

Research Articles

Factors influencing the utilisation of facility-based delivery in Nigeria: a qualitative evidence synthesis

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Introduction

High-quality facility-based birth reduces maternal and perinatal morbidity and mortality. Previous multi-country systematic reviews have analysed qualitative research studies to understand the barriers and facilitators of delivery in a health facility. However, questions remain as to the extent to which generic multi-context reviews capture nuanced insights from a specific country context. Nigeria contributes significantly to the global burden of maternal mortality and hence the need to explore the country's contextual factors affecting maternal mortality viz-a-viz a previous international review.

Methods

To synthesise published and unpublished qualitative research on factors that influence decision-making and use of facility-based delivery services in Nigeria using a qualitative evidence synthesis methodology. Multiple electronic databases, citation chaining and checking of reference lists were searched. Studies were screened by title, abstract and full text. The quality of the included studies was evaluated using the Critical Appraisal Skills Programme (CASP) checklist for appraising a qualitative study. Synthesis of extracted data followed the 'best-fit' framework method which combines deductive and then inductive approaches to analysis.

Results

27 eligible studies were identified. Data were organised around four principal themes, further divided into subthemes: perceptions of pregnancy and childbirth, the influence of the sociocultural context and care experiences; resource availability and access and perceptions of quality of care.

Conclusions

Beyond the structural gaps that exist which affect quality care provided at health facilities, wider social determinants like sociocultural beliefs, care experience and resource availability impact upon the utilisation of facility-based delivery services. Future research should prioritise interventions and programmes to address prevalent gaps involving distance and access. In this way, progress can be made against longstanding deficits in the quality of maternal and infant care.

Sub-Saharan Africa (SSA) accounted for about 66% of global maternal deaths in 2017.¹ The maternal mortality ratio (MMR) in Nigeria stood at about 917 per 100,000 live births with 67,000 maternal deaths, ranking 4th in the world after South Sudan, Chad and Sierra Leone.¹ Therefore, addressing maternal mortality in Nigeria is a global priority and findings from research in Nigeria may inform an understanding of other low- and middle-income countries (LMICs) with similarly high MMRs.

Facility-based delivery (FBD), also known as Facility-Based Birth (FBB) consists of skilled care provision provided to pregnant women during delivery at a health facility and

this is an important intervention for reducing maternal deaths.² The Nigeria National Demographic and Health Survey 2018 observed that only 39% of Nigerian women gave birth in a health facility.³ This may explain why the MMR of Nigeria has remained high, thus contributing to high global maternal deaths.

Qualitative research is well placed to explore how women perceive factors that influence their choice of where to give birth. Qualitative evidence synthesis (QES) applies the principles of systematic reviewing to studies that use recognised methods of qualitative data collection and qualitative data analysis – studies are systematically identified and assessed

for quality. Extracted data are then synthesised to derive insights into the perspectives of service users and their decision-making processes. A previous QES was conducted by the United States Agency for International Development (USAID) and the World Health Organization (WHO) to analyse the barriers and facilitators to FBD in LMICs.⁴

The USAID/WHO review offers a useful framework against which to map the factors affecting FBB in LMICs. However, questions remain regarding the extent to which synthesised findings apply to specific countries or contexts. For example, the USAID/WHO review included only two qualitative research studies conducted in Nigeria.^{5,6} Experience from conducting another country-specific review (i.e. Kenya) in this topic area⁷, and from two Masters assignments based on Nigerian studies done at the University of Sheffield, suggested that the two included studies may represent significant under-reporting of the eligible qualitative evidence. These initial projects were conducted by the first two authors and supervised by the third author which later informed the conceptualisation of this review. Therefore, this QES aims to increase the coverage and richness of included studies while focusing on specific considerations relating to FBB in a Nigerian context. This review uses common factors identified from the original USAID/WHO review as a “best fit framework”⁸, supplemented by factors unique to Nigeria.

