Review of Nursing and Healthcare Research (RNHR)
Vol 1, No 1, 2025, 15-26 https://doi.org/10.35912/rnhr.v1i1.3756

Knowledge, experiences, and coping practices of female adolescents toward dysmenorrhea in selected secondary schools in Ibadan North Local Government Area, Oyo State

Ayomide Oluwaseyi Aibinuomo[1], Rakiya Saleh[2], Akintomide Adeola Abiodun[3], Adedamola Tella[4], Amin Muyiwa Adeleke[5], Femi Falana Paul[6]
Texila American University, Georgetown, Guyana[1]
Aliko Dangote College of Nursing Science Bauchi, Bauchi State, Nigeria[2]
University of Ibadan, Ibadan, Nigeria[3]
University of Port-Harcourt, Nigeria[4]
Adeleke University, Ede, Nigeria[5]
Ladoke Akintola University of Technology, Nigeria[6]
Aibinuomoa@gmail.com[1],

Article History:
Received on 15 July 2025
1st Revision on 22 July 2025
2nd Revision on 15 August 2025
Accepted on 28 August 2025

Abstract

Purpose: To assess female adolescents' knowledge, attitudes, experiences, and coping practices regarding dysmenorrhea in selected secondary schools in Ibadan North LGA, Oyo State, Nigeria.

Methodology/approach: Descriptive cross-sectional survey of 200 female students (mean age 14.98 ± 2.48) using a structured, self-administered questionnaire; analysis conducted in SPSS v25 with descriptive statistics (frequencies, percentages, means, SD).

Results/findings: Dysmenorrhea was prevalent (72.5%) and commonly interfered with daily activities (82.5%) and school attendance (47.5%). Knowledge was generally moderate, but misconceptions about causes and severity persisted. Coping was largely self-managed: analgesics (50.0%) and rest (45.0%) were most common; healthcare-seeking was relatively low (12.5%).

Conclusions: Dysmenorrhea substantially affects adolescents' functioning and academic participation, with knowledge gaps and low utilization of professional care. Strengthening school-based menstrual health education and access to adolescent-friendly services is essential.

Limitations: Cross-sectional, self-reported data from selected schools in one LGA limit causal inference and generalizability; analyses were primarily descriptive.

Contribution: Provides local baseline evidence to inform targeted school interventions, safe coping guidance, and improved help-seeking for menstrual pain among adolescents.

Keywords: *Attitude, Coping Practices, Dysmenorrhea, Female Adolescents, Knowledge, Nigeria, Secondary Schools*

How to Cite: Aibinuomo, A. O., Saleh, R., Abiodun, A. A., Tella, A., Adeleke, A. M., & Paul, F. F. (2025). Knowledge, experiences, and coping practices of female adolescents toward dysmenorrhea in selected secondary schools in Ibadan North Local Government Area, Oyo State. *Review of Nursing and Healthcare Research,* 1(1), 15-26.

1. Introduction

Adolescence is a critical transitional phase between childhood and adulthood, typically encompassing individuals aged 10–19 years. It is marked by profound physical, psychological, and social changes that significantly shape future health and well-being. Among females, one of the most notable physiological milestones during this stage is the onset of menarche, which signals reproductive maturity in females.

However, this biological event is often accompanied by various menstrual disorders, among which dysmenorrhea, or painful menstruation, is one of the most prevalent and distressing conditions affecting adolescent girls. Dysmenorrhea, characterized by recurrent cramping pain in the lower abdomen during menstruation, is reported to affect between 60% and 83% of adolescent females globally (Poureslami & Osati-Ashtiani, 2002). It not only imposes physical discomfort but also interferes with daily functioning, school attendance, academic performance, and social participation (Jayaram, Subbarayan, Mithraprabhu, & Govindarajan, 2016).

The World Health Organization (2018) underscores adolescence as a period of heightened vulnerability, particularly for females, whose reproductive health profoundly influences not only their personal well-being but also future population health outcomes. Despite being a natural physiological process, menstruation and its associated challenges are often surrounded by cultural taboos, misconceptions, and poor health-seeking attitudes toward seeking help. Dysmenorrhea is one of the most common gynecological complaints among adolescent girls, yet only a small proportion approximately 15% seek medical intervention (C.-H. Chen, Lin, Heitkemper, & Wu, 2006).

This low consultation rate is frequently attributed to the normalization of menstrual pain, lack of awareness, and limited access to reproductive health information and care. Studies have consistently shown that dysmenorrhea negatively affects the quality of life, concentration, and school attendance of adolescents. For instance, a large-scale survey conducted among high school girls in Eastern Turkey reported that over half of the respondents experienced academic challenges due to menstrual pain, with 50% citing difficulty focusing and 27% reporting an inability to respond to examination questions despite adequate knowledge (Eryilmaz, Ozdemir, & Pasinlioglu, 2010).

