

Article Info

Accepted: 29/07/2025

1. Deptment of Nursing Sciences, Collge of Health Sciences, Usmanu Danfodiyo University Sokoto.

2. World Health Organization, Katsina Field Office

3. NANA Girls and Women Empowerment Initiatives

*Corresponding author's email: abukhalid.auwal@gmail.com

Cite this: *Ajoh*, 2025, vol1,i1,

KNOWLEDGE ATTITUDE AND PRACTICE OF PATIENT SAFETY AMONG MIDWIVES IN MATERNITY UNITS OF SPECIALIST HOSPITAL SOKOTO

Auwalu Muhammed¹, Muhammad Abdullahi Gigane¹, Faruk Dantsoho², Sadiya Khalid Adamu³

Abstract

Background: Patient safety in maternity care represents a critical component of the One Health approach, as it safeguards maternal and neonatal health while strengthening healthcare systems and promoting safe clinical environments.

Aim: This study assessed the perceived knowledge of patient safety among midwives in the maternity units of Specialist Hospital Sokoto. **Method:** A cross-sectional descriptive survey was conducted among 60 staff midwives, excluding those on annual or study leave. Completed Data were collected using a self-administered questionnaire from 54 responded and analyzed with descriptive statistics (means and percentages) using SPSS Version 23.

Result: Findings revealed that 87.1% of participants had good knowledge of patient safety, and most demonstrated a positive attitude. Although most respondents reported fair patient safety practices (mean = 3.9), the poor level of documentation (mean = 2.6) remains a cause for concern. The majority of midwives (72.2%) reported incidences in maternity units related to unsafe midwifery practice, while 50% identified women in labour as the group most affected by patient safety incidents.

Conclusion: Midwives at Specialist Hospital Sokoto generally possess good knowledge, and were positive about patient safety practices. While safety practices are observed, the quality of documentation remains inadequate and needs improvement. The study recommends regular training (at least annually) to strengthen midwives' competencies. Hospital management should also provide the necessary resources and support to ensure safe and high-quality maternity care.

Keywords: Midwifery, Maternity care, Patient safety

INTRODUCTION

Patient safety in maternity care represents a critical component of the One Health approach, as it safeguards maternal and neonatal health while strengthening healthcare systems and promoting safe clinical environments. Patient safety and quality of care are central to healthcare delivery, yet evidence on the knowledge, attitudes, and competence of nurses and midwives remains limited. Despite the intention of healthcare staff to deliver safe care, human error and organizational

inconsistencies often compromise outcomes. Investigations in Ireland highlighted the need for a “safety-first” culture and continuous professional education for nurses and midwives (Gallen, Kodate, & Casey, 2019).

Globally, unsafe care is a major public health challenge and one of the leading causes of death and disability. Approximately one in ten hospitalized patients in low- and middle-income countries (LMICs) experiences an adverse event, with an estimated 134 million cases contributing to 2.6 million deaths annually (World Health Organization [WHO], 2019; Slawomirski, Aaraaen, & Klazinga, 2017). The economic cost of unsafe care is estimated at USD 1–2 trillion per year (WHO, 2021). These incidents undermine trust in health systems and may cause long-term psychological distress for health workers involved (Hall et al., 2016).

In Nigeria, patient safety remains a critical concern, with reports of medical and medication errors leading to preventable harm. The Agency for Healthcare Research and Quality (AHRQ) recommends regular safety culture assessments to identify systemic weaknesses (Onuoha & Dimkpa, 2023). Midwives, as frontline caregivers in maternity units, are central to ensuring safe care. Their education equips them with specialist knowledge of maternal and neonatal health, but additional post-registration training may be needed to manage complex situations such as obstetric high dependency care (James et al., 2019).

Patient safety also requires attention to interpersonal skills and respectful maternity care. Evidence from Brazil and other developing countries shows that poor communication, workflow difficulties, and obstetric violence undermine quality of care (Dzomeku et al., 2022). The WHO emphasizes patient and family engagement as key to safer care (WHO, 2021). However, in Nigeria, systemic barriers—including inadequate infrastructure, staff shortages, and limited resources—continue to hinder safe practice (Kaware et al., 2022). Maternity units, which serve vulnerable women and children, are particularly affected. Strengthening midwives’ knowledge, resources, and institutional support is therefore essential to improving patient safety in Specialist Hospital Sokoto and similar settings.

