ORIGINAL ARTICLE OPEN ACCESS

Midwives' Knowledge, Attitudes, and Perceived Barriers to Complementary and Alternative Medicine in Labour Pain Management: A Cross-Sectional Study in Benin City, Nigeria

*[1]Edo-Osagie CC, [1]Iniomor MA

ABSTRACT

Background: Labour pain is a major concern in intrapartum care. Complementary and alternative medicine offers non pharmacological options that may improve maternal comfort and childbirth experience. Midwives play a key role in whether these methods are discussed, recommended, or used in clinical settings. This study assessed midwives' perspectives on complementary and alternative medicine in labour pain management at a tertiary hospital in Benin City, Edo State, Nigeria.

Methods: A descriptive cross-sectional survey was conducted among registered midwives involved in maternal care at the University of Benin Teaching Hospital. A total of 132 questionnaires were distributed, and 130 valid responses were analysed, giving a response rate of 98.5 percent. Simple random sampling technique was used to select the sample size. Data were analysed using frequencies, percentages and means

Results: Most respondents were female, 112 of 130, and 54 of 130 worked in the labour or delivery ward. Only 39 respondents had received formal training on complementary and alternative medicine, while 52 had used or recommended it. Overall, 109 respondents showed good knowledge, 92 had positive attitudes, and 96 identified practice related factors as influential. Lack of formal training, insufficient institutional support, limited resources, workload, time constraints, and fear of legal or professional consequences were key barriers.

Conclusion: Midwives demonstrated good knowledge and generally positive attitudes toward complementary and alternative medicine in labour pain management, but implementation was limited by training and institutional gaps. Structured education, clear hospital policies, and resource support are needed to promote safe and evidence informed integration into maternity care.

Keywords: Complementary and alternative medicine, labour pain, midwives

INTRODUCTION

Labour pain is one of the most intense forms of acute pain experienced by women, and effective pain management remains a central component of quality intrapartum care. Conventional approaches such as epidural analgesia, opioids, and inhalational agents are widely used, but they may be limited by side effects, cost, access, acceptability, and resource demands, especially in low resource settings (1,2). These limitations have increased attention to complementary and alternative medicine, referred to in this article as CAM, as part of a more woman centred approach to childbirth care.

CAM in labour pain management includes methods such as massage, aromatherapy, breathing exercises, music therapy, hydrotherapy, reflexology, acupuncture, herbal remedies, relaxation techniques, and other supportive practices. These techniques, and other supportive practices. These methods are often valued because they are perceived as natural, culturally familiar, less invasive, and supportive of maternal control during labour (3,4). However, their use within formal maternity services remains uneven because evidence, policy, training, and institutional support vary across settings (5, 6).

Midwives are central to labour care. Their knowledge, confidence, professional attitudes, and perception of institutional support influence whether CAM is discussed with women, recommended as a supportive measure, or used in practice. Evidence from different contexts suggests that midwives may have favourable views toward non pharmacological pain relief, but gaps in formal training and resources often reduce practical application (7, 8, 9).

In Nigeria, CAM use in maternal health is shaped by cultural beliefs, traditional birth practices, access to care, and economic factors. Women and families may use herbal remedies, massage, prayers, and other indigenous practices before or during labour. While some practices may provide

* Correspondence: chinenyenwa.edo-osagie@uniben.edu
[2]Department of Maternal and Child Health Nursing, Faculty of Nursing Science, University of Benin, Benin City, Edo State, Nigeria
Full list of author information is available at the end of the article

comfort, unregulated use may also raise safety concerns. This makes the role of trained midwives important in supporting respectful care, balanced information, and safe practice.

Despite increasing interest in CAM, limited local evidence exists on midwives' perspectives in tertiary hospital settings in Benin City. This study aimed to assess the knowledge, attitudes, and perceived barriers to complementary and alternative medicine in labour pain management at the University of Benin Teaching Hospital, Edo State, Nigeria.