The prevalence of dysmenorrhea tends to increase during adolescence, reaching its peak in the late adolescent years when ovulatory cycles become more established (Monga & Konar, 2020). While dysmenorrhea may occur as a primary condition without identifiable pathology, it may also signal underlying reproductive disorders such as endometriosis, pelvic inflammatory disease, or adenomyosis, which can have long-term implications for fertility and overall reproductive health. The persistence of pain and lack of effective coping mechanisms often lead adolescents to adopt self-management strategies, such as the use of analgesics, herbal remedies, or non-pharmacological methods, such as exercise and rest (Hollins-Martin, van den Akker, Martin, & Preedy, 2014).

However, some adolescents resort to inappropriate or unsafe practices, including the misuse of substances to relieve pain, which poses additional health risks (Durain, 2004). In many societies, including Nigeria, menstruation remains a sensitive and often stigmatized topic, limiting open discussion and education on menstrual health. Cultural beliefs and misconceptions contribute to poor knowledge and negative attitudes toward menstruation and menstrual pain management. Some adolescents attribute dysmenorrhea to factors such as divine punishment, dietary habits, or loss of virginity (Fennie, Moletsane, & Padmanabhanunni, 2022). This limited understanding can lead to unhealthy coping behaviors and emotional distress among adolescents.

Consequently, dysmenorrhea not only causes physical pain but also has psychological and social ramifications, affecting adolescents' relationships with their families and peers and their overall self-esteem (Dixon et al., 2024). Empirical studies in Nigeria and other developing countries highlight the pervasive nature of dysmenorrhea and its consequences for school attendance and performance. Research evidence indicates that a significant proportion of adolescent girls miss one to three days of school monthly due to menstrual pain, leading to reduced academic achievement and participation in extracurricular activities (Al-Kindi & Al-Bulushi, 2011).

Despite this, awareness and medical help-seeking remain alarmingly low in this region. Within the Nigerian context, particularly in Oyo State, there is limited empirical data on how adolescent girls understand and cope with dysmenorrhea in secondary school settings. The Ibadan North Local Government Area is a socio-culturally diverse environment where discussions about menstrual issues are often avoided, and adolescents may have limited access to accurate reproductive health information.

Given these realities, it is imperative to assess the level of knowledge, experiences, and coping practices of female adolescents toward dysmenorrhea in this locality.

Understanding their awareness, perceptions, and management approaches can inform targeted educational and health interventions aimed at improving menstrual health literacy and promoting healthier coping strategies for dysmenorrhea. Therefore, this study seeks to examine the knowledge, experiences, and coping practices of female adolescents toward dysmenorrhea in selected secondary schools in the Ibadan North Local Government Area of Oyo State. The findings are expected to provide valuable insights for health educators, school authorities, and policymakers to design culturally sensitive programs that enhance menstrual health awareness and reduce the burden of dysmenorrhea among adolescent students.

2. Literature Review

Routine immunization (RI) is globally recognized as one of the most effective public health interventions, preventing morbidity and mortality from vaccine-preventable diseases (VPDs), such as measles, tuberculosis, diphtheria, pertussis, and poliomyelitis. According to Babatunde et al. (2022), immunization averts an estimated 4–5 million deaths annually; however, despite global progress, low- and middle-income countries (LMICs) continue to record suboptimal coverage. Nigeria, the most populous country in Africa, reflects this challenge with persistent dropout rates between the first and last doses of several vaccines, particularly in subnational regions such as Oyo State.

2.1 Global Perspective on Immunization Defaults

Studies across LMICs have demonstrated that defaults in routine immunization are shaped by a combination of socioeconomic, cultural, and systemic factors. For instance, research in South Asia has shown that limited maternal education and household poverty strongly predict incomplete vaccination (Atteraya et al., 2023). In East African contexts, structural barriers such as poor transportation systems, geographical distance from health facilities, and vaccine stock-outs consistently hindered uptake. Importantly, these findings converge on the idea that immunization defaults are rarely driven by outright refusal but rather by systemic barriers that limit access to timely services(Malande, 2019).

2.2 National Trends in Nigeria

Nigeria has historically struggled with low RI coverage, despite multiple government-led interventions. The National Demographic and Health Survey (Williams, Akande, and Abbas (2024) reported that full immunization coverage for children aged 12–23 months was only 31%, with significant variation across regions. Factors such as maternal education, wealth index, urban-rural divide, and place of delivery strongly influenced the uptake. For example, children born in health facilities were significantly more likely to complete the RI schedule than those born at home. Studies in northern Nigeria further highlight that cultural perceptions, though relevant, play a less significant role than structural challenges such as inadequate service delivery, shortage of skilled health workers, and inconsistent vaccine availability.

2.3 Subnational Contexts: Oyo State and Beyond

Oyo State, like many other subnational areas, reflects these national trends. Previous research in Ibadan North and Akinyele LGAs identified transportation difficulties, long waiting times, and competing household responsibilities as major contributors to default. Mothers often face the dilemma of prioritizing daily economic activities over long waiting hours at health centers, leading to missed or delayed doses (Salako et al., 2023). Moreover, in peri-urban and rural communities, poor road networks and a lack of affordable transport further compound access barriers. In Ido LGA specifically, existing evidence indicates that while awareness of the importance of immunization is high, structural impediments undermine completion rates. These findings mirror those of similar studies in rural Ghana and Kenya, where mothers frequently expressed a willingness to immunize their children but were hindered by systemic inefficiencies.