METHODS

Study Design

A cross-sectional descriptive survey design was adopted to assess midwives’ knowledge, attitudes, and practices on patient safety at a single point in time (Nassaji, 2015).

Study Setting and Population

The study was conducted at Specialist Hospital Sokoto, a 500-bed public secondary health facility located in Rijija, Sokoto South Local Government Area, established in 1986. The hospital operates 24 hours and provides medical, surgical, pediatric, obstetric, and gynecological services (Maayoithhealth, 2023). The study population comprised all 60 registered midwives working in the maternity units. Following Cochran’s guideline for small populations (<100), the entire population was included, excluding those on annual or study leave.

Instrument for Data Collection

Data were collected using a structured, self-administered questionnaire with five sections: socio-demographic data, knowledge, attitudes, practices, and incidence of patient safety issues. The instrument was reviewed by two experts in maternal and child health for face and content validity. A pretest involving 10% of midwives from other hospital units confirmed clarity and reliability, yielding Cronbach's alpha values of 0.71 (knowledge), 0.7 (attitude), and 0.7 (practice).

Data Collection Procedure

Ethical approval and permission were obtained from the heads of the institution. Questionnaires were distributed across morning, evening, and night shifts to ensure full coverage, and completed forms were retrieved within one week. Oral informed consent was obtained, and participants were assured of confidentiality and voluntary participation.

Data Analysis

Data were analyzed using IBM SPSS version 23. Descriptive statistics (means and percentages) were generated, and results were presented in tables, and frequency distributions. Sociodemographic variables were categorized, and frequencies and percentages were computed for each respondent. The category with the highest frequency was reported.

For the perceived knowledge scale, frequencies and percentages were calculated for each response option (Yes = 1, No = 0) across all items. Knowledge level was determined based on the proportion of affirmative responses for each item and the overall mean score, with mean values > 0.5 classified as good knowledge and values < 0.5 classified as poor knowledge.

For attitude and patient safety practice scales, mean scores were calculated for each item, and cumulative mean scores were computed to determine overall attitude and level of patient safety practice. A mean score > 3 was considered indicative of a positive attitude and an adequate level of patient safety practice.

Finally, the incidence of patient safety practices was assessed using the frequency distribution of responses for each item. Items with lower mean scores were interpreted as areas where patient safety practices were suboptimal.

Ethical Considerations

Ethical approval (SHS/SUB/133/VOL.1) was obtained from the hospital's Research and Ethics Committee. Participation was voluntary, with informed consent obtained after explaining the study's purpose, benefits, and absence of risks. Confidentiality was maintained by excluding names and identifiers, and respondents' rights to decline participation were respected.

RESULTS

Socio-Demographic Characteristics

As shown in Table 1, a total of 60 midwives were targeted for this study, but 54 completed and returned the questionnaire. The majority of respondents (28, 51.9%) were aged 21–30 years, followed by 14 (25.9%) aged 31–40 years. Nearly all

respondents were married (47, 87.1%) and Muslim (35, 64.8%). Most participants were Hausa (29, 53.7%), while Igbo represented the smallest group (5, 9.3%). In terms of education, the largest group were Registered Nurses/Midwives (23, 42.6%), followed by Bachelor's degree holders (16, 29.6%).

Half of the respondents (27, 50%) had 3–7 years of professional experience, while only 5 (9.3%) had 13–20 years. The highest number of participants worked in the ANC ward (15, 27.8%). A large proportion (42, 77.8%) reported not having received formal training on patient safety, although all midwives (100%) expressed willingness to undergo such training if provided.

Knowledge of Patient Safety

As presented in Table 2, most respondents (47, 87.1%) reported awareness of patient safety, while 7 (12.9%) had not heard of the concept. Nearly all (49, 90.7%) expressed confidence in addressing patient safety issues in daily practice. More than half (30, 55.6%) had experience with the basic theoretical principles of patient safety, while 24 (44.4%) did not. All participants (100%) agreed that regular training (at least once annually) is essential for midwives. Overall participants perceived to have knowledge about patient safety (mean = 0.7)

Attitude toward Patient Safety

Table 3 shows a cumulative mean score of 4.1, indicating a generally positive attitude toward patient safety. All attitude-related items recorded mean scores between 3.8 and 4.4, reflecting strong agreement with the importance of safety practices.