Evidence syntheses that have addressed the low uptake of FBB have tended either to be quantitative⁹ or to assimilate evidence from different geographical regions or countries.^{4,10} This “context-specific QES”¹¹ aims to explore the factors influencing the use of FBB in Nigeria. The specific objectives of the QES are:

- To explore the various facilitators and barriers that influence the utilisation of services to support FBB for pregnant women in Nigeria.
- To provide recommendations for policymakers in Nigeria on strategies to strengthen the utilisation of services to support FBB.

METHODS

Methods for QES have been developed by the international Cochrane Collaboration¹² and have received substantive endorsement by the WHO.¹³ They are recognised as making an important potential contribution to an understanding of the effectiveness of programmes, by increasing understanding of a phenomenon such as FBB, identifying associations between the broader environment (e.g. urban and rural Nigeria) within which people (pregnant women, fathers and other community members) live and programmes are implemented, and unpacking the influence of individual characteristics and attitudes (to both birth and health facilities).¹² A sensitive literature search seeks to identify as many relevant studies as possible, examining and rejecting many abstracts in ensuring that items are not missed.¹⁴ Typically, all studies that pass this initial test of relevance and that can potentially contribute to the overall interpretation are included within the review; quality assessment is used to moderate the certainty associated with each finding, not to exclude suboptimal studies. A QES concludes by

acknowledging the limitations of the review methods and of the included studies, which act as constraints associated with secondary analysis of already published data.

As this synthesis follows recognised QES methodology, a systematic review protocol was produced to allow a priori specification of review methods, to facilitate replicability and to protect against potential threats to rigour. This secondary research is based on already existing published data with no participant involvement and therefore ethical requirements were not applicable.

LITERATURE SEARCH

Searching for qualitative studies is widely recognised as problematic, primarily due to variations in terminology and limitations in subject indexing.¹⁴ Debate continues within qualitative evidence syntheses regarding the acceptability of alternative sampling approaches.^{15,16} However, in this case, the specific country focus indicated that it would be both feasible and useful to use a comprehensive exhaustive sampling approach. We used recognisably relevant references as a starting point for potential free text and thesaurus search terms. This strategy known as “pearl-growing” involves reviewing all terms assigned by authors or indexers to the relevant record, identifying whether they are sufficiently distinctive and, if so, adding them to the formal search strategy.¹⁷

Initial searches were conducted on MEDLINE via OVID-SP, EMBASE via OVIDSP and CINAHL via EBSCO between March 2017 and April 2017 and were limited to articles published from 2000 to 2017. The inception date of 2000 was chosen to reflect the likely influence of Millennium Development Goal campaigns on health services. We undertook a further search in MedNar and the Nigeria Federal Ministry of Health (NFMH) websites to identify grey literature. Update searches were conducted in June 2019 using PubMed MEDLINE and an update citation search was also done in the same period. Citation searches were conducted for all included studies to identify additional studies. The full electronic strategy for Ovid MEDLINE is presented in *Appendix S1* in the **Online Supplementary Document**. Boolean operators were used to combine sets across the SPICE elements ([Table 1](#)).¹⁸

Studies were limited to those published in the English language. Report types could potentially include journal articles, book chapters, grey literature reports and academic theses provided that they reported a full account of a qualitative research study. Abstracts and conference proceedings were excluded, given their acknowledged tendency to report incomplete information.¹⁹

Methodological filters designed to retrieve qualitative research were used to optimise the likelihood of identifying potentially relevant studies.²⁰

CITATION SEARCHES

Citation (reference) searches were conducted on Google Scholar for all included papers (forward chaining). 192 citations were reviewed for additional included studies while 290 citations were reviewed from the update citation search. The reference list of each included study was re-

Table 1. Search components for the review

S (Setting) – Nigeria	P (Perspective) – pregnant woman, relatives and healthcare practitioners	I (Interest, Phenomenon of) – facility- based birth	C (Comparator) – by implication, home birth	E (Evaluation) – perceptions, views, experiences
Relevant search terms				
Nigeria Nigerian	Pregnancy, Pregnant women/mothers Gravid women/ mothers	Facility based birth Maternal health services Delivery services Facility- based delivery Facility delivery Institutional delivery	Home based delivery Home birth(s)	Perception(s) Experience(s) Attitude(s) Opinion(s) View(s) Determinants Facilitators