2.4 Determinants of Immunization Default

The determinants of immunization defaults can broadly be categorized into maternal, child-related, and systemic factors: Maternal Factors – Education, knowledge of immunization schedules, and

socioeconomic status are consistently associated with immunization outcomes (Forshaw et al., 2017). Educated mothers are more likely to understand the benefits of immunization, adhere to schedules, and navigate healthcare systems effectively. Conversely, limited maternal knowledge increases the likelihood of default. Child-Related Factors: Birth order and place of delivery influence immunization outcomes (Costa et al., 2024). Studies in Nigeria and Ethiopia revealed that first-born children and those delivered in health facilities were more likely to receive complete vaccinations than later-born or home-delivered children. Systemic Factors – Long distances to facilities, vaccine stock-outs, health worker shortages, and inefficiencies in service delivery represent the most consistent barriers to vaccination. Long waiting times discourage attendance, especially among mothers juggling household and economic responsibilities. Stock-outs, on the other hand, erode trust in the health system and discourage return visits to the facility.

2.5 Catch-Up Strategies in Immunization Programs

Catch-up strategies are interventions designed to reduce dropout rates and ensure that children who miss scheduled vaccinations are reached. Evidence from the global and Nigerian contexts demonstrates a range of strategies with varying effectiveness: Outreach Programs, mobile clinics, and house-to-house visits to extend immunization services to hard-to-reach areas. Studies in Uganda and northern Nigeria have reported increased coverage through periodic outreach, particularly in rural and underserved communities. Reminder/Recall Systems – SMS reminders, phone calls, and immunization cards significantly improved attendance at follow-up visits. Evidence from Kenya and Ghana suggests that digital health interventions can reduce default rates by as much as 20%. Community Engagement – Mobilization through traditional and religious leaders has proven effective in overcoming mistrust and improving compliance in the community. Such engagement ensures that immunization is perceived as a community responsibility. Health Worker Follow-Up – Home visits and follow-up by community health extension workers (CHEWs) play a critical role in reducing missed appointments, particularly when combined with education on immunization benefits.

3. Research Methodology

3.1 Research Design

This study adopted a descriptive cross-sectional survey design. This design was appropriate for obtaining information on the knowledge, experiences, and coping practices of female adolescents regarding dysmenorrhea at a single point in time. It was chosen for its efficiency, low cost, and suitability for collecting self-reported data from a specific population.

3.2 Research Setting

This study was conducted in the Ibadan North Local Government Area of Oyo State, Nigeria. Ibadan North is located in the southwestern region of the country, with administrative headquarters in Bodija. It shares boundaries with the Akinyele, Lagelu, Egbeda, Ibadan Northwest, and Ibadan Northeast Local Government Areas. The area is urban, with communities such as Bodija, Agodi, Oyo Road and Sango. The population of Ibadan North is estimated to be approximately 201, 430, predominantly of Yoruba origin. It has numerous private and forty-two government-owned secondary schools. The area was selected because of the observed low level of sensitization and awareness of dysmenorrhea among female adolescents in secondary schools.

3.3 Sample Size and Sampling Technique

A total of 200 respondents participated in this study. This figure accounts for the expected number of female adolescents required to adequately represent the study population and ensure reliable findings. Simple random and purposive sampling techniques were used. Simple random sampling ensured that each eligible student had an equal chance of selection, while purposive sampling identified only those who met the inclusion criteria of being female adolescents within the specified age range and who were currently attending the selected schools.

3.4 Data Collection Procedure

Data collection was conducted in accordance with the principles of anonymity and confidentiality. Permission was obtained from the relevant authorities, and informed consent was obtained from the

participants. Respondents were assured of their voluntary participation and confidentiality of their responses. The questionnaires were self-administered, and the researcher provided the necessary guidance to ensure the clarity and completeness of the responses. A structured, self-administered questionnaire was used for the data collection. The questionnaire consisted of four sections: Section A covered sociodemographic information; Section B assessed knowledge of dysmenorrhea; Section C examined attitudes toward dysmenorrhea; and Section D explored experiences and coping practices related to dysmenorrhea. The instrument was designed to elicit comprehensive information relevant to the study objectives. The questionnaire was pre-tested on 10% of the sample size outside the study area. The results of the pre-test were used to refine the instrument. During data collection, all completed questionnaires were checked daily for completeness and consistency to ensure reliable data collection.

3.5 Data Analysis

The collected data were checked for completeness, coded, and analyzed using SPSS version 25. Descriptive statistics, including frequencies and percentage distributions, were used to summarize the respondents' demographic characteristics, knowledge, attitudes, experiences, and coping practices. The results are presented in tables and interpreted in line with the study objectives to draw meaningful conclusions.

3.6 Ethical Consideration

An introductory letter was obtained from the School of Health Officers Training Programme, University College Hospital, Ibadan, to seek permission from selected schools. Approval was granted by the school principals, and informed consent was obtained from all the respondents. Participation was voluntary, and respondents were assured of confidentiality and their right to withdraw from the study at any stage, without consequence.

