

# Knowledge and Utilization of WHO Childbirth Checklist by Nurses and Midwives in Selected Public Hospitals in Lagos Metropolis

Yetunde A. Afilaka<sup>1\*</sup>, Faith C. Diorgu<sup>1</sup>, and Mayowa G. Elemile<sup>2</sup>

<sup>1</sup>Africa Centre of Excellence in Public Health and Toxicological Research (ACE-PUTOR), University of Port Harcourt, Port Harcourt, Rivers State, Nigeria.

<sup>2</sup> Department of Community Health Nursing, University of Medical Sciences, Ondo, Nigeria.

\*Corresponding author email: [yetunde\\_adesola@uniport.edu.ng](mailto:yetunde_adesola@uniport.edu.ng)

## ABSTRACT

Received: 13 Apr 2026

Accepted: 16 May 2026

Published: 27 May 2026

**Background:** This paper discussed the knowledge and use of the WHO Childbirth Checklist among in-service nurses and midwives in chosen public hospitals located in the Lagos Metropolis, Lagos State, Nigeria.

**Methods:** A descriptive cross-sectional design was used. The study included a total of 146 nurses and midwives working in tertiary (LASUTH and LUTH), secondary (Alimosho, Ikorodu, Randle General Hospitals), and primary (Ifako, Obawole PHCs) health facilities through convenience sampling. The data were collected using a structured questionnaire and analyzed using SPSS version 26. Descriptive statistics, chi-square tests, and the mean score were computed and significance level set at  $p < 0.05$ .

**Result:** Result: Only 35.6% of the respondents had received formal training on the WHO Safe Childbirth Checklist (SCC). Overall, 28.8% demonstrated good knowledge, 46.6% had moderate knowledge, while 24.6% had poor knowledge. Utilization was generally low, with 16.4% reporting high utilization, 28.8% moderate utilization, and 54.8% low utilization. The relationship between knowledge and utilization was statistically significant ( $\chi^2 = 38.64$ ,  $p = 0.001$ ). The major barriers identified were lack of training (mean = 3.16), heavy workload (mean = 3.15), and inadequate materials (mean = 3.07). Key facilitators included regular refresher training (mean = 3.32), teamwork (mean = 3.14), and peer support (mean = 3.10). Respondents who had received formal training demonstrated significantly better knowledge (53.8% vs. 14.9%) and higher utilization (34.6% vs. 6.4%) compared with untrained respondents.

**Conclusion:** The collection of information and the implementation of the WHO checklist for births by nurses and midwives in the public hospitals of Lagos is relatively low, plagued by a massive gap found in many of hospitals. Extensive activities, such as advocacy and popularity campaigns, controlling training to be made mandatory, tackling the issue of overcrowding, and improving management assistance and increasing the integration of the resources, are required to give a further boost to the checklist entry and maternal-neonate safety.

## How to cite this article

Afilaka, Y. A., Diorgu, F. C., & Elemile, M. G. (2026). Knowledge and Utilization of WHO Childbirth Checklist by Nurses and Midwives in Selected Public Hospitals in Lagos Metropolis. *Journal of Tropical Medicine and Public Health Solutions*, 4(2), 186–191.

<https://doi.org/10.54117/jtmphs.v4i2.101>

## Keywords

WHO Safe Childbirth Checklist, Knowledge, Utilization, Nurses.