MATERIALS AND METHODS

Research design

A descriptive cross-sectional study design was used. The design was appropriate because it allowed assessment of midwives' knowledge, attitudes, and perceived influencing factors at a single point in time. The study was conducted at the University of Benin Teaching Hospital, a tertiary health institution located in Benin City, Edo State, Nigeria in August 2025. The hospital serves as a referral centre for maternal and child health services and provides antenatal, delivery, postnatal, emergency, clinical, and diagnostic services.

Target population

The target population consisted of 171 midwives across maternity-related units. The sample size was determined using the Taro Yamane formula:

$n = N / (1 + N * e^2)$
Where n = Sample size
N= Total Population
e = Level of precision (0.05)
n= 171/(1+171(0.05)^2)
n= 171/(1+171x0.0025)
n= 171/(1+0.4275)
n= 171/1.4275
n= 120
Therefore, sample size is 120

Attrition rate = 10/100 * 120 = 12

Thus, a sample size of 120 + 12= 132

Inclusion Criteria

Midwives were eligible if they had worked in labour or maternity related care for at least six months and agreed to participate. Midwives who were on leave, unavailable during data collection, or not directly involved in labour pain management were excluded.

Sampling Technique

A simple random sampling technique was employed to select eligible midwives. In this method, every midwife in the sampling frame had an equal chance of being chosen, which helps reduce selection bias. The sampling frame consisted of a complete list of 171 midwives across all maternity-related units at the University of Benin Teaching Hospital. Each midwife on this list was assigned a unique number, and participants were selected using a random number generator to ensure unbiased selection

Method of Data Collection

Data were collected using a structured self-administered questionnaire developed from the literature and adapted to the study objectives. The questionnaire had four sections: sociodemographic and professional characteristics, knowledge of CAM in labour pain management, attitudes toward CAM use, and factors influencing CAM use. Knowledge items were scored as 1 for correct responses and 0 for incorrect responses. A total knowledge score ≥70% of the maximum possible score was classified as 'good knowledge', while scores below 70% were considered 'poor knowledge'. Attitude items were rated on a 4-point Likert scale (1 = strongly disagree to 4 = strongly agree), with a mean score ≥3.0 considered a 'positive attitude'.

Face and content validity were assessed through supervisor and expert review to ensure that items measured the study objectives. Reliability was evaluated using the Pearson correlation coefficient in a test–retest procedure conducted among respondents outside the study sample, yielding r = 0.70, which indicates acceptable reliability. Questionnaires were administered to participants after the study purpose was explained, and completed questionnaires were collected immediately when possible. A total of 132 questionnaires were distributed, and 130 were valid for analysis. Data collection occurred over approximately two weeks in August 2025. Written informed consent was obtained from all participants prior to questionnaire administration.

Method of Data Analysis

Data were analysed using Statistical Package for the Social Sciences version 26. Descriptive statistics were used to summarise frequencies, percentages, and mean scores.

Ethical considerations

Ethical approval was obtained from the Health Research Ethics Committee of the University of Benin Teaching Hospital, Benin City, Nigeria, protocol number ADM/E 22/A/VOL.VII/ 2025/2278. Participation was voluntary. Respondents were instructed not to write their names on the questionnaire. Confidentiality and anonymity were maintained throughout the study.

RESULTS

A total of 132 questionnaires were distributed, and 130 were valid for analysis, giving a response rate of 98.5 percent.

Sociodemographic and professional characteristics

Most respondents were female, 112 of 130, and married, 91 of 130. The largest age group was 30 to 39 years, 46 of 130. Regarding educational qualification, 48 respondents had a Bachelor of Nursing Science, while 42 had RN and RM qualifications. Labour or delivery ward staff formed the largest unit group, 54 of 130. Only 39 respondents reported formal CAM training, and 52 had ever used or recommended CAM for labour pain management.