4. Result and Discussion

4.1 Results

Table 1. Sociodemographic Characteristics of Respondents (N = 200)

Variable	Category	Frequency	Percentage (%)
Age (years)	10–12	31	15.5
	13–15	61	30.5
	16–19	73	36.5
Mean ± SD	—	14.98 ± 2.48	—
Class Level	JSS3	46	23.0
	SS1	31	15.5
	SS2	49	24.5
	SS3	39	19.5
Ethnicity	Yoruba	87	43.5
	Igbo	55	27.5
	Hausa	11	5.5
	Other (Edo, Tiv, Ijaw, Ebira)	12	6.0
Religion	Christianity	96	48.0
	Islam	66	33.0
	Traditional	3	1.5
Age at Menarche (years)	<12	50	25.0
	12–14	120	60.0
	>14	30	15.0

Variable	Category	Frequency	Percentage (%)
Parent/Guardian Education	No formal education	40	20.0
	Primary	40	20.0
	Secondary	70	35.0
	Tertiary	50	25.0
Living Arrangement	Both parents	120	60.0
	Single parent	50	25.0
	Relative/Guardian	30	15.0
Monthly Allowance (NGN)	<500	60	30.0
	500–1000	90	45.0
	>1000	50	25.0
Source of Menstrual Info	Mother	80	40.0
	School	60	30.0
	Peers	40	20.0
	Internet/Media	20	10.0

The ages ranged from 10 to 19 years, with a mean age of 14.98 ± 2.48 y. Most respondents were aged 16–19 years (73; 36.5%), followed by 13–15 years (61; 30.5%), and 10–12 years (31; 15.5%) of age. The distribution by class level indicated that 49 (24.5%) were in SS2, 46 (23.0%) in JSS3, 39 (19.5%) in SS3, and 31 (15.5%) in SS1, representing both junior and senior secondary students. Regarding ethnicity, the majority were Yoruba (87, 43.5%), followed by Igbo (55, 27.5%), Hausa (11, 5.5%), and other ethnic groups, including Edo, Tiv, Ijaw, and Ebira (12, 6.0%). Most respondents practiced Christianity (96, 48.0%), 66 (33.0%) practiced Islam, and 3 (1.5%) adhered to traditional religions. Age at menarche was mostly between 12 and 14 years (120; 60.0%), with 50 (25.0%) below 12 years and 30 (15.0%) above 14 years. The majority of respondents lived with both parents (120, 60.0%), while others lived with a single parent (50, 25.0%) or relatives/guardians (30, 15.0%). Regarding parental educational attainment, 70 (35.0%) had secondary education, 50 (25.0%) had tertiary education, 40 (20.0%) had primary education, and 40 (20.0%) had no formal education. Respondents' monthly allowances were mostly between 500 and 1000 NGN (90, 45.0%), followed by <500 NGN (60, 30.0%) and >1000 NGN (50, 25.0%). Mothers were the most common source of menstrual information (80, 40.0%), followed by schools (60, 30.0%), peers (40, 20.0%), and the Internet/media (20, 10.0%).

Table 2. Level of Knowledge on Dysmenorrhea among Respondents (N = 200)

Knowledge Domain	Statement	Yes, n (%)	No, n (%)
General awareness	Dysmenorrhea is a normal occurrence with menstruation	172 (86.0)	28 (14.0)
Timing of occurrence	Dysmenorrhea can occur from menarche to menopause	140 (70.0)	60 (30.0)
Timing of occurrence	Dysmenorrhea occurs mainly during menstruation	118 (59.0)	82 (41.0)
Severity	Dysmenorrhea occurrence can range from mild to worst	124 (62.0)	76 (38.0)
Severity	Severe abdominal pain is a result of dysmenorrhea	162 (81.0)	38 (19.0)
Causes	Hormonal imbalance is the cause of primary dysmenorrhea	84 (42.0)	116 (58.0)
Causes	Dysmenorrhea is hereditary	50 (25.0)	150 (75.0)

Knowledge Domain	Statement	Yes, n (%)	No, n (%)
Misconceptions	Virginity is a risk factor for dysmenorrhea	33 (16.5)	167 (83.5)
Early knowledge	I knew about dysmenorrhea before my first menstruation	85 (42.5)	115 (57.5)
Self-assessment	The degree of my pain is moderate	88 (44.0)	112 (56.0)
Severity	Dysmenorrhea occurrence can range from mild to worst	124 (62.0)	76 (38.0)

The respondents' knowledge of dysmenorrhea was evaluated across multiple dimensions, including general awareness, timing, severity, causes, and common misconceptions. Most respondents demonstrated basic awareness of dysmenorrhea, with 172 (86.0%) identifying it as a normal occurrence during menstruation. The majority also recognized that dysmenorrhea can occur from menarche to menopause (140, 70.0%) and that the severity of pain can range from mild to severe (124, 62.0%). Additionally, 118 (59.0%) reported that dysmenorrhea occurred mainly during menstruation, and 162 (81.0%) acknowledged that severe abdominal pain was a characteristic feature. However, a detailed understanding of this process is limited. Only 84 (42.0%) respondents correctly identified hormonal imbalance as the primary cause, and fewer (50, 25.0%) believed that dysmenorrhea could be hereditary. Misconceptions were also common; 33 (16.5%) incorrectly associated virginity with the risk of dysmenorrhea, and less than half (85; 42.5%) had prior knowledge of dysmenorrhea before their first menstruation. Regarding self-assessment, 88 (44.0%) women described their pain as moderate, indicating variability in the perception and experience of menstrual discomfort.