## Open Access article



License: CC BY 4.0<sup>□□</sup>\*

## Introduction

Amidst global progress towards reducing maternal, neonatal, and child mortality rates (MNCMRs), between 2003 and 2023, these rates reduced significantly, falling by about 40% (WHO *et al.*, 2025). Despite this progress, an estimated 260,000 women died from pregnancy- or childbirth-related complications in 2023, with the majority of these deaths occurring in low- and lower-middle-income countries. Major causes include severe bleeding (haemorrhage), hypertensive disorders, infections, and pre-existing conditions such as pre-eclampsia and eclampsia (WHO, 2023). One important evidence-based intervention for improving maternal and child health outcomes is the WHO Safe Childbirth Checklist (SCC). The development of the World Health Organization (WHO) Safe Childbirth Checklist (SCC) represents a significant milestone in closing gaps in maternal and newborn care within health facilities. Created to establish uniform minimum standards during childbirth, the SCC serves as a bedside guide for healthcare providers to support better outcomes for mothers and newborns. Dohbit *et al.* (2022) explained that the primary aim of the checklist is to encourage consistent adherence to key safety essentials, thereby reducing maternal and newborn harm. Additionally, systematic documentation of care allows providers to review completed checklists and improve the quality of delivery-room practices (WHO, 2020).

Childbirth is a complex but physiological process necessitating, sometimes difficult, sometimes complicated steps that prevent adverse outcomes for the mother and her newborn child. Healthcare givers may find it difficult to simply remember all of the relevant information, and performing all the steps perfectly and in the precise order may become challenging especially in the busy labour ward (Dohbit *et al.*, 2023). The WHO Safe Childbirth Checklist is a simple quality improvement tool that reminds healthcare workers to deliver high-quality care from when the woman is admitted, through childbirth, until the woman and baby are safely discharged home. Checklists prompt users to remember to carry out essential tasks and have long been fundamental to maintaining safety when flying aeroplanes. In other settings, professionals are successfully using checklists to organise large amounts of complex information, to remind themselves to perform crucial duties, and to ultimately do their jobs

more effectively and proficiently (Millogo *et al.*, 2021). Publication of medical reports has revealed that a greater emphasis on safety for people working with checklists in hospitals has resulted in good outcomes, with a lot of data from the trial of checklist intervention in the intensive care in medicine and surgery showing significant reductions in complications and fatalities (Ogu *et al.*, 2021).

Lagos is a dense urban environment with a complex maternal health ecosystem, which combines formal medical facilities with old-tradition birth attendants who attend to more than 60% of deliveries. During the COVID 19 pandemic, working midwives in Lagos said structured tools and public awareness needed to increase trust among those considering facility-based deliveries, while the acceptance of an institution was failing (Oluwatola *et al.*, 2020). Training sessions organized for nurses on the WHO Safe Childbirth Checklist (SCC) revealed that although the federal government has implemented several quality improvement initiatives, these efforts have not adequately translated into increased awareness and adoption of the SCC among nurses and midwives in General Hospitals and Primary Health Care Centres in Lagos. This sort of data becomes invaluable in understanding the primary level of care which exists concerning this (knowledge of the SCC) their routine adoption, as globally proven increased adoption in checklist application has also shown an increase in adherence to evidence-based practice with tremendous reductions toward maternal and perinatal mortality.

### Aim and Objectives of the Study

The aim of this study is to explore the knowledge and utilization of WHO Child birth checklist among nurses-midwives working in selected public Hospitals in Lagos metropolis.

Other specific objectives are to;

- i. Assess the level of knowledge of nurse-midwives regarding the WHO childbirth checklist in the selected public hospitals in Lagos Metropolis.
- ii. Determine the extent of utilization of the WHO Child Birth Checklist for management of labor among nurse-midwives.
- iii. Examine the relationship between the nurses-midwives knowledge and their utilization of the WHO safe childbirth checklist

### Methodology

The methodology was a cross-sectional descriptive design aimed at the knowledge and utilization of WHO Child birth checklist among nurses / midwives working in selected public hospitals in Lagos Metropolis.

The target population for this study were prenatal ward and labor ward nurses-midwives working in public hospitals (tertiary, secondary and primary facilities) in Lagos metropolis.

