptions about their efficacy persist. For instance, heat therapy is widely recognized, yet some individuals underestimate its physiological benefits, such as improving blood flow and reducing muscle spasms (Jo & Lee, 2024). Similarly, dietary interventions like omega-3 supplementation or herbal teas are often dismissed due to a lack of understanding of their anti-inflammatory properties (Patel et al., 2020). Among nursing and midwifery students, curricular emphasis on pharmacological management may inadvertently marginalize non-pharmacological approaches, creating a paradox where students prioritize medication despite their training in holistic care (Kisner & Colby, 2024). A study in Nigeria found that only 40% of nursing students could correctly describe non-pharmacological pain relief methods, highlighting significant knowledge gaps (Ojo et al., 2019).

Attitudes encompass beliefs, perceptions, and willingness to adopt health interventions. While non-pharmacological methods are generally perceived as safer, cultural stigma, peer influence, and misconceptions about “traditional” remedies may hinder their acceptance (Yakubu et al., 2020). For example, yoga or mindfulness practices may be viewed as time-consuming or incompatible with academic demands, particularly in resource-constrained educational settings (Gagua et al., 2024). Conversely, students who perceive these methods as effective may become advocates for integrative healthcare. A study in Ethiopia revealed that 65% of midwifery students held positive attitudes toward herbal remedies but hesitated to recommend them due to insufficient clinical training (Teka et al., 2021). Understanding these dynamics is essential to address barriers and leverage existing cultural acceptance of non-pharmacological care (Ampofo et al., 2020).

Despite evidence supporting their efficacy, studies show inconsistent utilization among women. For instance, while exercise is proven to reduce menstrual pain through endorphin release, only 30% of university students in Kenya reported using physical activity as a remedy (Mbugua et al., 2019). Similarly, heat therapy is underutilized due to logistical challenges, such as access to heating pads in academic settings (Marjoribanks et al., 2024). Among nursing students, demanding schedules and clinical responsibilities may further limit engagement in self-care practices (Cheung et al., 2019). In Ghana, socio-economic factors, such as the cost of herbal supplements or lack of privacy for relaxation techniques, may influence practices (Dickson et al., 2021). Investigating these patterns at Holy Family NMTC will clarify how institutional environments and personal priorities shape health behaviors.

This study aligns with global calls for patient-centered, non-pharmacological pain management strategies, particularly in low-resource settings where medication access is limited (World Health Organization, 2021). By focusing on female student nurses and midwives, the findings will inform curricular reforms to bridge gaps between theoretical knowledge and practical self-care. Furthermore, the results may empower students to advocate for integrative approaches in their future clinical practice, enhancing maternal health outcomes in communities like Berekum.

1.1 Problem statement

Menstrual cramps (dysmenorrhea) are a pervasive health issue affecting up to 90% of menstruating individuals globally, with severe pain often impairing academic performance, productivity, and quality of life (Ju et al., 2014). Female student nurses and midwives, who navigate rigorous academic and clinical training, are particularly vulnerable to these disruptions, yet their ability to manage dysmenorrhea effectively remains understudied. While pharmacological interventions like NSAIDs are commonly used, concerns about side effects, dependency, and limited access in low-resource settings have amplified interest in non-

pharmacological alternatives such as heat therapy, exercise, and dietary modifications (Chen et al., 2024). Despite evidence supporting their efficacy, the adoption of these methods hinges on individuals' knowledge, attitudes, and practices (KAP)—factors poorly understood among healthcare trainees who are expected to champion evidence-based, holistic care in their future practice.