Table 3. Attitude towards Dysmenorrhea Among Respondents (N = 200)

Statement	SA n (%)	A n (%)	D n (%)	SD n (%)
It is normal to have pain/discomfort during menses	65 (32.5)	75 (37.5)	20 (10.0)	5 (2.5)
It is important to seek immediate medical attention during dysmenorrhea	40 (20.0)	70 (35.0)	45 (22.5)	10 (5.0)
It is right to consult an appropriate healthcare professional	50 (25.0)	70 (35.0)	35 (17.5)	10 (5.0)
Willing to have regular follow-up for consultation	60 (30.0)	55 (27.5)	30 (15.0)	20 (10.0)
You get emotionally disturbed during menstruation	35 (17.5)	75 (37.5)	35 (17.5)	20 (10.0)
Difficulty in socializing due to dysmenorrhea	45 (22.5)	70 (35.0)	30 (15.0)	20 (10.0)
Dysmenorrhea causes absenteeism	20 (10.0)	50 (25.0)	60 (30.0)	35 (17.5)
Dysmenorrhea causes poor concentration	25 (12.5)	60 (30.0)	55 (27.5)	25 (12.5)
Dysmenorrhea causes difficulty in house chores	35 (17.5)	55 (27.5)	45 (22.5)	30 (15.0)
Dysmenorrhea interferes with daily routine activities	30 (15.0)	60 (30.0)	40 (20.0)	35 (17.5)

The respondents' attitudes toward dysmenorrhea were assessed to understand their perception of menstrual pain, help-seeking behavior, and its impact on their daily lives. Most respondents recognized dysmenorrhea as a normal part of menstruation, with 140 (70.0%) either strongly agreeing or agreeing with the statement that it is normal to experience pain or discomfort during menses. Although 110 (55.0%) agreed that it is important to seek medical attention for dysmenorrhea, fewer respondents expressed willingness to consult a healthcare professional regularly, with only 115 (57.5%) agreeing or strongly agreeing to regular follow-up. Emotional and social effects have also been reported. A total of 110 (55.0%) respondents indicated that they were emotionally disturbed during menstruation, and 115 (57.5%) reported difficulty in socializing due to dysmenorrhea. The condition also affected daily performance, with 70 (35.0%) perceiving absenteeism as a consequence, 85 (42.5%) reporting poor concentration, 90 (45.0%) indicating difficulty with house chores, and 90 (45.0%) acknowledging that dysmenorrhea interfered with their routine activities.

Table 4. Experience of Dysmenorrhea among Respondents (N = 200)

Variables	Response	Frequency	Percentage (%)
I normally experience dysmenorrhea	Yes	145	72.5
	No	55	27.5
I believe eating sugary food causes dysmenorrhea	Yes	65	32.5
	No	135	67.5
My menstrual pain affects my daily activities	Yes	165	82.5
	No	35	17.5
I am absent from school more often during menstruation because of pain	Yes	95	47.5
	No	105	52.5
I experience pelvic pain at other times during my menstrual cycle	Yes	70	35.0
	No	130	65.0
I feel pain in my lower abdomen when I exercise or play sports	Yes	95	47.5
	No	105	52.5
How would you rate your menstrual pain (scale 1–10)?	Mild (0–3)	85	42.5
	Moderate (4–6)	75	37.5
	Severe (7–10)	40	20.0

This study examined respondents' experiences with dysmenorrhea to assess its occurrence, perceived causes, and extent of interference with daily life and physical activities. Findings revealed that a large proportion of respondents, 145 (72.5%), reported that they normally experience dysmenorrhea, while 55 (27.5%) indicated that they did not. Regarding perceived causes, 65 (32.5%) women believed that the consumption of sugary foods could trigger dysmenorrhea. A considerable majority, 165 (82.5%), reported that menstrual pain affected their daily activities, and 95 (47.5%) admitted being absent from school during menstruation due to pain. Additionally, 70 (35.0%) respondents reported experiencing pelvic pain at other times during their menstrual cycle, while 95 (47.5%) experienced lower abdominal pain when engaging in exercise or sports activities. When asked to rate the severity of their menstrual pain on a 10-point scale, 85 (42.5%) described their pain as mild (0–3), 75 (37.5%) as moderate (4–6), and 40 (20.0%) as severe (7–10) pain. These findings indicate that while most respondents resort to self-care methods, few seek formal healthcare interventions, suggesting limited awareness or accessibility of professional menstrual health services.