Approach: Booth *et al.*, 2016¹⁴

Table 2. Review inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
Primary research only	Systematic reviews and secondary data
Qualitative studies (or mixed-methods studies if qualitative results reported separately)	Quantitative data
Nigerian populations	Non-Nigerian population
Women of child-bearing age	
Focus on peripartum period	Focus on antepartum or postpartum periods
Peer-reviewed articles or grey literature published in English	Non-English papers
No restriction by publication type	

viewed for relevant references.¹⁷

Searches of the repositories for major Nigerian universities were also conducted and yielded one additional thesis. Two further eligible theses by Nigerian students registered at South African and United States universities were identified from the Google Scholar search.

STUDY SELECTION

Study selection was completed by two independent reviewers with each reviewer independently assessing each article using the inclusion and exclusion criteria (Table 2). Titles and abstracts were reviewed sequentially and those meeting the inclusion criteria, or those with insufficient information for exclusion, were referred for full-text inspection. In the absence of consensus, articles were referred to a third reviewer.

DATA EXTRACTION

Data extraction of included articles was performed simultaneously with a risk of bias assessment using a Microsoft Excel™ spreadsheet, adapted from previous systematic reviews and modified following pilot extraction. Each of the two principal reviewers extracted data independently from a separate set of studies. A third author checked the extracted for accuracy, completeness and resolved discrepancies that arose from the two reviewers. Data items includ-

ed SPICE elements, descriptive study characteristics (objectives, study design, data collection, analysis method, ethical approval), themes identified from a pre-existing framework and conclusions.

Qualitative findings, in the form of author observations on the data, may appear throughout a paper. However, in this instance, we privileged extraction of findings from the Results sections alone of the included primary studies reasoning that subsequent sections should draw upon salient findings from the Results section. Verbatim quotes and accompanying author's interpretation were all extracted as data with quotes documented as italics and authors' interpretation documented as bold. By combining these sources, we sought to obtain the authentic experiences of participants enhanced by the researchers' interpretation of context and significance.

RISK OF BIAS ASSESSMENT

No accepted methods exist for assessing the risk of bias for qualitative studies.²¹ The team, therefore, privileged a structured examination of study quality using the most commonly used quality assessment checklist; the Critical Appraisal Skills Programme (CASP) qualitative checklist tool.²² We rated each study as being of high, moderate or low quality. No article was excluded from synthesis because of study design limitations.²¹ Following accepted approach-

Table 3. Pre-existing analytical framework

Theme	Description
Cost	Direct and indirect costs associated with facility birth
Influence of others on birthing decisions	Involvement of husbands, partners, family members, and friends on delivery location decisions
Plan for childbirth	Plans or lack of plans that a woman or her family make for her delivery
Human Immunodeficiency Virus (HIV)	Fear of HIV testing, disclosure, and discrimination
Transportation/access	Perception of the distance and time to a health facility and implications of available transportation options.
Policies	Health policies that may influence the decision to deliver in a facility or at home
Perception of risk	Awareness of risks associated with childbirth, influence of previous birth experiences on future delivery choices, and influence of Antenatal Care (ANC) on delivery choice.
Perceptions of quality of care	Perceived quality of care received at facilities during delivery
Medicalization of Childbirth	The perception that birth is a natural event, lack of supportive attendance at facility deliveries, fear of cutting
Intersection of traditionalism and modernity	Influence of tradition and culture on delivery decisions, delays in transition from unskilled to skilled care, cooperation between traditional and biomedical health systems
Logistics of home birth	Perception that home deliveries are logistically easier than facility deliveries

Source: Bohren *et al.*, 2014⁴

es to interpretive reviews, we prioritised the contribution of each study to answering the review question and to the overall interpretation over technical criteria for data collection and analysis.