Patient Safety Practices

As shown in Table 4, the cumulative mean score was 3.9, suggesting a good level of safety practice among respondents. Mean scores for most practice-related items ranged between 3.9 and 4.5, though one item on incident reporting scored lower (2.6), indicating limited documentation of safety incidence practices.

Patient Safety-Related Incidences

Most respondents (39, 72.2%) reported maternity-related safety incidences occurring in approximately 1 out of 10 patients, while only 2 (3.7%) estimated incidences in 4 out of 10 patients. The majority identified pregnant women in labour (27, 50%) as the most affected group. Half of the participants (27, 50%) attributed these incidences primarily to obstetric trauma, while 21 (38.9%) highlighted increased workload and strain on the healthcare system as a key consequence.

DISCUSSION

Socio-demographic Data

Most respondents were young and active midwifery workforce, similar to findings by Fuseini et al. (2023). The majority were Hausa, Muslim, and married, reflecting the cultural and religious context of Sokoto State. In terms of qualifications, the majority were Registered Nurses/Midwives. Notably, most had not received training on patient safety, in contrast to Fuseini et al. (2023), who reported higher exposure among healthcare workers.

Perceived Knowledge of Patient Safety

Findings revealed that most midwives had prior knowledge of patient safety and recognized the importance of applying safety standards in daily practice. All respondents agreed on the need for regular training, at least once a year, to strengthen competence. These results are consistent with Fuseini et al. (2023), Gamse (2018), and Lawton et al. (2012), who reported high levels of awareness and positive attitudes toward patient safety among midwives and other healthcare professionals. However, contrasting evidence from studies in some low-resource settings suggests that although health workers may demonstrate adequate knowledge of patient safety, gaps often exist in consistent application of safety standards due to workload, staffing shortages, and limited institutional support (Ammouri et al., 2015; Kim et al., 2016).

Attitude toward Patient Safety

Respondents generally exhibited a positive attitude, supporting and teaching one another, though some admitted to skipping steps under workload pressure. Many also gave feedback based on reported safety events. This aligns with Gamse (2018), who noted that midwives showed the most positive safety attitudes among healthcare professionals, whereas physicians scored lowest.

Patient Safety Practices

The majority reported addressing colleagues who neglected safety, valuing staff suggestions, and reflecting on their own practices. However, few participants completed formal incident reports. This corresponds with Alsulami, A'aqoulah, and Almutairi (2022) who highlighted that staff often speak up about patient safety but sometimes perceive reporting as punitive rather than problem-focused.

Incidence of Patient Safety Events

Most respondents indicated that safety incidences occurred in about 1 out of 10 patients, which is consistent with WHO (2021), noting that adverse events affect one in ten hospitalized patients, particularly in low- and middle-income countries. Participants identified pregnant women in labour as the most affected group, supporting Ekwuazi, Chigbu, and Ngene (2023), who reported high preventable maternal mortality in LMICs. Half of the respondents attributed incidences mainly to obstetric trauma. This finding aligns with Mlotshwa and Sibiyi (2023), who associated unsafe obstetric practices with maternal mortality rates of nearly 391 per 100,000 live births in Africa. Strengthening the midwifery workforce is therefore critical to achieving the Sustainable Development Goal of reducing maternal mortality to fewer than 70 per 100,000 live births by 2030.

CONCLUSION

This study found that most midwives at Specialist Hospital Sokoto possess knowledge of patient safety practices, supported by their understanding of basic theoretical principles. The findings also revealed generally positive attitudes toward safety, with midwives making efforts to improve practices and evaluate outcomes. However, unsafe practices (poor documentations) were noted as contributors to patient safety incidents, particularly affecting maternity care. All participants emphasized the importance of regular training, at least annually, to strengthen

patient safety. This study highlighted the need for ongoing training and system-level interventions to improve patient safety practices and documentations.