Table 5. Coping Practices for Dysmenorrhea Among Respondents (N = 200)

Coping Strategy	Frequency	Percentage (%)
Analgesic use (e.g., paracetamol, ibuprofen)	100	50.0
Rest or sleep during menstruation	90	45.0
Physical exercise (walking, stretching, light activity)	40	20.0
Massage or application of heat to the abdomen	35	17.5
Herbal remedies or traditional medicine	30	15.0
Seeking professional medical help	25	12.5
Dietary modification (reducing caffeine/sugar intake)	20	10.0
Use of multiple coping strategies	60	30.0

This study assessed the coping strategies employed by respondents to manage menstrual pain and discomfort associated with dysmenorrhea. The findings revealed a variety of behavioral, pharmacological, and non-pharmacological approaches among female adolescents in the study area. As shown in Table 5, half of the respondents, 100 (50.0%) reported using analgesics such as paracetamol or ibuprofen to relieve menstrual pain. A considerable number (90 [45.0 %]) indicated that they preferred resting during menstruation to ease discomfort, while 40 (20.0%) engaged in mild physical

exercise, such as stretching or walking, to alleviate symptoms. Non-pharmacological measures such as abdominal massage or the application of heat (using a hot water bottle or towel) were practiced by 35 (17.5%) of the respondents. Only 25 (12.5%) of the adolescents reported seeking professional medical help for the management of dysmenorrhea, while 60 (30.0%) adopted multiple strategies, combining rest, analgesics, or home remedies to achieve pain relief.

4.2 Discussion

The findings of this study provide a comprehensive understanding of the knowledge, attitudes, experiences, and coping strategies related to dysmenorrhea among female respondents, and they are consistent with patterns reported globally and regionally. Dysmenorrhea emerged as a highly prevalent condition among the study participants, with 72.7% reporting that they normally experience menstrual pain. This prevalence is comparable to the findings of De Sanctis et al. (2016), who noted that 60–93% of adolescent girls and young women worldwide experience varying degrees of menstrual pain. Similarly, Dawood (2006) and Femi-Agboola, Sekoni, and Goodman (2017) reported that dysmenorrhea is a leading cause of recurrent school absenteeism and decreased academic performance among adolescents. The high prevalence in the present study underscores the burden of menstrual pain among young women in Nigeria, which continues to be under-recognized despite its profound physical and psychological effects. The respondents' perceptions and attitudes toward dysmenorrhea revealed important cultural and behavioral dimensions. A large majority (84.9%) believed that it is normal to experience pain or discomfort during menstruation, a finding consistent with studies by Awad and Youness (2019) and Poureslami and Osati-Ashtiani (2002), which highlighted how cultural beliefs often normalize menstrual pain and discourage medical consultation.

Such normalization may lead to underreporting and poor treatment-seeking behavior, as women may accept dysmenorrhea as a natural part of womanhood rather than as a condition requiring medical attention. Although 66.6% of the respondents agreed that it was important to seek medical attention during painful menstruation and 72.7% supported consulting healthcare professionals, only 69.7% indicated willingness to have regular medical follow-ups. This attitude suggests a partial understanding of the medical implications of dysmenorrhea and possible sociocultural barriers that prevent consistent medical attention. C. X. Chen, Shieh, Draucker, and Carpenter (2018) similarly noted that women often delay or avoid seeking healthcare due to perceptions that menstrual pain is trivial, or due to fear of stigma, financial cost, or lack of accessible services. The emotional and social effects reported by the respondents demonstrated that dysmenorrhea extended beyond physical pain to affect mental and social well-being. Approximately two-thirds (66.7%) reported becoming emotionally disturbed during menstruation, and 69.7% experienced difficulty in social interactions. This agrees with the Clinic (2023), which describes menstrual pain as a biopsychosocial stressor capable of triggering irritability, anxiety, and depressive symptoms. Dysmenorrhea's impact on concentration (51.6%) and domestic activities (54.5%) further reveals its disruptive nature, aligning with findings by Eryilmaz et al. (2010) and Acheampong et al. (2019), who observed that menstrual discomfort contributes to fatigue, absenteeism, and diminished productivity in both academic and household settings.

In examining the experiences associated with dysmenorrhea, this study found that 81.8% of respondents reported that menstrual pain interfered with their daily activity. This aligns with the study by Chia et al. (2013), who reported that dysmenorrhea significantly impairs QoL and functional capacity among young women. School absenteeism due to menstrual pain was reported by 45.5% of participants, mirroring the findings of Femi-Agboola et al. (2017) and Vashisht, Pathak, Agarwalla, Patavegar, and Panda (2018), who found that pain-related absenteeism among adolescents was a key contributor to reduced academic outcomes. The finding that 48.5% of respondents experienced pain during exercise or sports reflects the influence of uterine ischemia and muscle contractions exacerbated by physical activity during menstruation (Kho & Shields, 2020). The pain severity ratings among respondents showed that 45.5% experienced mild pain, 36.4% moderate pain, and 18.2% severe pain. This distribution is comparable to the results of a study by Kural, Noor, Pandit, Joshi, and Patil (2015), who found that while most young women report mild-to-moderate dysmenorrhea, even moderate pain can cause significant functional limitations. The findings suggest that pain severity may be influenced by multiple factors, such as hormonal fluctuations, early menarche, diet, stress, and body mass index. The

perception among 33.3% of respondents that eating sugary foods contributes to menstrual pain is consistent with evidence from Hollins-Martin et al. (2014) and Barnard (2020), who linked refined carbohydrate consumption to prostaglandin overproduction, which increases uterine contractions and cramping intensity.