Methods for assessing the likelihood of publication or dissemination bias in qualitative studies are relatively underdeveloped, although such biases undoubtedly exist.²³ For example, “truncation bias” occurs where the full reporting of results is constrained by journal word limits. We sought to mitigate against potential truncation bias by seeking academic thesis reports that met our eligibility criteria, even where journal versions of the same study also exist. We identified one thesis from our search of Nigerian university repositories and two additional theses by students registered at non-Nigerian universities.

SYNTHESIS

Findings were synthesised using framework synthesis.⁸ Best fit framework synthesis is recognised as a rapid and efficient way of generating themes; initially deductively and then through a discrete inductive phase to analyse the remaining data. Framework synthesis is one of several options believed to offer deliverable findings that are easier for policymakers to apply to their context.²⁴ While thematic synthesis offered a flexible and easily understood alternative, we selected a “best-fit” framework synthesis approach to optimise comparison with a framework derived from a pre-existing multi-context qualitative synthesis on FBD for LMICs (Table 3).⁴

The authors agreed on a reflexive statement to acknowledge their positionality concerning their perceptions of FBB

and the possible impact it could have in the synthesis of the study. All the authors generally favour formal intervention-al approaches to support a pregnant woman during birth that will give rise to the outcome of a healthy mother and baby. Two of the authors have varying practical knowledge and experience of the Nigerian context while the third has little. This imbalance helped to constrain the unwarranted interpretation of the findings.

REPORTING

This systematic review is reported using the ENTREQ statement guidelines outlined to adhere to the comprehensive and transparent reporting of QES.²⁵

RESULTS

SEARCH OUTCOME

A detailed search across the included databases including citation search yielded a total of one thousand four hundred and thirty studies (1,430) (*Appendix S2 in Online Supplementary Document*). Following removal of duplicates, 1084 records were eligible for title and abstract screening. 1054 items were excluded following the examination of title and abstracts. Full texts of 30 items were examined. Twenty-seven eligible studies were identified and included in the qualitative evidence synthesis after 3 articles were excluded with reasons (*Figure 1*) and *Appendix S3 in the Online Supplementary Document* shows the 3 articles excluded with reasons. *Table 4* describes the characteristics of each of the 27 included studies.^{5,6,26–50}

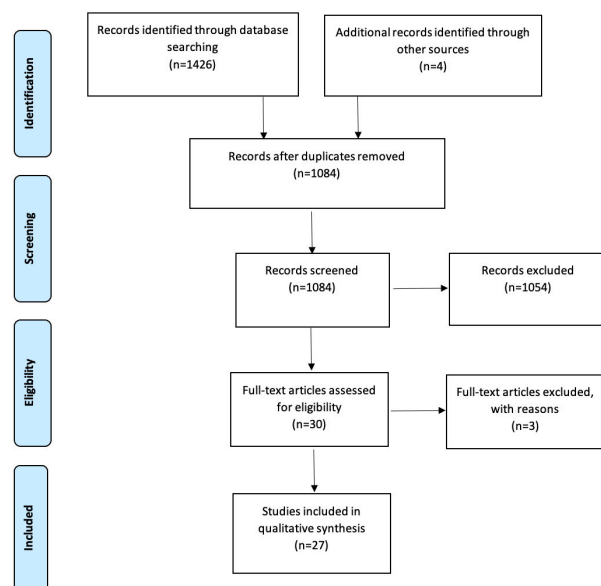


Figure 1. PRISMA flow diagram of study selection process.