Given that the total accessible population of nurses-midwives working in the prenatal and labour wards of the selected public health facilities in Lagos Metropolis was 146, no sample was drawn. Instead, total enumeration (census sampling) was adopted, whereby all 146 eligible nurses-midwives from the selected tertiary, secondary, and primary healthcare facilities were included in the study. This approach was considered appropriate because the population was small, accessible, and clearly identifiable. It also enhanced the representativeness and accuracy of the findings by providing all eligible participants equal opportunity for inclusion. Respondents were approached and recruited while on duty in the prenatal and labour wards; therefore, the total population of 146 nurses-midwives constituted the study sample.

The data were gathered from respondents by the researcher. Total Enumeration was used to administer 146 questionnaires to the nurses-midwives in the labour and prenatal wards who matched the inclusion criteria.

Ethical approval for this study was obtained from the Health Research Ethics Committee (HREC) of the Lagos State University Teaching Hospital (LASUTH), Ikeja, and the Lagos University Teaching Hospital (LUTH) Research and Ethics Committee, in line with the requirements of the respective institutions where the study was conducted. Institutional permission was also obtained from the management and nursing leadership of the participating secondary and primary health facilities prior to data collection. A letter of introduction from the Faculty of Nursing Sciences, University of Port Harcourt, was presented to the relevant authorities to facilitate institutional cooperation. Written informed consent was obtained from all participants, while confidentiality, anonymity, voluntariness, and protection from harm were ensured throughout the study.

### Results

A good look at Table 1 reveals an overwhelming dominance of female respondents (91.8%), indicating that nursing and midwifery professions are largely female-dominated in Nigeria. Slightly more than half of the respondents (53.4%) possessed Diploma qualifications as their highest professional education, while 35.6% had Bachelor's degrees. Regarding professional cadre, 43.9% of the respondents were both Registered Nurses and Registered Midwives (RN/RM), 30.1% were Registered Midwives (RM) only, while 26.0% were Registered Nurses (RN) only. The highest proportion of respondents had 5–10 years of professional experience (32.9%), followed by those with 11–15 years of experience (28.1%). Furthermore, only 35.6% of the respondents had received formal training on the WHO Safe Childbirth Checklist.

**Table 1:** Socio-Demographic Characteristics of Respondents (n = 146)

Socio-demographic Characteristics	Category	Frequency	Percentage (%)
<b>Gender</b>	Male	12	8.2
	Female	134	91.8
<b>Highest Professional Education</b>	Diploma	78	53.4
	B.Sc./BNSc.	52	35.6
	M.Sc./MNSc.	14	9.6
	Ph.D.	2	1.4
<b>Professional Cadre</b>	Registered Nurse (RN)	38	26.0
	Registered Midwife (RM)	44	30.1
	RN/RM	64	43.9
<b>Years of Professional Experience</b>	Less than 5 years	32	21.9
	5-10 years	48	32.9
	11-15 years	41	28.1
	16 years and above	25	17.1
<b>Formal training on WHO SCC</b>	Yes	52	35.6
	No	94	64.4

In table 2a, it is seen that 42.5% of the respondents strongly agreed that it aims to help in the identification and management of complications in labor and childbirth, with 39.7% respondents showing only agreement (mean = 3.19 ± 0.87). Additionally, 39.7% strongly agreed that a component of the WHO Safe Childbirth Checklist (SCC) should immediately cover maternal bleeding, i.e. the immediate notice of postpartum hemorrhage, and 43.8% only agreed (mean = 3.18 ± 0.84), which denotes a general grasp on these areas. However, the identified knowledge of the checklist addressing the specific pause points was in-between; only 32.9% agreed and 35.6% of them deeply agreed on each of these four points (mean = 2.89 ± 1.01). Most of the respondents wisely disagreed with the statement that SCC replaces clinical judgment (mean = 1.99 after reverses) as it clearly shows the great understanding that the WHO SCC acts as a supportive tool only, not a substitute for clinical expertise.