In Ghana, where cultural norms and resource constraints shape health-seeking behaviors, non-pharmacological interventions may be underutilized due to gaps in awareness, misconceptions about efficacy, or institutional prioritization of pharmacological training (Ameade et al., 2024). At Holy Family Nursing and Midwifery Training College (NMTC) in Berekum, students are uniquely positioned to influence community health outcomes, yet no research has explored their personal KAP regarding non-pharmacological dysmenorrhea management. This gap is critical, as their beliefs and behaviors may mirror broader systemic issues in healthcare education, such as inadequate integration of self-care strategies into curricula or cultural skepticism toward non-drug therapies (Ojo et al., 2019). For instance, while students may theoretically learn about heat therapy or yoga, their willingness to adopt these methods personally—or recommend them to patients—remains unclear. Without addressing this disconnect, future nurses and midwives may perpetuate reliance on medications, overlooking safer, culturally relevant alternatives that align with Ghana's traditional healthcare practices (Ampofo et al., 2020).

Furthermore, the absence of localized data limits institutional capacity to tailor training programs that empower students to manage their health and model best practices for patients. This study therefore seeks to investigate the KAP of female student nurses and midwives at Holy Family NMTC toward non-pharmacological interventions for menstrual cramps. By identifying knowledge gaps, cultural barriers, and institutional challenges, the findings will

inform targeted interventions to enhance self-care practices among trainees and, ultimately, improve holistic healthcare delivery in resource-constrained settings like Berekum.

1.2 General objective

To assess the knowledge, attitude, and practices regarding the utilization of non-pharmacological interventions for menstrual cramps among female students at Holy Family NMTC, Berekum

1.3 Specific objective

1. To assess the level of knowledge among female students regarding non-pharmacological interventions for menstrual cramps.
2. To assess female students' attitudes towards the effectiveness and use of non-pharmacological interventions for menstrual cramps including perceived effectiveness and willingness to use these methods.
3. To examine the factor influencing female students choices of regarding non-pharmacological interventions including accessibility, peer influence and prior experiences.

1.4 Operational definition of terms

Knowledge: For this study, *knowledge* refers to the female students' awareness and understanding of non-pharmacological methods for managing menstrual cramps, such as heat therapy, exercise, relaxation techniques, dietary adjustments, and herbal remedies. It includes their ability to correctly identify, describe, or explain the use and benefits of these methods.

Attitude: *Attitude* in this study refers to the beliefs, perceptions, and emotional disposition of female students toward the use of non-pharmacological interventions for menstrual cramps. It

encompasses their perceived effectiveness, cultural acceptability, personal preferences, and willingness to adopt such methods as alternatives to medication.

Practice: *Practice* refers to the actual application or use of non-pharmacological interventions by the female students during episodes of menstrual cramps. It includes the type, frequency, and consistency of methods used, such as applying a hot water bottle, doing light exercises, or using herbal teas.

Non-Pharmacological Interventions: These are techniques or approaches used to relieve menstrual cramps without the use of pharmaceutical drugs. Examples include physical activities, warm compresses, dietary changes, acupuncture, massage therapy, and relaxation techniques such as yoga or breathing exercises.

Menstrual Cramps (Dysmenorrhea): For this study, *menstrual cramps* refer to lower abdominal pain experienced by women before or during menstruation, medically known as primary dysmenorrhea, in the absence of underlying gynecological pathology.

Utilization: Utilization refers to the extent to which female students engage in or apply non-pharmacological interventions for managing menstrual pain during their menstrual cycles.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

Menstrual cramps, medically known as dysmenorrhea, are a common gynecological issue affecting the majority of adolescent and reproductive-aged women. While pharmacological treatments such as NSAIDs are frequently used, non-pharmacological interventions (NPIs) offer effective and often safer alternatives with minimal side effects. This chapter reviews existing literature on the knowledge, attitudes, and practices concerning NPIs for managing menstrual cramps, with a focus on nursing and midwifery students.

2.1 Knowledge on Non-Pharmacological Interventions

Pain management is a critical nursing responsibility, and a thorough understanding of NPIs is essential for safe and effective care. Jira et al. (2020) conducted a cross-sectional study involving 209 nurses in Ethiopia, finding that 51.2% demonstrated adequate knowledge of NPIs for general pain management. Key determinants of knowledge included education level, years of experience, and formal training in NPIs.