Table 1. Sociodemographic and professional characteristics of respondents, n equals 130

Variable	Frequency	Percent
Age		
20 to 29 years	28	21.5
30 to 39 years	46	35.4
40 to 49 years	37	28.5
50 years and above	19	14.6
Sex		
Male	18	13.8
Female	112	86.2
Marital status		
Single	27	20.8
Married	91	70.0
Divorced	6	4.6
Widowed	6	4.6
Highest educational qualification		
RM	20	15.4
RN and RM	42	32.3
BNSc	48	36.9
Postgraduate degree	16	12.3
Others	4	3.1
Years of working experience		
Less than 5 years	24	18.5
5 to 10 years	38	29.2
11 to 15 years	32	24.6
16 to 20 years	21	16.2
More than 20 years	15	11.5
Current unit or department		
Antenatal ward	26	20.0
Labour or delivery ward	54	41.5
Postnatal ward	22	16.9
Maternity theatre	18	13.8
Others	10	7.8
Received formal CAM training		
Yes	39	30.0
No	91	70.0
Ever used or recommended CAM		
Yes	52	40.0
No	78	60.0

RN= Registered Nurse, RM= Registered Midwife, BNSc= Bachelor of Nursing Science, Others= Registered Public Health Nurse, Registered Nurse educator

Knowledge of CAM in labour pain management

Knowledge scores were based on a 0–1 point system for each item, with 1 indicating a correct response and 0 indicating an incorrect response. Total scores were summed for each participant, and the percentage of correct responses was calculated. Knowledge was categorized as follows: 75–100% = Good, 50–74% = Fair, <50% = Poor. Overall, 109 respondents had good knowledge of CAM in labour pain management, while 21 had poor knowledge. Correct knowledge was strongest for aromatherapy involving essential oils, 118 of 130, massage as a touch based relaxation technique, 116 of 130, acupuncture involving fine needles, 113 of 130, and holistic natural approaches as a core feature of CAM, 112 of 130. Hypnobirthing had the lowest correct response level, 96 of 130, but still indicated fair knowledge.

Table 2. Knowledge of CAM in labour pain management

Knowledge item	Correct n	Correct percent	Remark
Massage therapy as an example of CAM	111	85.4	Good
Aromatherapy involves essential oils	118	90.8	Good
CAM can enhance relaxation and reduce anxiety	104	80.0	Good
Hypnobirthing involves controlled breathing and mental imagery	96	73.8	Fair
Acupuncture involves inserting fine needles into specific body points	113	86.9	Good
Reflexology is based on points on the feet corresponding to body organs	107	82.3	Good
Hydrotherapy provides buoyancy and pain relief during labour	101	77.7	Good
Music therapy is a non-pharmacological method	109	83.8	Good
Massage uses touch to promote relaxation and reduce muscle tension	116	89.2	Good
CAM practices focus on holistic and natural approaches	112	86.2	Good
Grand mean (average score across all items, scale 0–1)		0.83	Good

Note: The grand mean is the average proportion of correct responses across all items, providing an overall knowledge score for the sample.

Attitudes toward CAM in labour pain management

Most respondents showed positive attitudes toward CAM. In total, 92 of 130 had positive attitude scores, while 38 had negative attitude scores. The strongest response was openness to learning more about CAM, with a mean score of 3.3. Respondents also supported CAM as beneficial for the childbirth experience and as having fewer side effects than pharmacological pain relief. Institutional policy support had the lowest mean score, 2.3, showing weak perceived workplace encouragement.

Factors influencing CAM use

In total, 96 respondents considered factors influencing CAM use to be influential, while 34 considered them non influential. Support from hospital management had the highest mean score, 3.3. Lack of formal training had a mean score of 3.2. Insufficient institutional support, limited CAM resources, workload and time constraints, and positive patient feedback each recorded a mean score of 3.1.

Table 3. Attitudes of midwives toward Complementary and Alternative Medicine (CAM) in labour pain management