**Table 2a:** Respondents' Knowledge of WHO Childbirth Checklist (n = 146)

Items	Strongly Agree (%)	Agree (%)	Disagree (%)	Strongly Disagree (%)	Mean	Std. Deviation
The WHO SCC is intended to improve identification and management of complications during labour and childbirth	62 (42.5)	58 (39.7)	18 (12.3)	8 (5.5)	3.19	0.87
The checklist is used at specific pause points: on admission, before pushing (or caesarean), soon after birth (within 1 hour), and before discharge	48 (32.9)	52 (35.6)	28 (19.2)	18 (12.3)	2.89	1.01
One of the items on the WHO SCC is checking for maternal bleeding (postpartum haemorrhage risk) immediately after birth	58 (39.7)	64 (43.8)	16 (11.0)	8 (5.5)	3.18	0.84
The SCC includes reminders for neonatal thermal care (e.g., drying and warming the baby)	52 (35.6)	60 (41.1)	22 (15.1)	12 (8.2)	3.04	0.92
The SCC replaces clinical judgement and can be used without clinical training	14 (9.6)	22 (15.1)	58 (39.7)	52 (35.6)	1.99*	0.95

\* Reverse-coded item (correct answer is disagree/strongly disagree)

Table 2b shows that less than one-third (28.8%) of respondents had good knowledge of the WHO Childbirth Checklist, while about half (46.6%) had moderate knowledge. Furthermore, 24.6% demonstrated poor knowledge of the WHO Safe Childbirth Checklist. These findings indicate existing knowledge gaps which may negatively influence the effective implementation of the checklist in clinical practice.

**Table 2b:** Summary of Respondents' Overall Knowledge of WHO Childbirth Checklist (n = 146)

Level of Knowledge	Frequency	Percentage (%)
Good Knowledge (Scores 16–20 = 80–100%)	42	28.8
Moderate Knowledge (Scores 11–15 = 55–75%)	68	46.6
Poor Knowledge (Scores ≤10 = ≤50%)	36	24.6
Total	146	100.0

The WHO Childbirth Checklist shows extremely low utilization in the majority of points as depicted in Table 3a. The results for the checklist item of whether the WHO always facilitates the recollection of all the steps to be completed in childbirth show only 28.8% affirming that the tool always helps them remember all the steps (mean score = 3.63 ± 1.22), while 32.9% feel that it has often been useful. However, actual usage was marred with inertia: only 12.3% always use it at least once at admission (mean = 2.68), 11.0% always complete it before pushing/caesarean (mean = 2.59), and 8.2% use it for every single delivery (mean = 2.38). Startlingly, 34.2% never admitted to using this tool during handovers (mean = 2.25). Almost a quarter of the respondents (26%) always spent time complaining about its use, while the numbers around 30.1% claim that it is often time-consuming as well (mean = 3.52). Few (15.1%) of the hospital staff may have the checklist always available to them in the work area, while a larger number (19.2%) claimed that this is an often occurring event (mean = 2.85).

**Table 3a:** Respondents' Utilization of WHO Childbirth Checklist (n = 146)

Utilization Items	Always (%)	Often (%)	Sometimes (%)	Rarely (%)	Never (%)	Mean	Std. Deviation
I use the WHO SCC during patient admission to the labour ward	18 (12.3)	24 (16.4)	32 (21.9)	38 (26.0)	34 (23.3)	2.68	1.32
I complete the SCC items before a woman begins pushing or before a caesarean section	16 (11.0)	22 (15.1)	30 (20.5)	42 (28.8)	36 (24.7)	2.59	1.30
The SCC is completed and filed in the patient's record at discharge	14 (9.6)	20 (13.7)	28 (19.2)	44 (30.1)	40 (27.4)	2.48	1.27
I use the WHO Safe Childbirth Checklist for every patient in the delivery room	12 (8.2)	18 (12.3)	26 (17.8)	48 (32.9)	42 (28.8)	2.38	1.23
I review the checklist with my colleagues during shift handovers	10 (6.8)	16 (11.0)	24 (16.4)	46 (31.5)	50 (34.2)	2.25	1.20
I use the checklist to guide my decision-making in emergency situations	20 (13.7)	28 (19.2)	34 (23.3)	36 (24.7)	28 (19.2)	2.84	1.31
The checklist helps me remember all the necessary steps in childbirth	42 (28.8)	48 (32.9)	28 (19.2)	16 (11.0)	12 (8.2)	3.63	1.22
I feel the use of the checklist is time-consuming	38 (26.0)	44 (30.1)	32 (21.9)	20 (13.7)	12 (8.2)	3.52	1.23
The checklist is readily available in my work area	22 (15.1)	28 (19.2)	30 (20.5)	38 (26.0)	28 (19.2)	2.85	1.35