Table 4. Characteristics of included studies

Author (Year) [Publication type]	Context	Participants	Ethnicity	Gender	Method
Adejoh <i>et al.</i> , (2017) [Journal]	Badagry, Lagos, Nigeria	30	Mixed (Egun; Hausa; Igbo; Ijaw; Yoruba)	Married Ms	In-depth Interviews (n = 30)
Adukwu (2015) [Thesis]	Benue State, Nigeria, rural	22	Idoma	Women (15-45 years) married with at least one child alive, and last delivery within past two years.	4 Focus Groups
Al-Mujtaba <i>et al.</i> , (2016) [Journal]	North-Central Nigeria	68	Hausa/Igbo	Women	7 Focus Groups approximately 10 per group (n = 68)
Amakoromo (2016) [Thesis]	Central Senatorial District, Bayelsa State, Nigeria	15	Ijaw	Women	In-depth Interviews (n = 15)
Banke-Thomas <i>et al.</i> , (2017)	Lagos, Nigeria	68	Yoruba, Igbo	Ms and Fs (Doctors, Nurses/midwives, health facility managers, government officials)	Focus Group Discussions(n=6) Key informant interviews (n=29)
Bohren <i>et al.</i> , (2017) [Journal]	Federal Capital Territory, Abuja metropolitan area of Nigeria	118	Mixed	Women; Healthcare providers/ administrators (29F, 14M);	4 Focus Groups (n = 34); In-depth Interviews (n = 84; 41 with women, 17 with nurses/ midwives, 17 with doctors and 9 with administrators
Doctor <i>et al.</i> , (2012) [Journal]	Northern Nigeria; Katsina, Zamfara and Yobe states	974	Hausa or Kanuri	Women who had attended maternity services; Community and local government leaders, TBAs, and health care providers.	Focus Groups (n = 95) with an average of 9 participants approx. 855; Individual Interviews (n = 119)
Edu <i>et al.</i> , (2017) [Journal]	Cross River state, Nigeria	40	Many Ethnic/Sub-Ethnic Groups	Female	FGD (n=8)
Esienumoh <i>et al.</i> , (2016) [Journal]	Bakassi, Southern Nigeria	29 (plus FGs) Number of participants per FG was not stated	Major ethnic group is Efik, also Ibibios, Annangs, Ijaws and Ibos.	Women of child-bearing age; other childbearing-age women, menopausal women/mothers- in-law and TBAs.	In-depth individual interviews (n = 29), Four Focus groups; Practices of 5 TBAs and one midwife were observed.
Exley <i>et al.</i> , (2016) [Journal]	Three study states: Enugu, Kwara and Kano from geopolitical zones with varying maternal mortality ratios ('very high' (North West), 'high' (North Central) and 'moderate' (South East) maternal mortality)	73 Interviews, 9 FGD with an average of 7 participants approximating 63 participants in FGD. Hence total= 136	Hausa/Fulani (North West); Yoruba (North); Igbo (South East)	Women; Policymakers/key community leaders (Gender unspecified)	Focus Groups (n = 9); In-depth Interviews (n = 73)
George (2017) [Thesis]	Seven health facilities in Nkanu West Local Government Area (LGA) of Enugu State, Nigeria	45	Igbo	Women	7 Focus Groups and In-depth Interviews (n = 45)
Igboanugo & Martin (2011) [Journal]	South-south Nigeria; rural Niger delta community	8	Not stated (heterogeneous)	Women	Semi-Structured Interviews (n = 8)
Love (2013) [Journal]	Southwest Nigeria; Ondo State	23	Yoruba (South West)	Women	2 Focus Groups (n = 23)
Ogu <i>et al.</i> , (2017)	Multiple context	339	Multiple	Fs (Pregnant or recently delivered)	Focus Group Discussions (n=40)
Oguntunde <i>et al.</i> , (2018) [Journal]	Kaduna state and Jigawa state, Nigeria.	50 (+ focus groups: 6-8 people)	Hausa	Ms and Fs (Local government area secretaries) plus focus groups (ETS drivers; Mothers from the last year; Husbands; Health care providers; TBAs; Religious leaders)	Focus groups (n = 24) Interviews (n = 50)
Ohaja and Murphy-	South-East Nigeria	17	Igbo	Fs (Pregnant Women)	In-depth Interviews (n=17)