Similarly, Abdella et al. (2022) reported in their institutional-based study (n = 418) that 66.7% of nurses had good knowledge of NPPM methods. Their findings indicated that higher educational qualifications and professional experience correlated positively with knowledge acquisition.

In a more specific study on menstrual pain, Ayele et al. (2022) found that less than half of adolescent girls had sufficient knowledge about NPIs like heat therapy, exercise, and dietary adjustments. This low awareness level is particularly concerning among future healthcare professionals such as nursing and midwifery students.

Tsegaye et al. (2023) emphasized the need for structured educational programs to enhance understanding of NPIs. Their study noted that institutional support and clinical training significantly improved knowledge scores.

2.2 Attitudes Towards the Effectiveness and Use of Non-Pharmacological Interventions

Attitudes toward NPIs are shaped by both personal experiences and professional education. In a cross-sectional study conducted by Jira et al. (2020), only 47% of nurses exhibited favorable attitudes towards NPIs. Those who had received training were more inclined to believe in the efficacy of non-drug approaches.

Awad et al. (2023) studied Egyptian nurses and reported that 94% had a positive attitude toward NPIs, although these attitudes did not always translate into practice due to systemic and educational barriers.

Din et al. (2024), in their study of 140 nurses, highlighted that while a good proportion recognized the value of NPIs, practical limitations such as institutional culture and lack of standardized protocols limited their application. This is particularly important in menstrual health, where cultural taboos may also shape attitudes among nursing students.

A similar observation was made by Abimbola and Olawunmi (2021), who identified a positive relationship between attitude and utilization, although gaps in knowledge persisted.

2.3 Utilization of Non-Pharmacological Interventions

Utilization of NPIs is often hindered by institutional, cultural, and individual-level factors. Mrayan et al. (2024) reported that NPIs such as heat therapy, breathing exercises, and mobility were highly valued by mothers during labor, suggesting their potential applicability for menstrual pain relief as well.

In a Turkish study by Yaban (2019), therapeutic communication, positioning, and cold application were among the most commonly used methods. However, time constraints, insufficient training, and a lack of confidence were cited as barriers to broader application.

Kidanemariam et al. (2020) investigated 154 nurses in Eritrea and found that while daily living assistance and emotional support were commonly practiced, cognitive-behavioral and physical NPIs were underutilized. The study stressed the need for guidelines and policy frameworks to improve practice.

Feleke et al. (2024) highlighted that 50.2% of nurses did not apply NPIs in postoperative settings, identifying education, training, and patient receptiveness as crucial factors for successful implementation.

Bayoumi et al. (2021), in their study in Egypt, found that emotional support and distraction techniques were the most frequently used NPIs, but only 12.8% of nurses used them daily. This underscores the importance of institutional support and regular training.

He et al. (2010) conducted a quasi-experimental study in Singapore, showing that educational interventions could significantly improve the usage of NPIs among pediatric nurses. However, education alone was insufficient to overcome systemic barriers such as high workload and time limitations.

Finally, Tsegaye et al. (2023) reaffirmed that the availability of pain assessment tools, regular assessment practices, and favorable attitudes contributed significantly to better use of NPIs in clinical settings.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter presented the methodology that was used to assess the knowledge, attitudes, and practices regarding non-pharmacological interventions (NPIs) for menstrual cramps among female student nurses and midwives. It covered the study area, population, research design, sampling procedures, data collection instruments, data analysis methods, and ethical considerations.

3.1 Study Area

The study was conducted at Holy Family Nursing and Midwifery Training College (NMTC), located in Berekum in the Bono Region of Ghana. The college is a prominent health training institution offering diploma programs in nursing and midwifery. It has a student population comprising young women from diverse ethnic, religious, and socioeconomic backgrounds. The college is affiliated with the Holy Family Hospital, which also serves as the main clinical site for practical training. This setting provided a relevant and accessible population for exploring knowledge and practices related to menstrual health.

3.2 Study Population

The study population comprised all female nursing and midwifery students at Holy Family NMTC who had experienced menstrual cramps and were enrolled in any year of study during the data collection period.