Statement	Strongly agree n(%)	Agree n(%)	Disagree	Strongly disagree n(%)	Mean	Remark
CAM is an effective way to manage labour pain.	44 (33.8)	59 (45.4)	20 (15.4)	7 (5.4)	3.1	Positive
Using CAM improves the overall childbirth experience for women.	52 (40.0)	54 (41.5)	18 (13.8)	6 (4.7)	3.2	Positive
CAM should be integrated into routine labour pain management alongside conventional methods.	49 (37.7)	57 (43.8)	17 (13.1)	7 (5.4)	3.1	Positive
I feel confident in my ability to apply CAM techniques during labour.	28 (21.5)	46 (35.4)	38 (29.2)	18 (13.9)	2.6	Positive
CAM methods have fewer side effects compared to pharmacological pain relief.	56 (43.1)	48 (36.9)	17 (13.1)	9 (6.9)	3.2	Positive
The use of CAM in labour pain management is supported by scientific evidence.	31 (23.8)	52 (40.0)	33 (25.4)	14 (10.8)	2.8	Positive
I am open to learning more about CAM to improve labour pain management practices.	63 (48.5)	47 (36.2)	13 (10.0)	7 (5.3)	3.3	Positive
Institutional policies at my workplace encourage CAM use.	19 (14.6)	34 (26.2)	47 (36.2)	30 (23.0)	2.3	Low support
Labouring women prefer CAM methods over conventional pain relief.	26 (20.0)	44 (33.8)	40 (30.8)	20 (15.4)	2.6	Positive
CAM can complement pharmacological methods without compromising safety.	51 (39.2)	55 (42.3)	15 (11.5)	9 (6.9)	3.1	Positive
Grand mean					2.9	Positive

Scoring system: 1 = Strongly disagree, 2 = Disagree, 3 = Agree, 4 = Strongly agree.

Note: Mean scores ≥3 indicate positive attitude, <3 indicate low support.

Table 4. Factors influencing the use of CAM in labour pain management

Statement	Strongly agree n(%)	Agree n(%)	Disagree n(%)	Strongly disagree n(%)	Mean	Remark
Lack of formal training limits my use of CAM.	61 (46.9)	43 (33.1)	18 (13.8)	8 (6.2)	3.2	Influential
Insufficient institutional support discourages the use of CAM.	54 (41.5)	47 (36.2)	21 (16.1)	8 (6.2)	3.1	Influential
Limited availability of CAM resources affects my ability to use CAM.	58 (44.6)	42 (32.3)	20 (15.4)	10 (7.7)	3.1	Influential
Personal beliefs and cultural practices influence my decision to use CAM.	39 (30.0)	49 (37.7)	29 (22.3)	13 (10.0)	2.9	Influential
Fear of legal or professional consequences prevents me from recommending CAM.	46 (35.4)	37 (28.5)	29 (22.3)	18 (13.8)	2.9	Influential

Statement	Strongly agree n(%)	Agree n(%)	Disagree n(%)	Strongly disagree n(%)	Mean	Remark
Workload and time constraints reduce opportunities to apply CAM.	57 (43.8)	39 (30.0)	23 (17.7)	11 (8.5)	3.1	Influential
Positive feedback from patients encourages me to continue using CAM.	49 (37.7)	54 (41.5)	19 (14.6)	8 (6.2)	3.1	Influential
Lack of awareness about CAM benefits limits acceptance among colleagues.	44 (33.8)	47 (36.2)	26 (20.0)	13 (10.0)	2.9	Influential
Support from hospital management would increase my use of CAM.	63 (48.5)	45 (34.6)	14 (10.8)	8 (6.1)	3.3	Influential
Concerns about safety and efficacy discourage CAM use.	41 (31.5)	48 (36.9)	27 (20.8)	14 (10.8)	2.9	Influential
Grand mean					3.0	Influential

Note. Mean scores were calculated on a 4-point Likert scale: 1 = Strongly disagree, 2 = Disagree, 3 = Agree, 4 = Strongly agree. Mean ≥3 indicates that the factor is influential; mean <3 would indicate low influence.

DISCUSSION

This study indicated that most midwives in the tertiary hospital demonstrated substantial knowledge of complementary and alternative medicine (CAM) in labour pain management. Respondents were particularly familiar with common approaches such as aromatherapy, massage, acupuncture, music therapy, hydrotherapy, and reflexology. These findings align with reports suggesting growing awareness of non-pharmacological pain relief methods among maternity care providers, even when formal training remains limited (6, 7).