Author (Year) [Publication type]	Context	Participants	Ethnicity	Gender	Method
Lawless (2017) [Journal]					
Ojelade <i>et al.</i> , (2017) [Journal]	Akure, Nigeria	113	Yoruba (interviews also conducted in English)	Fs of reproductive age, midwives, doctors, and facility administrators.	In-depth interviews (IDIs) (n = 42) Focus group discussions (FGDs) (n = 10; 71)
Okafor <i>et al.</i> , (2014) [Journal]	Southwest Nigeria; Lagos state	25	Yoruba (South West)	Women	3 Focus Groups (9,9,7) (n = 25)
Okonofua <i>et al.</i> , (2017) [Journal]	4 geo political zones of Nigeria excluding (Northeast /Southeast)	339	Not documented	Women	40 Focus Groups (n = 339)
Okonofua <i>et al.</i> , (2018) [Journal]	4 geo political zones of Nigeria excluding (Northeast /Southeast)	339	Not documented	Women	40 Focus Groups (n = 339)
Orpin <i>et al.</i> , (2018)	Benue state, Nigeria	32	Mixed (Tiv, Igala, Idoma, Igbo, Iggede)	Female	FGD (n=32)
Osubor <i>et al.</i> , (2006) [Journal]	South–south Nigeria; Ologbo community	48?	Various ethnic groups including: Binis and Ishans; Ikas, Urhobos, Isokos; and, Efiks and Ibibios.	Women; Health workers	Focus groups (n = 48 approx; 6 x 8 participants each (4 for women; 2 for health workers)
Sharma <i>et al.</i> , (2017)	Jigawa, Nigeria	4 to 20	Hausa, Fulani	Ms and Fs	In-depth Interviews (n=40)
Tukur <i>et al.</i> , (2016) [Journal]	Northwest Nigeria	192	Hausa & Fulani	Healthcare workers (4F, 2M); TBAs (6F); Women Attendants & Mother-In-Laws (Fs); Father in Laws (Ms)	Focus Groups (n = 180); In-depth Interviews (n = 12)
Wright <i>et al.</i> , (2016) [Journal]	Lagos State, South West Nigeria	39	Yoruba	Fs receiving at least one of nine WHO recommended signal functions	Focus group discussions (FGDs) (n = 6)
Yaya <i>et al.</i> , (2019a) [Journal]	Etsako East and Esan South East local government areas of Edo State, Nigeria	179	Not stated (interviews in Pidgin English; English)	Ms (Varying ages) and Fs (15–45 yrs)	Focus Group Discussion (FGDs) (n = 20)
Yaya <i>et al.</i> , (2019b) [Journal]	Edo state, Nigeria	128	Not stated	Male	FGD (n=9)

F = Female, M = Male, TBAs = Traditional Birth Attendants

QUALITY ASSESSMENTS

All twenty-seven studies were assessed using the CASP checklist for qualitative research (Table 5). This was independently assessed by two reviewers and conflicting results were resolved by the third reviewer. One source journal was considered a potential predatory journal³⁷, two other journals are controversially labelled as such^{28,35} and the studies included three academic theses.^{27,29,35} The remaining journals are indexed in PubMed MEDLINE.

THEMES

Data were organised under four overarching themes in line with the best-fit framework used for this synthesis.⁴ Further synthesis gave rise to two or more subthemes (Table 6). Details on the results of the included studies can be found in Appendix S4 in the Online Supplementary Document.

PERCEPTIONS OF PREGNANCY AND CHILDBIRTH

Compelling reasons for giving birth in a health facility were a woman's prior experience of a safe delivery or other women having given birth safely.³⁵ Also, *"an additional attraction going for facility delivery was the incentives given to patients such as baby kits and mosquito nets."*⁴⁷

Childbirth was consistently revealed as a normal, safe process^{6,38} leading to a prevalent narrative that a facility is only to be accessed when a woman developed complications. Another prevailing fear that related to the medicalisation of childbirth was that, *"Some of the participants complained bitterly for fear of sharp objects and recommendations for Caesarean Section."*²⁹

Conversely, a woman's knowledge of their HIV-positive status encouraged them to pursue FBB.²⁸ However, another study elicited opinions that the requirement to undergo an HIV test *"drives women away from using the facilities."*⁴³