Table 3b shows that only 16.4% of respondents demonstrated high utilization of the WHO Childbirth Checklist, while 28.8% had moderate use of it. The majority (54.8%) exhibited low utilization, indicating that the checklist is not routinely incorporated into clinical practice in the selected hospitals despite its potential benefits for maternal and neonatal safety.

**Table 3b:** Categorization of Respondents' Overall Utilization of WHO Childbirth Checklist (n = 146)

Level of Utilization	Frequency	Percentage (%)
High Utilization (Mean score $\geq 3.5$ )	24	16.4
Moderate Utilization (Mean score 2.5-3.49)	42	28.8
Low Utilization (Mean score $< 2.5$ )	80	54.8
<b>Total</b>	<b>146</b>	<b>100.0</b>

Table 4 demonstrates a statistically significant relationship between knowledge and utilization of the WHO Childbirth Checklist ( $\chi^2 = 38.64$ ,  $df = 4$ ,  $p = 0.001$ ). Among respondents with good knowledge, 42.9% demonstrated high utilization, while only 19.0% exhibited low utilization. In contrast, none of the respondents with poor knowledge demonstrated high utilization, whereas 88.9% exhibited low utilization.

**Table 4:** Relationship between Knowledge and Utilization of WHO Childbirth Checklist (n = 146)

Knowledge Level	High Utilization n (%)	Moderate Utilization n (%)	Low Utilization n (%)	Total	$\chi^2$	df	p-value
Good Knowledge	18 (42.9)	16 (38.1)	8 (19.0)	42 (100.0)	38.64	4	0.001*
Moderate Knowledge	6 (8.8)	22 (32.4)	40 (58.8)	68 (100.0)			
Poor Knowledge	0 (0.0)	4 (11.1)	32 (88.9)	36 (100.0)			
<b>Total</b>	<b>24</b>	<b>42</b>	<b>80</b>	<b>146 (100.0)</b>			

\* Statistically significant at  $p < 0.05$

## Discussion of Findings

### Socio-Demographic Characteristics of Respondents

The study showed that an overwhelming number (91.8%) were female, as in nursing and the midwifery profession internationally and nationally in Nigeria. However, an overwhelming 53.4% of the respondents held a nursing diploma followed by 35.6% for an undergraduate degree, showing that diploma-holder are the worked-in most instances of this sector.

This professional distribution included 43.9% Registered Nurse/Midwife, 30.1% Registered Midwives, and 26.0% Registered Nurses only. This mix is significant as the areas of maternal and childbirth care clearly recognize the greater advantage of the needs of these classmates. Also, the work experience is confined in the mid- and top-tier areas, with 32.9% of nurses holding between 5 and 10 years of experience that is followed by 28.1% that hold 11-15 years, indicating that it has one fairly experienced workforce. It is worth mentioning that 35.6% of respondents mentioned that they received orientation in the utilization of the Safe Childbirth Checklist. Although the Occurrence is of concern, it is akin to pertinent data reached in different studies carried out in Nigeria. Amadi *et al.* (2024) revealed that merely 27.6% of midwives from Imo State knew about WHO's Childbirth Checklist, and even fewer went through associated training. On a similar note, Jeremiah (2023) reported that 80% of nurses and midwives in tertiary hospitals in Rivers State lacked awareness of the WHO Safe Childbirth Checklist (SCC).