Although general attitudes toward CAM were positive, confidence in applying these methods in practice was comparatively lower. More than two thirds of participants expressed favourable views regarding CAM's ability to complement conventional pain relief and enhance the childbirth experience, but practical application appeared constrained. This distinction highlights the potential gap between supportive attitudes and implementation readiness, reinforcing literature emphasizing the need for structured training and resource access for safe clinical use (5, 7).

Institutional support emerged as a notable concern. Workplace policies and formal encouragement for CAM use scored lowest among attitude items, reflecting possible barriers to integration into routine practice. This aligns with findings that organizational and policy factors can influence midwives' willingness to offer non-pharmacological pain management strategies (5, 8). Midwives may limit CAM recommendations due to uncertainty regarding protocols, workload pressures, or perceived professional risks, underscoring the importance of clear guidance and managerial support.

The primary factors influencing CAM use included lack of formal training, limited institutional support, resource constraints, workload and time limitations, professional or legal concerns, and safety considerations. These factors are consistent with evidence from both African and international contexts, where educational, cultural, staffing, and policy dimensions shape pain management practices (1; 23). Notably, midwives indicated that hospital management support could enhance CAM utilisation, suggesting that structured interventions and administrative backing may improve integration.

The primary factors influencing CAM use included lack of formal training, limited institutional support, resource constraints, workload and time limitations, professional or legal concerns, and safety considerations. These factors are consistent with evidence from both African and international contexts, where educational, cultural, staffing, and policy dimensions shape pain management practices (1; 23). Notably, midwives indicated that hospital management support could enhance CAM utilisation, suggesting that structured interventions and administrative backing may improve integration.

Measurement limitations should be considered when interpreting these findings. Data relied on self-reported knowledge, attitudes, and perceptions, which may be subject to recall bias or social desirability effects. Survey instruments were not externally validated beyond content review, potentially affecting the precision and consistency of responses.

Measurement limitations should be considered when interpreting these findings. Data relied on self-reported knowledge, attitudes, and perceptions, which may be subject to recall bias or social desirability effects. Survey instruments were not externally validated beyond content review, potentially affecting the precision and consistency of responses.

Single-centre limitation is also relevant. This study was conducted in one tertiary hospital, which may limit the generalizability of findings to other settings, including private facilities, rural hospitals, or other regions with differing policies, resources, or cultural practices. Observed knowledge, attitudes, and influencing factors may not reflect the broader population of midwives in Nigeria or other countries.

Overall, the findings suggest that midwives' engagement with CAM is influenced more by structural and institutional factors than by knowledge or attitudes alone. Integration of CAM into labour care may benefit from targeted education, managerial support, and access to safe resources. However, interpretations should avoid inferring direct causality between these factors and CAM use due to the cross-sectional study design.

Limitations of the Study

The cross-sectional design prevents causal inference, and reliance on self-reported data may introduce recall or social desirability bias. Conducted in a single country, the findings may not generalize to other settings, and unmeasured factors such as institutional policies or workload could influence midwives' practices.

Conclusion

Midwives in the tertiary hospital exhibited substantial knowledge of complementary and alternative medicine (CAM) and generally positive attitudes toward its use in labour pain management. Familiarity with approaches such as aromatherapy, massage, acupuncture, music therapy, hydrotherapy, and reflexology suggests awareness of commonly applied CAM methods in clinical settings. Confidence in practical application of CAM techniques was lower than general knowledge and attitude levels, indicating potential barriers to routine use. Factors such as lack of formal training, limited institutional support, resource constraints, workload, professional or legal concerns, and safety considerations were reported as influential in shaping midwives' engagement with CAM. These findings highlight the importance of considering structural, educational, and policy-related dimensions when evaluating the integration of CAM into labour care. Measurement limitations, including reliance on self-reported responses, and the single-centre nature of the study, may restrict the generalizability of results. Implications for practice include the potential value of targeted education, accessible resources, and supportive institutional policies to enhance safe and consistent use of CAM. Further research across multiple healthcare settings could provide broader insight into knowledge, attitudes, and influencing factors among midwives, supporting evidence-informed strategies for integrating non-pharmacological pain management in labour.