References

- Alsulami, A., A'aqoulah, A., & Almutairi, N. (2022). Patient safety culture awareness among healthcare providers in a tertiary hospital in Riyadh, Saudi Arabia. *Frontiers in Public Health*, 10, Article 953393. <https://doi.org/10.3389/fpubh.2022.953393>
- Ammouri, A. A., Tailakh, A. K., Muliira, J. K., Geethakrishnan, R., & Al Kindi, S. N. (2015). Patient safety culture among nurses. *International Nursing Review*, 62(1), 102–110. <https://doi.org/10.1111/inr.12159>
- Dzomeku, V. M., Mensah, A. B., Nakua, E. K., Agbadi, P., Okyere, J., Donkor, P., & Lori, J. R. (2022). Promoting respectful maternity care: Challenges and prospects from the perspectives of midwives at a tertiary health facility in Ghana. *BMC Pregnancy and Childbirth*, 22(1), Article 451. <https://doi.org/10.1186/s12884-022-04786-w>
- Ekwuazi, E. K., Chigbu, C. O., & Ngene, N. C. (2023). Reducing maternal mortality in low- and middle-income countries. *Case Reports in Women's Health*, 39, e00542. <https://doi.org/10.1016/j.crwh.2023.e00542>
- Fuseini, A.-K. J., Teixeira da Costa, E. I. M., Matos, F. A. S. d., Merino-Godoy, M.-d.-I.-A., & Nave, F. (2023). Patient-Safety Culture among Emergency and Critical Care Nurses in a Maternal and Child Department. *Healthcare*, 11(20), 2770. <https://doi.org/10.3390/healthcare11202770>
- Gallen, A., Kodate, N., & Casey, D. (2019). How do nurses and midwives perceive their preparedness for quality improvement and patient safety in practice? A cross-sectional national study in Ireland. *Nurse Education Today*, 76, 125–130. <https://doi.org/10.1016/j.nedt.2019.01.025>
- Gamşe T. U. (2018). Defining the patient safety attitudes and influencing factors of health professionals working at maternity hospitals. *Journal of Nursing Management*, 26(5), 579-586. <https://doi.org/10.1111/jonm.1258512>
- Hall, L. H., Johnson, J., Watt, I., Tsipa, A., & O'Connor, D. B. (2016). Healthcare staff wellbeing, burnout, and patient safety: A systematic review. *PLOS ONE*, 11(7), e0159015. <https://doi.org/10.1371/journal.pone.0159015>
- James, A., Cooper, S., Stenhouse, E., & Endacott, R. (2019). What factors influence midwives to provide obstetric high-dependency care on the delivery suite or request care be escalated away from the obstetric unit? *BMC Pregnancy and Childbirth*, 19(331). <https://doi.org/10.1186/s12884-019-2487-0>
- Kaware, M. S., Ibrahim, M. I., Shafei, M. N., Mohd Hairon, S., & Abdullahi, A. U. (2022). Patient Safety Culture and Its Associated Factors: A Situational Analysis among Nurses in Katsina Public Hospitals, Northwest Nigeria. *International Journal of Environmental Research and Public Health*, 19(6), 3305. <https://doi.org/10.3390/ijerph19063305>
- [Kim, L., Lyder, C. H., McNeese-Smith, D., Leach, L. S., & Needleman, J. \(2016\). Defining attributes of patient safety through a concept analysis. *Journal of Advanced Nursing*, 72\(11\), 2457–2470. <https://doi.org/10.1111/jan.13024>](https://doi.org/10.1111/jan.13024)
- [Lawton, R., Carruthers, S., Gardner, P., Wright, J., & McEachan, R. R. C. \(2012\). Identifying the latent failures underpinning patient safety incidents: A qualitative study. *BMJ Quality & Safety*, 21\(2\), 130–137. <https://doi.org/10.1136/bmjqs-2011-000150>](https://doi.org/10.1136/bmjqs-2011-000150)

- Maayoihealth(2023): Specialist Hospital Sokoto location. accessed from www.maayoihealth.com/SHS.com13
- Mlotshwa, P. R., & Sibiya, M. N. (2023). Pregnant Womens Views Regarding Maternity Facility-Based Delivery at Primary Health Care Facilities in the Province of KwaZulu-Natal in South Africa. *International journal of environmental research and public health* , 20 (15). <https://doi.org/10.3390/ijerph2015653>
- Onuoha, U. S., & Dimkpa, B. M. (2023). Patient Safety in Nigerian Health Care Facilities: A Review. *Asian Journal of Medical Principles and Clinical Practice*, 6(2), 224–232. <https://doi.org/10.46557/006c/36327>
- [Slawomirski, L., Auraaen, A., & Klazinga, N. S. \(2017\). The economics of patient safety: Strengthening a value-based approach to reducing patient harm at national level. Organisation for Economic Co-operation and Development \(OECD\). <https://doi.org/10.1787/9789264274476-en>](https://doi.org/10.1787/9789264274476-en)
- World Health Organization. (2021). Global Patient Safety Action Plan 2021–2030: Towards Eliminating Avoidable Harm in Health Care. Geneva. <https://doi.org/10.2471/BLT.21.290676>