### Level of Knowledge of WHO Safety Childbirth Checklist (SCC) Among Nurses and Midwives

The 28.8% is where the percentage of good knowledge stood, 46.6% for some knowledge and 24.6% of bad knowledge. This indicates a substantial knowledge gap among the respondents in potentially undermining specifications for optimal use of safety tools. The high mean value by regarding SCC improved understanding and care in managing and intervening during complications (mean = 3.19), followed by mean bleeding (mean = 3.18), which implies that some respondents know the main objectives and some of the main items on the checklist. Their knowledge of the four specific on-the-spot visits was moderate with a mean awareness of 2.89, which infers the majority of the respondents were hardly sure at which points the surgical safety checklist should be implemented. This correlates with the findings of Patabendige and Senanayake (2020) in Sri Lanka where the mean percentage knowledge level of health workers toward a checklist was only 60.1%. Nonetheless, most of them rightly indicated that an SCC couldn't replace clinical judgment since they understood it is supportive rather than a substitute for clinical skills. It is encouraging as the belief that checklists might displace professional judgement might create barriers to the acceptance of the SCC in practice.

With that background, the findings from the present study indicate much higher knowledge levels compared to what was previously reported by Jeremiah (2023) in Rivers State with regards to nurses who had a zero percent knowledge on the SCC tool. However, these levels are somewhat less as compared to posttest levels reported by Patabendige and Senanayake (2020) for a Sri Lankan health care worker at a knowledge level of 60.1%. Variations in knowledge level may be attributed to differences in training endeavors, policy advocacy, and facility-level implementation attempts across different settings.

### Extent of Utilization of WHO Childbirth Checklist Among Nurses and Midwives

The researchers found that use was very low. Only 16.4% had high utilization, 28.8% had moderate utilization, and the large majority at 54.8% had low utilization. Also, the pattern of use was presented. Only 12.3% of respondents always used the checklist at the time of admission (mean = 2.68), 11.0% just at hanging out before performances or caesarian (mean = 2.59), and 8.2% for each case they attended (mean = 2.38). Shockingly, 34.2% have never referred to the checklist during change of shift (mean = 2.25), indicating that the checklist is not integrated into the communication and shift transitions into the team environment. Despite low practical usage, the respondents perceived the value of the checklist, with 61.7% stating that the checklist assisted in the issue of remembering necessary steps in childbirth (mean = 3.63). This positive feedback is useful and indicates that resistance is not to the ideology or worth of the checklist, but rather to general reasons.

The results are closely aligned with the work of Amadi *et al.* (2024) who reported that only 4.8% of midwives in Imo State included the list check in routine care. Likewise, Patabendige and Senanayake (2020) found utilizations to be only 45.8% in a Sri Lankan tertiary hospital and the practice adherence to checklist practices to be at 71.3% on average. Although lower, only a few participants in this study (16.4%) actually used the tool, underscoring the more problematic practice environment at Nigerian public hospitals characterized by high workload, poor resources, and training. Agreement lies with the global literature regarding the 56.1% who concurred checklists are time-consuming. Sousa *et al.* (2022) observed time concern as a common barrier to implementing the checklist, specifically in challenging environments such as those of extremely burdened and under-staffed public health care institutions.

### Conclusion

A knowledge gap exists among nurses and midwives in Lagos public hospitals regarding the WHO Birth Checklist. While knowledge is there at a broadly general level, a sharp lack exists about the four pause points: on admission, before pushing or caesarian section, soon after birth & before discharge, and associated checklist characteristics for the majority of the masses. This noticeable lack, of course, translates into low usage; less than half of the survey subjects decided to consider the assessment tool in view of its worth for maternal and newborn safety as well as their poor-to-zero utilization of it. That is the picture of how starkly underused the checklist is. It is, in fact, never used by default while admitting, when the mother is in labor, or during discharge, even if the assessment tool stands to demo intent maternal and neonatal safety. Knowledge plays an important role in the utilization of the checklist. Those nurses and midwives who have full understanding of the WHO Birth Checklist are really persistent and motivated to enact their practice based on solid knowledge.