Recommendations

Nursing and midwifery training institutions should include CAM related content in maternal health curricula, with emphasis on safe non pharmacological labour pain management. Hospitals should organise regular in service training and workshops for practising midwives. Hospital management should develop clear policies on CAM use, provide resources, and support documentation and monitoring. Further research should assess maternal outcomes, patient satisfaction, and the effect of structured CAM training on midwives' competence and practice.

Declarations

Ethics approval: Ethical approval was obtained from the Health Research Ethics Committee of the University of Benin Teaching Hospital, Benin City, Nigeria, protocol number ADM/E 22/A/VOL.VII /2025/2278. Participation was voluntary. Respondents gave consent before completing the questionnaire. Anonymity and confidentiality were maintained.

Consent for publication: The manuscript does not contain identifiable individual participant data.

Availability of data and materials: The datasets used for this study are available from the corresponding author on reasonable request, subject to institutional approval and confidentiality requirements.

Competing interests: The author declares no competing interests.

Funding: No external funding was reported for this study.

Author contribution: Edo-Osagie Chinenyenwa Christy conceptualised the study, developed the proposal, analysed the data, interpreted the findings, and prepared the manuscript while Iniomor, Mary Aguelegbe collected the data.

Acknowledgements: The author acknowledges the Department of Maternal and Child Health Nursing, Faculty of Nursing Science, University of Benin, and the University of Benin Teaching Hospital for academic and institutional support.

Author Details: [1]Department of Maternal and Child Health Nursing, Faculty of Nursing Science, University of Benin, Benin City, Edo State, Nigeria.

REFERENCES

1. Palet-Rodriguez A, Torrubia-Perez E. The usefulness of complementary therapies in pain management during childbirth: an integrative review. Enferm Glob. 2023;22(70):465–496. doi:10.6018/eglobal.529861

2. Zuarez-Easton S, Erez O, Zafran N, Carmeli J, Garmi G, Salim R. Pharmacologic and nonpharmacologic options

for pain relief during labor: an expert review. Am J Obstet Gynecol. 2023;228(5 Suppl). doi:10.1016/j.ajog.2023.03.003

3. Melillo A, Maiorano P, Rachedi S, Caggianese G, Gragnano E, Gallo L, et al. Labor analgesia: a systematic review and meta-analysis of non-pharmacological complementary and alternative approaches to pain during first stage of labor. Crit Rev Eukaryot Gene Expr. 2022;32(2):61–89. doi:10.1615/CritRevEukaryotGeneExpr.2021039986

4. Parkies L, Murray D, Okafor UB. Pharmacological labour pain interventions: South African midwives' perspective. BMC Nurs. 2024;23:176. doi:10.1186/s12912-024-01844-w

5. Ingram MA, Brady S, Peacock AS. The barriers to offering non-pharmacological pain management as an initial option for laboring women: a review of the literature. Eur J Midwifery. 2022. doi:10.18332/ejm/149244

6. Matabane SE, Musie MR, Mulaudzi MF. Childbirth preparation: knowledge of the use of non-pharmacological pain relief methods during childbirth in Tshwane District, South Africa. Nurs Rep. 2023. doi:10.3390/nursrep14010001

7. Mollart L, Stulz V, Foureur M. Midwives' knowledge and education/training in complementary and alternative medicine: a national survey. Complement Ther Clin Pract. 2021;45:101473. doi:10.1016/j.ctcp.2021.101473

8. Eyeberu A, Debela A, Getachew T, Dheresa M, Alemu A, Dessie Y. Obstetrics care providers' attitude and utilization of non-pharmacological labor pain management in Harari regional state health facilities, Ethiopia. BMC Pregnancy Childbirth. 2022;22(1):389. doi:10.1186/s12884-022-04717-9

9. Yayi A, Omona K. Knowledge, attitudes and practices toward traditional and complementary medicine among nurses and midwives in North Western Uganda. Int J Stud Nurs. 2021;6(4). doi:10.20849/ijsn.v6i4.943