TABLES

Table 1: Distribution of respondents by sociodemographic data (n =54)

Variables/Items	Frequency	Percentage s(%)
Age		
21-30	28	51.9
31-40	14	25.9
41-50	9	16.7
51-62	3	5.6
Marital Status		
Single	7	12.9
Married	47	87.1
Ethnic group		
Hausa	29	53.7
Yoruba	11	20.4
Igbo	5	9.3
Others	9	16.7
Religion		
Islam	35	64.8
Christianity	13	24.1
Other	4	7.4
Total	54	100
Academic qualification		
RM	14	25.9
RN-RM	23	43.6
BNSC	16	29.6
MSC	1	1.9
Total	54	100
Professional experience		
1-2 years	9	16.7
3-7 years	27	50
8- 12 years	12	22.2
13-20 years	10	18.5
More than 20 years	5	9.3
Total	54	100
Service area		
Labour room	6	11.1
Gynae	13	24.1
ANC	15	27.8

Prenatal	6	11.1
Postnatal	10	18.5
Others	4	7.4
Total	54	100
Have you done Training on patient safety?		
Yes	12	22.2
No	42	77.8
Total	54	100
Would you attend training on patient safety?		
Yes	54	100
No	0	0
Total	54	100

Table 2: Perceived Knowledge of Midwives on Patient Safety

Items	Yes		No	
	n	%	n	%
Have you heard the term patient safety	47	87.1	7	12.9
Are you confident concerning the issues related to patient safety in your every day midwifery practice	49	90.7	5	9.3
Do you have experience on the basic principles of theoretical background associated with patient safety.	30	55.6	24	44.4
Do you consider it important that midwives do frequent training/updates(at least once a year) on patient safety ?	54	100	0	0
Total mean				0.7

Table 3: Attitude of Midwives toward Patient Safety

Items	SA	A	U	D	SD	\bar{x}	Remark
People support one another in this unit to maintain patient safety	18	30	0	6	0	4.1	Agreed
People teach one another in this unit how to maintain patient safety.	20	28	2	4	0	4.3	Agreed
The Overcrowding condition of this unit results in trying to do too much, too quickly this makes them skip some steps in carry out patient safety	20	20	0	10	4	3.8	Agreed
I am given feedback about the changes put in place based on events reports on patient safety	13	40	0	1	0	4.4	Agreed

Cumulative mean=4.1

Table 4: Patient Safety Practice

Items	SA	A	U	D	SD	\bar{x}	Remark
I Speak to staff who is showing lack of concern for patient's safety practice	18	26	3	3	4	3.9	Agreed
I seriously consider staff suggestions for improving patient safety practice	31	20	0	3	0	4.5	Agreed
I often make changes to improve the patient safety	14	40	0	0	0	4.3	Agreed
I evaluate the effectiveness of my action on patient safety	8	40	6	0	0	4.1	Agreed
I fill in reporting form to help in improvement of patient safety practice	6	10	0	30	8	2.6	Disagreed

cumulative mean=3.9

Table 5: Incidence Of Patient Safety

Category / Items	Frequency	Percentage (%)
The rate of incidence in this unit is		
1 in 10 patients	39	72.2
2 in 10 patients	10	18.5
3 in 10 patients	4	7.4
4 in 10 patients	2	3.7
Total	54	100
The highest occurrence of patient safety incidences in maternity units are among		
Pregnant women during labour	27	50.0
Unbooked pregnant women during ANC	11	20.4
Postpartum women	16	29.6
Total	54	100.
The most common cause of safety-related incidences is/are		
Patient fall	6	11.1
Obstetric trauma	27	50.0
Sepsis	11	20.4
Perineal tear	10	18.5
Total	54	100.
The rate of obstetric trauma indicator may increase with consequences of		
Extra cost of health care system	21	38.9

Overcrowding	16	29.6
Lack of autonomy to perform nursing and midwifery procedures	12	22.2
Skill gaps and lack of up-to-date knowledge	5	9.3
Total	54	100