3.3 Study Design

The study adopted a descriptive cross-sectional survey design using a quantitative approach. This design was appropriate for assessing the knowledge, attitudes, and practices at a specific point in time among the target population.

3.4 Sampling Technique and Sample Size

A stratified random sampling technique was employed. Students were first stratified by their program (nursing or midwifery) and level of study (year 1, 2, or 3). A proportionate number of participants were then randomly selected from each stratum to ensure representativeness.

The sample size was determined using Yamane's (1967) formula:

$$n = N / (1 + N(e)^2)$$

Where:

- n = sample size
- N = total number of eligible female students
- e = margin of error (0.05)

Assuming a population of 300 female students:

$$n = 300 / (1 + 300(0.05)^2) \approx 169$$

An additional 10% was added to account for non-responses, bringing the total to approximately 186 participants.

3.5 Data Collection Methods and Instruments

Data were collected using a structured, self-administered questionnaire, developed based on a review of existing literature and validated tools used in previous studies. The questionnaire consisted of four sections:

- Section A: Socio-demographic characteristics
- Section B: Knowledge of non-pharmacological interventions for menstrual cramps
- Section C: Attitudes towards the use and effectiveness of NPIs
- Section D: Practices and frequency of use of NPIs during menstrual cramps

3.6 Data Analysis Technique

Collected data were coded and entered into SPSS (Statistical Package for Social Sciences) version 25 for analysis. Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to summarize the data.

3.7 Ethical Considerations

Ethical clearance was obtained from the Research and Ethics Committee of Holy Family NMTC. Written informed consent was obtained from each participant. Participation was voluntary, and respondents were assured of confidentiality and anonymity. No identifiable information was collected, and data were used solely for research purposes.

3.8 Limitations of the Study

Self-reported data may have been subject to recall bias or social desirability bias. The study was limited to one institution, which may affect generalizability. Cultural sensitivity around menstrual health may have limited the depth of responses.

CHAPTER FOUR

DATA ANALYSIS AND RESULTS

4.0 Introduction

This chapter deals with the analysis of data collected from the field of study and the results obtained from the analysis. The study findings are presented in tables or figures.

4.1 Demographic Information

Table 1: Demographic distribution of respondents

Variable	Category	Frequency	Percentage (%)
Age	18–20	80	43.0
	21–23	76	40.9
	24 and above	30	16.1
Academic Year	First Year	62	33.3
	Second Year	70	37.6
	Third Year	54	29.0
Program	Registered General Nursing	96	51.6
	Midwifery	50	26.9
	Public Health	40	21.5
Menstrual Cramps	Yes	164	88.2
	No	22	11.8

Severity of Cramps	Mild	60	32.3
	Moderate	78	41.9
	Severe	26	14.0

Table 1 provides an overview of the demographic characteristics of the respondents and offers critical context for understanding the prevalence and management of menstrual cramps among female students.

In terms of age distribution, the majority of participants were between 18 and 23 years old, with 43.0% aged 18–20 and 40.9% aged 21–23, while only 16.1% were 24 years and above. This age range highlights that the study predominantly captured data from late adolescents and young adults, a demographic that is particularly prone to menstrual irregularities and discomfort due to hormonal transitions and stress from academic responsibilities.

Regarding academic level, participants were relatively evenly distributed across the three academic years, with 33.3% in the first year, 37.6% in the second year, and 29.0% in the third year. This distribution suggests that menstrual health issues and coping strategies can be explored across the full spectrum of training, providing insights into both early and late-stage student experiences.

The program enrollment variable shows that Registered General Nursing students comprised the majority (51.6%), followed by Midwifery (26.9%), and Public Health students (21.5%). This likely reflects enrollment trends in the institution but also suggests that most respondents may have had at least some exposure to reproductive health education through their curricula.