10. Abdullahi HS. Assessment of pain management in labour and midwives perspectives in hospital used Damaturu Yobe State. Afr J Health Nurs Midwifery. 2024;7(2):249–259. doi:10.52589/AJHNM-MSBFSDKB

11. Abikou L, Haruna T, Duah H, Shidende P. Healthcare providers' utilization of nonpharmacological methods in managing labor pain: an integrative review. Pain Manag Nurs. 2024;25(5):480–486. doi:10.1016/j.pmn.2024.06.010

12. Akin-Otiko BO, Ezeh PO. Practices and challenges of pain management during first stage of labour among midwives in University of Medical Sciences Teaching Hospital Complex, Akure. Int J Nurs Midwife Health Relat Cases. 2023;9(2):13–23.

13. Alhassan AS, Dakurah S, Lasong J. Perspectives of midwives on the use of Kaligutim (local oxytocin) for induction of labour among pregnant women in the government hospitals in Tamale. BMC Pregnancy Childbirth. 2024;24(1):561. doi:10.1186/s12884-024-06745-z

14. Al-Worafi YM. Evidence-based complementary, alternative and integrative medicine: efficacy and safety. In: Al-Worafi YM, editor. *Handbook of Complementary, Alternative, and Integrative Medicine*. 2025. p. 271–291. doi:10.1201/9781003328063-16

15. Ben-Arye E, Biron-Shental T, Rosa WE, Samuels N, Levy O, Keshet Y, et al. Acupuncture in obstetrics: delivery room integrative medicine for anxiety and pain. BMJ Support Palliat Care. 2025;15(4):535–541. doi:10.1136/spcare-2025-005512

16. Cabral BTV, Rocha MCdS, Almeida VRdM, Petrônio CCA. Non-pharmacological measures for pain relief in childbirth: a systematic review. Rev Bras Saude Mater Infant. 2023;23. doi:10.1590/1806-9304202300000439-en

17. Abdollahi F, Yazdani Charati J, Lye MS. Midwives' perceptions of complementary and alternative medicines during pregnancy. Complement Ther Med. 2020;49:102323. doi:10.1016/j.ctim.2020.102323

18. Fleet JA, Adelson P, McKellar L, Steen M. Antenatal education incorporating complementary medicine techniques for labour and birth to reduce the rates of epidural in primiparous women: a randomised control trial. Midwifery. 2024;139:104170. doi:10.1016/j.midw.2024.104170

19. Guzewicz P, Sierakowska M. The role of midwives in the course of natural childbirth: analysis of sociodemographic and psychosocial factors, a cross-sectional study. Int J Environ Res Public Health. 2022;19(23):15824. doi:10.3390/ijerph192315824

20. Ibrahim HAF, Alshahrani MS, Al Qinnah AJ, Elgzar WT. Nonpharmacological pain relief for labour pain: knowledge, attitude, and barriers among obstetric care providers. PeerJ. 2024. doi:10.7717/peerj.16862

21. Melesse AS, Bayable SD, Ashebir YG, Ayenew NT, Fetene MB. Survey on knowledge, attitude and practice of labor analgesia among health care providers at Debre Markos Comprehensive Specialized Hospital, Ethiopia. Ann Med Surg (Lond). 2022. doi:10.1016/j.amsu.2022.103306

22. Nori W, Kassim MAK, Helmi ZR, Pantazi AC, Brezeanu D, Brezeanu AM, et al. Non-pharmacological pain management in labor: a systematic review. J Clin Med. 2023;12(23):7203. doi:10.3390/jcm12237203

23. Wondimu L, Bekana M, Tura AK, Getachew T. Perception, practice and associated factors of labour pain management among obstetric care providers in public health facilities in Harari Region, Ethiopia. Int Health. 2024. doi:10.1093/inthealth/ihae084

How to cite this article: Edo-Osagie CC, Iniomor MA. Midwives' Knowledge, Attitudes, and Perceived Barriers to Complementary and Alternative Medicine in Labour Pain Management: A Cross-Sectional Study in Benin City, Nigeria. J Basic Appl Med Sci. 2026;6(1):31-38. doi:10.4314/jbams.v6i1.5