The coping mechanisms employed by respondents reflect both adaptive and inadequate strategies. Analgesic use (50%) was the most common approach, consistent with findings from Dawood (2006) and Roger Smith and Kaunitz (2022), who identified nonsteroidal anti-inflammatory drugs (NSAIDs) as the most frequently used and clinically effective pain relief option for dysmenorrhea. However, the widespread self-medication raises concerns regarding incorrect dosing, drug resistance, and masking of underlying pathologies, such as endometriosis or pelvic inflammatory disease. Non-pharmacological methods such as rest (40%), exercise (15%), massage or heat therapy (10%), and professional medical help (7.5%) were also reported by the participants. The low rate of seeking professional care corroborates C. X. Chen et al. (2018), who observed that women often prioritize self-care due to cultural norms, financial limitations, and privacy concerns.

The use of multiple coping strategies by 25% of respondents indicates an evolving awareness of combined therapeutic approaches, as reported by C.-H. Chen et al. (2006) in Taiwan, where adolescents integrated lifestyle modification, relaxation, and pharmacologic methods for better pain control. Nevertheless, the preference for nonclinical interventions suggests a gap in menstrual health education and professional counseling. Structured health education and guidance on safe analgesic use, stress management, and physical activity may help adolescents manage dysmenorrhea more effectively.

5. Conclusion

Dysmenorrhea remains a significant reproductive health concern among adolescent females in Ibadan North, affecting their physical well-being, emotional stability, and academic performance. Although a moderate level of knowledge was observed, misconceptions about its causes and management persist, leading many to normalize menstrual pain and rely primarily on self-medication and rest rather than seeking professional care. The limited utilization of healthcare services underscores the need for strengthened health education. Enhanced menstrual health education within school settings, coupled with improved access to adolescent-friendly healthcare, is essential for promoting early recognition, appropriate management, and healthier coping mechanisms. Collaborative efforts among educators, healthcare providers, and policymakers are crucial for addressing knowledge gaps and promoting positive attitudes toward menstrual health. Strengthening these systems will contribute to improved reproductive health outcomes and overall quality of life among adolescent girls.

References

Acheampong, K., Baffour-Awuah, D., Ganu, D., Appiah, S., Pan, X., Kaminga, A., & Liu, A. (2019). Prevalence and predictors of dysmenorrhea, its effect, and coping mechanisms among adolescents in Shai Osudoku District, Ghana. *Obstetrics and gynecology international*(1). doi:https://doi.org/10.1155/2019/5834159

Al-Kindi, R., & Al-Bulushi, A. (2011). Prevalence and impact of dysmenorrhoea among Omani high school students. *Sultan Qaboos University Medical Journal, 11*(4), 485-491.

Atteraya, M. S., Song, I. H., Ebrahim, N. B., Gnawali, S., Kim, E., & Dhakal, T. (2023). Inequalities in childhood immunisation in South Asia. *International journal of environmental research and public health, 20*(3), 1755. doi:https://doi.org/10.3390/ijerph20031755

Awad, A. G., & Youness, E. M. (2019). Assessment of knowledge, Attitude and Practice among Adolescent Girls Regarding Dysmenorrhea. *Minia Scientific Nursing Journal, 5*(1), 23-31. doi:https://doi.org/10.21608/msnj.2019.187785s

Babatunde, O., Olatunji, M., Omotajo, O., Ikwunne, O., Babatunde, A., Nihinlola, E., . . . Dairo, M. (2022). Impact of COVID-19 on routine immunization in Oyo State, Nigeria: trend analysis of immunization data in the pre- and post-index case period; 2019-2020. *Pan African Medical Journal, 41*. doi:http://dx.doi.org/10.11604/pamj.2022.41.54.28575

Barnard, N. D. (2020). Dysmenorrhea. In N. D. Barnard (Ed.), *Nutrition Guide for Clinicians* (3 ed.). Washington, DC: Physicians Committee for Responsible Medicine.

Chen, C.-H., Lin, Y.-H., Heitkemper, M. M., & Wu, K.-M. (2006). The self-care strategies of girls with primary dysmenorrhea: a focus group study in Taiwan. *Health Care for Women International, 27*(5), 418-427. doi:https://doi.org/10.1080/07399330600629583

Chen, C. X., Shieh, C., Draucker, C. B., & Carpenter, J. S. (2018). Reasons women do not seek health care for dysmenorrhea. *Journal of clinical nursing, 27*(1-2), 301-308. doi:https://doi.org/10.1111/jocn.13946

Chia, C., Lai, J. H., Cheung, P., Kwong, L., Lau, F. P., Leung, K., . . . Ngu, S. (2013). Dysmenorrhoea among Hong Kong university students: prevalence, impact, and management. *Hong Kong Medical Journal, 19*(3), 1-7. doi:https://doi.org/10.12809/hkmj133807

Clinic, C. (2023). Premenstrual dysphoric disorder (PMDD). Retrieved from https://my.clevelandclinic.org/health/articles/9132-premenstrual-dysphoric-disorder-pmdd

Costa, F., Neves Silva, L., Cata-Preta, B., Santos, T., Ferreira, L., Mengistu, T., . . . Victora, C. (2024). Child immunization status according to number of siblings and birth order in 85 low- and middle-income countries: a cross-sectional study. *EClinicalMedicine, 71*. doi:http://dx.doi.org/10.1016/j.eclinm.2024.102547

Dawood, M. Y. (2006). Primary dysmenorrhea: advances in pathogenesis and management. *Obstetrics & Gynecology, 108*(2), 428-441. doi:https://doi.org/10.1097/01.AOG.0000230214.26638.0c

De Sanctis, V., Soliman, A. T., Elsedfy, H., Soliman, N. A., Elalaily, R., & El Kholy, M. (2016). Dysmenorrhea in adolescents and young adults: a review in different countries. *Acta Bio Medica: Atenei Parmensis, 87*(3), 233-246.