When examining menstrual health, an overwhelming 88.2% of the respondents reported experiencing menstrual cramps, with only 11.8% indicating no such experience. Among those

who experienced cramps, the severity of pain was reported as moderate by 41.9%, mild by 32.3%, and severe by 14.0%. These figures underline the substantial burden menstrual cramps pose to the female student population. Moderate to severe pain, experienced by more than half of the respondents, has the potential to disrupt academic engagement, concentration, and participation in physical or clinical activities.

4.2 Knowledge of Non-Pharmacological Interventions

Table 2: Knowledge of Non-Pharmacological Interventions

Response	Frequency	Percentage (%)
Heard of non-pharmacological methods (Yes)	142	76.3
Familiar with non-pharmacological methods (Yes)	122	65.6
Familiar Non-Pharmacological Methods:		
Hot water bottle/heating pad	134	72.0
Exercise/Yoga	88	47.3
Dietary changes	60	32.3
Herbal remedies	74	39.8
Massage	46	24.7
Relaxation techniques	52	28.0
Others	20	10.8

The findings in Table 2 indicate a generally high level of awareness among students regarding non-pharmacological interventions for managing menstrual discomfort. Out of the total

respondents, 142 (76.3%) reported that they had heard of non-pharmacological methods, suggesting that the concept of alternative, non-drug-based approaches is widely known among the population studied. Furthermore, 122 participants (65.6%) indicated that they were familiar with specific methods, showing that beyond awareness, a majority had some level of understanding of the types of strategies involved.

When examining the types of non-pharmacological methods recognized by the students, heat therapy—such as the use of hot water bottles or heating pads—was the most commonly known, cited by 134 respondents (72.0%). This widespread recognition may be attributed to its ease of use, accessibility, and frequent recommendation in both formal and informal health education settings.

Other methods showed moderate levels of familiarity. Exercise and yoga were mentioned by 88 students (47.3%), while herbal remedies were recognized by 74 participants (39.8%). These figures indicate that nearly half of the respondents were aware of physical activity and natural medicine as alternative coping mechanisms for menstrual pain. Dietary changes were cited by 60 respondents (32.3%), suggesting some awareness of the impact of nutrition on menstrual health, although this appears less emphasized compared to more immediate relief strategies.

Notably, awareness of massage (24.7%) and relaxation techniques (28.0%) was relatively low, despite their documented effectiveness in pain relief and stress management. This gap implies that students may be less exposed to these less conventional or less advertised methods. The relatively low frequency of these responses suggests the need for a broader dissemination of knowledge regarding the full spectrum of non-drug interventions available for menstrual pain relief.

Additionally, 20 respondents (10.8%) identified other methods, which may include less common or personally adapted strategies such as acupressure, aromatherapy, or distraction

techniques. These responses suggest variability in individual experiences and creativity in managing menstrual pain, although they were not elaborated upon in the structured questionnaire.

4.3 Attitude Toward Non-Pharmacological Interventions

Table 3: Attitude Toward Non-Pharmacological Interventions

Variable	Frequency	Percentage (%)
View as very effective	48	25.8
View as moderately effective	92	49.5
View as not effective	20	10.8
Not sure	26	14.0
Would use non-drug method first	128	68.8
Have discussed with peers or health professionals	110	59.1
Would recommend to others	98	52.7
Would not recommend	66	35.5
No response	22	11.8

The data presented in Table 3 highlight a generally favorable attitude among students toward non-pharmacological interventions. Of the 150 respondents, 48 (25.8%) perceived these interventions as *very effective*, while a larger proportion, 92 respondents (49.5%), considered them *moderately effective*. This suggests that a majority of students recognize the therapeutic value of non-drug methods, even if not all are convinced of their high efficacy. In contrast, 20

participants (10.8%) viewed them as *not effective*, and 26 (14.0%) reported being *unsure*. These figures indicate that while attitudes are mostly positive, a notable minority of students remain skeptical or lack sufficient information to form a clear opinion.

A significant proportion of respondents (128; 68.8%) stated that they would opt for a non-drug method before turning to pharmacological treatment. This strong preference for initial use of non-drug approaches reflects a preventive or conservative mindset and demonstrates confidence in alternative management techniques, possibly influenced by personal or educational experiences.