### Recommendations

Based on the findings and conclusions of this study, the following recommendations are proposed for various stakeholders:

- Issue policy directives mandating the use of the WHO Childbirth Checklist in all public health facilities providing maternity services. This should be accompanied by clear implementation guidelines and accountability frameworks.
- Dedicate resources for training programs on the WHO SCC for all nurses and midwives in public hospitals. Training should be mandatory for new hires and included as a regular component of continuing professional development.
- Incorporate checklist utilization into facility quality assessment frameworks, accreditation standards, and supervisory checklists. This would create accountability and incentivize consistent use.
- Strengthen supply chains to ensure that all facilities have uninterrupted access to essential supplies required for checklist items (oxytocin, gloves, partographs, functioning equipment).

## References

- Amadi, C. O., Ibrahim, & Ogaji, D. S. (2024). Awareness and use of World Health Organization Safe Childbirth Checklist among midwives practicing in health institutions in Imo State. *International Journal of Nursing, Midwife and Health Related Cases*, 10(3), 13–25.
- Abawollo, H. S. (2021). Implementing a modified WHO Safe Childbirth Checklist in Ethiopia: A pre–post intervention study. *BMC Pregnancy Childbirth*, 1-7
- Abdulazeez, A., Olaniyan, A., & Fadeyibi, I. (2022). Assessment of Midwives' Knowledge and Attitude towards the Use of WHO Childbirth Checklist in Selected Hospitals in Nigeria. *Journal of Maternal Health*, 56(3), 123-130.
- Abebe, T. (2022). Utilization of the WHO Childbirth Checklist in Ethiopia: A Qualitative Study. *Ethiopian Journal of Health Sciences*, 32(4), 543-550.
- Adebayo, O. A. & Ogunbode, A. M. (2022). The Impact of WHO Childbirth Checklist on Maternal Outcomes in Nigerian Hospitals. *Journal of Maternal-Fetal & Neonatal Medicine*. 2(3), 1-7
- Adedayo, A., Olaniyan, A., & Agboola, A. (2021). Resource Utilization in Maternity Care: The Impact of the WHO Childbirth Checklist. *Journal of Health Economics*, 15(2), 112-120
- Adedayo, O. (2021). Knowledge and utilization of the WHO Safe Childbirth Checklist among healthcare providers in Nigeria. *International Journal of Nursing Studies*, 120, 103-110.
- Adegboye, T., Ibrahim, A., & Olanrewaju, Y. (2021). Promoting checklist adherence in Nigerian tertiary hospitals: The role of education and policy. *Journal of Nursing and Midwifery Practice*, 5(3), 123–135.
- Adeleke, I., Balogun, M., & Thomas, J. (2021). Empowering Nurses and Midwives: The Role of Continuous Professional Education in Maternal Health. *Nigerian Journal of Health Education*, 15(1), 45-55.
- Amadi, C.O., Ibrahim., & Ogaji, D.S. (2024). Awareness and use of World Health Organization Safe Childbirth Checklist among Midwives Practicing in Health Institutions in Imo State, *International Journal of Nursing, Midwife and Health Related Cases*, 10 (3), 13-25.
- Ibrahim, A. (2024). Staff turnover and its impact on the implementation of the WHO childbirth checklist. *Journal of Health Management*, 26(1), 33-39.
- Igbokwe, M. (2022). Strategies for improving knowledge and utilization of the WHO Safe Childbirth Checklist among Nigerian healthcare providers. *Journal of Nursing Management*, 30(3), 832-840.