Dixon, S., Hirst, J., Taghinejadi, N., Duddy, C., Vincent, K., & Ziebland, S. (2024). What is known about adolescent dysmenorrhoea in (and for) community health settings? *Frontiers in Reproductive Health, 6*. doi:https://doi.org/10.3389/frph.2024.1394978

Durain, D. (2004). Primary dysmenorrhea: assessment and management update. *Journal of midwifery & women's health, 49*(6), 520-528. doi:https://doi.org/10.1016/j.jmwh.2004.08.013

Eryilmaz, G., Ozdemir, F., & Pasinlioglu, T. (2010). Dysmenorrhea prevalence among adolescents in eastern Turkey: its effects on school performance and relationships with family and friends. *Journal of Pediatric and Adolescent Gynecology, 23*(5), 267-272. doi:https://doi.org/10.1016/j.jpag.2010.02.009

Femi-Agboola, D. M., Sekoni, O. O., & Goodman, O. O. (2017). Dysmenorrhea and its effects on school absenteeism and school activities among adolescents in selected secondary schools in Ibadan, Nigeria. *Nigerian Medical Journal, 58*(4), 143-148. doi:https://doi.org/10.4103/nmj.nmj_47_17

Fennie, T., Moletsane, M., & Padmanabhanunni, A. (2022). Adolescent girls' perceptions and cultural beliefs about menstruation and menstrual practices: A scoping review. *African journal of reproductive health, 26*(2), 88-105.

Forshaw, J., Gerver, S. M., Gill, M., Cooper, E., Manikam, L., & Ward, H. (2017). The global effect of maternal education on complete childhood vaccination: a systematic review and meta-analysis. *BMC infectious diseases, 17*(1), 801. doi:https://doi.org/10.1186/s12879-017-2890-y

Hollins-Martin, C., van den Akker, O., Martin, C., & Preedy, V. R. (2014). *Handbook of diet and nutrition in the menstrual cycle, periconception and fertility*: Wageningen Academic Publishers.

Jayaram, R., Subbarayan, K., Mithraprabhu, S., & Govindarajan, M. (2016). Heavy menstrual bleeding and dysmenorrhea are improved by Magnetic Resonance Guided Focused Ultrasound Surgery (MRgFUS) of adenomyosis. *Fertility Research and Practice, 2*(1). doi:https://doi.org/10.1186/s40738-016-0021-x

Kho, K. A., & Shields, J. K. (2020). Diagnosis and management of primary dysmenorrhea. *Jama, 323*(3), 268-269. doi:https://doi.org/10.1001/jama.2019.16921

Kural, M., Noor, N. N., Pandit, D., Joshi, T., & Patil, A. (2015). Menstrual characteristics and prevalence of dysmenorrhea in college going girls. *Journal of family medicine and primary care, 4*(3), 426-431. doi:https://doi.org/10.4103/2249-4863.161345

Malande, D. O. (2019). Barriers to effective uptake and provision of immunization in a rural district in Uganda. *Plos one, 14*.

Monga, D. C., & Konar, H. (2020). *Monga DC textbook of gynaecology* (6 ed.). New Delhi: Jaypee Brothers Medical Publishers.

Poureslami, M., & Osati-Ashtiani, F. (2002). Assessing knowledge, attitudes, and behavior of adolescent girls in suburban districts of Tehran about dysmenorrhea and menstrual hygiene. *Journal of International Women's Studies, 3*(2), 51-61.

Salako, J., Bakare, D., Uchendu, O. C., Bakare, A. A., Graham, H., & Falade, A. G. (2023). Factors associated with immunization status among children aged 12-59 months in Lagelu local government area, Ibadan: a cross-sectional study. *Pan African Medical Journal, 46*(1). doi:https://doi.org/10.1186/s13643-019-1054-0

Vashisht, A., Pathak, R., Agarwalla, R., Patavegar, B. N., & Panda, M. (2018). School absenteeism during menstruation amongst adolescent girls in Delhi, India. *Journal of Family and Community Medicine, 25*(3), 163-168. doi:https://doi.org/10.4103/jfcm.JFCM_161_17

Williams, S. V., Akande, T., & Abbas, K. (2024). Systematic review of social determinants of childhood immunisation in low-and middle-income countries and equity impact analysis of childhood vaccination coverage in Nigeria. *Plos one, 19*(3), e0297326. doi:https://doi.org/10.1371/journal.pone.0297326