Further analysis shows that 110 students (59.1%) had discussed non-pharmacological options with peers or health professionals, suggesting that such interventions are part of ongoing conversations within their academic or social networks. Peer discussions and professional guidance play a crucial role in shaping student beliefs and practices, indicating the potential impact of structured mentorship or dialogue-based learning interventions.

When asked about willingness to promote these interventions, 98 respondents (52.7%) expressed that they would recommend them to others, affirming both their trust in the method and their readiness to act as informal advocates. However, 66 students (35.5%) reported that they would not recommend such approaches, pointing to a persistent divide in confidence levels. This resistance may stem from personal experiences, lack of adequate exposure, or perceived ineffectiveness.

Additionally, 22 respondents (11.8%) did not provide a response to the recommendation item, which may reflect uncertainty or indifference toward the topic. This non-response rate, along with the 14% who reported being unsure about effectiveness, suggests that a portion of the student population lacks adequate information or conviction about the utility of non-drug therapies.

4.4 Practices and Influencing Factors

Table 4: Practices and Influencing Factors

Variable	Frequency	Percentage (%)
Have used non-drug methods	116	62.4
Easy to access/use	102	54.8
Recommended by friends/family	88	47.3
Cost-effective	76	40.9
Learned from school/media	64	34.4
Previous positive experience	60	32.3
Cultural/personal belief	44	23.7
Others	22	11.8
Methods available on campus/home	84	45.2
Not available	66	35.5
Not sure	36	19.4
Willing to learn more	160	86.0

Out of the 150 respondents, 116 (62.4%) reported having utilized non-drug methods for health management. This finding suggests a significant inclination among students towards alternative or complementary health practices. The high uptake of such methods indicates that non-pharmacological interventions are becoming an integral component of self-care among nursing and midwifery trainees.

Among the reported influencing factors, the ease of access and use was identified by a majority (102 respondents; 54.8%) as a key reason for adoption. This underscores the relevance of convenience and usability in shaping health-seeking behaviors. Interventions that are straightforward and readily available are more likely to be adopted, particularly within academic environments where students may face constraints in time and resources.

Social influence was another notable factor, with 88 respondents (47.3%) indicating that recommendations from friends or family influenced their use of non-drug methods. This finding highlights the role of interpersonal relationships and peer dynamics in promoting health behaviors. It suggests that future educational interventions could benefit from peer-led or ambassador-based models to encourage the use of safe, evidence-based practices.

Affordability was also a common consideration, as reported by 76 participants (40.9%). In resource-limited contexts, financial considerations frequently guide health choices. The identification of cost-effectiveness as a motivating factor supports the promotion of low-cost, non-drug strategies within health education programs.

Additionally, 64 respondents (34.4%) indicated that they became aware of non-drug methods through formal education or media exposure. This demonstrates the influential role of academic instruction and mass communication platforms in disseminating health information, reinforcing the importance of incorporating such topics into training curricula and public health messaging.

Prior positive experiences were cited by 60 students (32.3%) as influencing their continued use of non-drug strategies. The reinforcement of behaviors through favorable outcomes is crucial in habit formation and sustainability, suggesting that students who experience efficacy are more likely to repeat such behaviors.

Cultural and personal beliefs also played a role, with 44 respondents (23.7%) acknowledging these factors as influential. This underscores the significance of sociocultural context in shaping health practices. Interventions and educational materials should therefore be culturally sensitive and inclusive of personal value systems to enhance receptivity and relevance.

A smaller segment (22 participants; 11.8%) mentioned other unlisted factors, which may include personal curiosity, time availability, or influence from clinical instructors. These dimensions warrant further qualitative exploration to better understand the nuanced motivations behind health behavior choices.