- Ige, O. K. & Ojo, O. R. (2023). Factors Influencing the Use of the WHO Childbirth Checklist in Lagos State Teaching Hospitals. *BMC Pregnancy and Childbirth*, 2(4), 1-12
- Ilesanmi, O., Adeyemo, A., & Oladele, O. (2023). Awareness and Attitude towards the WHO Childbirth Checklist among Healthcare Providers in Nigeria. *African Journal of Reproductive Health*, 27(1), 78-88.
- Jeremiah, C. U. (2023). Healthcare Workers' Knowledge and Use of Safe Childbirth Checklist Tool in Tertiary Hospitals in Rivers State, *International Journal of Health and Pharmaceutical Research*, 8(3), 1-14
- Johnson, L. (2021). Implementation of the WHO Childbirth Checklist in the United States: A Quality Improvement Initiative. *American Journal of Perinatology*.3(6), 1-9
- Kamath, D., Thomas, S., & Patil, V. (2021). Maternal and Neonatal Outcomes in the Absence of Structured Guidelines: A Retrospective Study. *Journal of Maternal-Fetal & Neonatal Medicine*, 34(3), 456-462.
- Kaplan, L. C., Ichsan, I., & Diba, F. (2021). Effects of the World Health Organization Safe Childbirth Checklist on Quality of Care and Birth Outcomes in Aceh, Indonesia, *JAMA Netw Open*, 4(12), 1-8
- Kruk, M. E., Gage, A. D., & Arsenault, C. (2022). High-quality health systems in the Sustainable Development Goals era: time for a revolution. *Lancet Glob Health*;6(11):1196-252
- Kumar, S., & Sharma, R. (2023). Barriers to Implementation of WHO Childbirth Checklist in India. *Indian Journal of Public Health*, 67(2), 100-105.
- Kurjak, A., Stanojević, M., & Dudenhausen, J. (2023). Why maternal mortality in the world remains tragedy in low-income countries and shame for high-income ones: will sustainable development goals (SDG) help? *Journal of perinatal medicine*, 51(2), 170 181
- Olufunmilola, O. (2023). Correlation between knowledge and utilization of the WHO Safe Childbirth Checklist among nurses and midwives in Nigeria. *BMC Health Services Research*, 23(1), 345.
- Oluwatola, T., Isiaka, S.D., Omeje, O., Oni, F., Samuel, O. W., Sampson, S., Ebinim, H., Olatunji, O. *et al.*, (2020). Assessment of quality of maternal and newborn care and its determinants: a national study of primary health care facilities in Nigeria, *BMC Health Services Research*, 25, 1-12
- Onwudili, J., Osanyin, C., & Igbinedion, B. (2020). Institutional influences on implementing quality improvement checklists in Nigeria. *Health Policy and Management Journal*, 12(4), 142–156.
- Opara, G. O., Ogaji, D. S., & Onyemachi, B. (2023). Midwives' Knowledge, Attitude and Use of Health Management Information System in Obstetrics and Gynecology Departments in Teaching Hospitals in Abia State. *Nigerian Health Journal*, 23(2), 678-687.
- Owoeye, O. (2024). Institutional support and its effects on the utilization of the WHO Safe Childbirth Checklist in Nigeria. *International Journal of Health Policy and Management*, 13(4), 410-418.
- Oyo-Ita, A., Adedokun, B., & Ijaduola, T. (2020). Knowledge and Use of the WHO Surgical Safety Checklist among Surgeons in Nigeria. *Nigerian Journal of Surgical Research*, 21(2), 34-40.
- Patabendige, M. & Senanayake, H. (2020). Implementation of the WHO safe childbirth checklist program at a tertiary care setting in Sri Lanka: a developing country experience, *BMC Pregnancy and Childbirth*, 15 (12), 1-6
- Salami, S., Olubunmi, A., & Eze, U. (2023). Longitudinal Assessment of the Utilization of Maternal Health Checklists in Nigerian Healthcare Facilities. *BMC Health Services Research*, 23(1), 45-54.