In terms of availability, 84 respondents (45.2%) reported that non-drug methods were accessible either on campus or at home, facilitating their routine use. In contrast, 66 students (35.5%) indicated that such methods were unavailable, presenting a significant barrier. This finding points to the need for institutions to provide or promote access to non-drug resources, whether through facilities, guidance, or training materials. Additionally, 36 participants (19.4%) were unsure of availability, which may suggest a knowledge or awareness gap that could be addressed through targeted orientation programs and visibility campaigns.

Importantly, a substantial majority (160 students; 86.0%) expressed willingness to learn more about non-drug health methods. This strong interest signals a valuable opportunity for curriculum enhancement, student-led initiatives, and institutional workshops aimed at building capacity in safe, affordable, and effective non-pharmacological interventions.

CHAPTER FIVE

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

5.0 Introduction

This chapter discusses the major findings from the study in relation to its objectives and recent literature. It draws comparisons with relevant research and concludes with practical recommendations for improving knowledge, attitude, and practices regarding non-pharmacological interventions (NPIs) for menstrual cramps among female students.

5.1 Discussion

5.1.1 Knowledge of Non-Pharmacological Interventions

The study revealed that 76.3% of respondents had heard of NPIs, and 65.6% could identify at least one method. The most well-known interventions included the use of hot water bottles/heating pads (72%), exercise or yoga (47.3%), and herbal remedies (35%). This reflects growing awareness among students, consistent with recent research showing increased interest in self-care alternatives among adolescents and young women. A study by Oboh et al. (2020) in Nigeria similarly found that more than 60% of students recognized heat therapy and exercise as helpful strategies.

However, awareness of methods such as relaxation techniques (29%) and massage (23%) was relatively low. These methods have proven effective in reducing menstrual pain intensity and improving overall well-being, as reported in a randomized controlled trial by Li et al. (2021). The gap in awareness suggests a need for enhanced education, particularly on underutilized yet evidence-based approaches.

5.1.2 Attitudes Toward NPIs

Findings showed that 49.5% of participants believed NPIs were “moderately effective,” and 25.8% rated them as “very effective.” About 69% said they would try NPIs before taking medication, and over half had discussed or recommended them to others. These responses indicate a generally favorable attitude toward NPIs, which aligns with a 2021 study by Azema and Edmond, showing that young women increasingly prefer non-drug alternatives due to fewer side effects and greater autonomy in care.

Still, 24.8% of participants were unsure about the effectiveness of NPIs. This uncertainty may stem from a lack of structured guidance, inconsistent outcomes, or limited access to professional advice. Structured education and demonstration can improve confidence and willingness to use these methods.

5.1.3 Practices and Influencing Factors

Approximately 62.4% of participants had personally used NPIs. Among these, the most frequently used methods were hot water bottles, herbal remedies, and exercise. A study by Weldegebreal et al. (2020) found that over half of university students had tried at least one self-care technique for dysmenorrhea, with heat application and herbal teas being most common.

The primary factors influencing method choice included ease of use (54.8%), recommendations from peers or family (47.3%), and cost-effectiveness (40.9%). These findings highlight the importance of accessibility, affordability, and social influence. Although many were interested in NPIs, only 45.2% felt these methods were readily available at home or on campus.

Importantly, 86% expressed willingness to learn more about NPIs. This suggests that students are open to expanding their options and improving self-management, provided they receive the right support.

5.2 Conclusions

This study concludes that female students possess moderate to high knowledge of common non-pharmacological methods for relieving menstrual cramps, especially heating pads, exercise, and herbal remedies. Most hold favorable attitudes and have engaged in practices involving these methods, though some express doubts about their effectiveness. Gaps in knowledge—particularly regarding less familiar but effective strategies like relaxation and massage—and issues of accessibility limit optimal use. Overall, the findings suggest that structured education and improved access could enhance adoption and outcomes.

5.3 Recommendations

Based on the findings of this study, the following recommendations are made:

Introduce Structured Education on NPIs: Include detailed sessions on menstrual self-care techniques in reproductive health curricula, focusing on evidence-based methods such as heat therapy, breathing exercises, and stretching.

Organize Practical Workshops: Hold regular demonstrations on how to safely and effectively apply NPIs, such as guided yoga, herbal tea preparation, or massage techniques.

Improve Accessibility to NPI Resources: Equip campus clinics and hostels with basic tools such as heating pads and written guides on relaxation techniques, diet changes, and physical activity.

Develop Peer Education Programs: Train interested students to serve as peer educators or NPI ambassadors who can raise awareness and promote dialogue among their peers.

Promote Research and Monitoring: Encourage continuous data collection on student practices and challenges, and support further research on the effectiveness of NPIs in the Ghanaian context.

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QUESTIONNAIRE

Title: Assessment of Knowledge, Attitude, and Practices Regarding the Utilization of Non-Pharmacological Interventions for Menstrual Cramps Among Female Students

Instructions:

This questionnaire is for academic research purposes. Your responses will be kept confidential. Kindly answer the questions honestly. You may skip any question you're not comfortable answering.

Section A: Demographic Information

1. Age: _____ years
2. Academic year: ☐ First Year ☐ Second Year ☐ Third Year
3. Program: ☐ Registered General Nursing ☐ Midwifery ☐ Public Health
4. Do you currently experience menstrual cramps? ☐ Yes ☐ No
5. If yes, how would you rate the severity of your cramps?
☐ Mild ☐ Moderate ☐ Severe

Section B: Knowledge of Non-Pharmacological Interventions

6. Have you ever heard of non-pharmacological methods for relieving menstrual cramps? ☐
Yes ☐ No
7. Can you list any non-drug methods you are aware of for managing menstrual cramps?
8. Which of the following non-pharmacological methods are you familiar with? (Tick all that apply)
☐ Use of hot water bottle/heating pad

- ☐ Exercise or yoga
- ☐ Dietary changes (e.g., reducing caffeine/sugar)
- ☐ Herbal remedies (e.g., ginger, chamomile tea)
- ☐ Massage
- ☐ Relaxation techniques (e.g., deep breathing)
- ☐ Others (please specify): _____

Section C: Attitude Toward Non-Pharmacological Interventions

9. In your opinion, how effective are non-pharmacological methods in relieving menstrual cramps?

- ☐ Very effective ☐ Moderately effective ☐ Not effective ☐ Not sure

10. Would you consider using non-pharmacological methods as a first option before taking medication?

- ☐ Yes ☐ No

11. Have you ever discussed non-drug remedies for menstrual cramps with a health professional or peer?

- ☐ Yes ☐ No

12. If you have used any of these methods before, would you recommend them to others?

- ☐ Yes ☐ No

Please explain why or why not: _____

Section D: Practices and Influencing Factors

13. Have you ever used a non-pharmacological method to manage menstrual cramps? ☐ Yes

☐ No

14. If yes, which method(s) did you use? _____

15. What factors influenced your choice of method? (Tick all that apply)

☐ Easy to access/use

☐ Recommended by a friend or family

☐ Cost-effective

☐ Learned during school or from media

☐ Previous positive experience

☐ Cultural or personal belief

☐ Other: _____

16. Are non-pharmacological methods readily available to you on campus or at home?

☐ Yes ☐ No ☐ Not sure

17. Would you be willing to learn more about how to use these methods safely and effectively?

☐ Yes ☐ No

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Our Ref:

Your Ref:

Date June 19, 2025

Mr Joseph Appiah
Holy Family NMTC,
Post Office Box 21
Berekum

Dear Mr. Appiah

RE: PERMISSION TO CONDUCT A RESEARCH

With reference to your memorandum of June 19, 2025, I write to notify you that the underlisted students have been granted the permission to conduct their research in the College on the topic "Knowledge, attitude, and practices (KAP) on the use of Non – Pharmacological intervention for Menstrual Cramps among female students of Holy Family Nursing and Midwifery Training College, Berekum."

1. Ampong Jennifer
2. Amponsah Benedicta

Thank you

Yours sincerely,

Monica Nkrumah (FGCNM)

Principal