The home environment offers a competing private and comfortable place for birth compared to the open nature of health facilities.⁴⁷ For example, some traditionally prefer to lie on the floor to have their babies whereas midwives in the hospitals may try to persuade them to deliver on a couch.³³

INFLUENCE OF SOCIOCULTURAL CONTEXT AND CARE EXPERIENCES

Sometimes choice may be determined by whether the partner is available to transport her to the clinic.²⁸ Husbands were typically the major decision-makers in the household.^{35,46} However, this influence may extend to the husband's family: *"My sister's husband told me to go to the TBA although my husband did not support the idea. However, I had to obey my sister's husband by going to the TBA for care."*³³

Nonetheless, family influence is not always construed negatively; a mother advocating FBB to her daughter³⁵ or a husband affirming his wife's choice³⁵ were viewed as an extremely positive occurrence. Friends also influence the place of birth, particularly if their own experience has been positive.³⁵ TBAs also play a positive role where they perceive danger signs associated with delivery.³⁸

Religious leaders are seen to play important roles in sig-

nalling the need for FBB services.³⁸ The influence of religious belief is also seen less overtly in shaping how the overall labour and birth takes place. Adejoh *et al*²⁶ reported that, *"...Even when lives are lost in the process of giving birth in religious homes, they see it as 'the will of God'."*

The women cited the sudden onset of labour as a reason for not giving birth in a facility: which didn't give them time to plan: *"It was the hospital [where I] intended to give birth, but it [labour] suddenly come at home, before I could come, I felt I cannot make it, so I delivered at home."*³⁴

RESOURCE AVAILABILITY AND ACCESS

Participants voiced practical concerns relating to the availability of, and access to, health facilities; for example, the working hours of the facility⁴⁷ or delays experienced when waiting to access services.

FBB is seen as expensive^{37,40} and this may influence women to resort to home delivery³⁵ and to access TBAs as a cheaper option.²⁹ Women expressed the view that if the facilities were free then women would utilise the services.⁴⁷

The sudden onset of labour may preclude transportation options, for example, the use of motorcycles or Okada (motorcycle taxis).²⁹ Okada may even drop the nurse at the facility before returning for the woman.³⁷ If nearby facilities are closed women need transportation to more distant facilities.⁴⁶

Some communities benefit from Emergency Transport Schemes (ETS) that have been instituted to transport pregnant women to the hospital. However, some health facilities do not readily admit women brought by the ETS drivers because the drivers are not able to identify themselves as volunteer drivers for the program.³⁸

Women who used the program and their husbands responded positively to ETS as they affirmed that, *"It [ETS] has really helped women. Immediately we get to know that a woman is in labor and she is bleeding, we immediately call the driver to come take her to the hospital [...] yes, it is a success."* (Woman, integrated ETS, Kaduna)³⁸

Security challenges were identified as a significant barrier, given that drivers often transport the women at night.

"I won't forget [the experience] of one of my drivers that once took a woman in labor to the health facility [...] in the night. Thieves attacked them on the way, forced them to stop [...], laid them flat on the ground and they collected the little money that the woman's husband had on him." (Focal person, integrated ETS, Kaduna state).³⁸

Other transportation-related barriers from the same study included insufficient numbers of volunteer drivers and vehicles, poor road conditions, and instances where a husband would not let the driver transport his wife which often led to sad outcomes³⁸ - *"All in all she was not taken away from home, she died while we were trying or in the process of looking for car"* (MD-6).⁴⁶

PERCEPTIONS OF QUALITY OF CARE

Women frequently expressed concerns about the lack of privacy.³¹ In some cases, this not only threatened basic human rights but also transgressed religious dictates.³¹ A particu-

Author (year)	1. Aims of Research	2. Methodology Appropriate	3. Research Design	4. Recruitment Strategy	5. Data Collection	6. Relationship of Researcher	7. Ethical Issues	8. Data Analysis	9. Statement of Findings	10. Value of Research	Overall Quality
Adejoh <i>et al.</i> , (2017)	✓	✓	✓	✓	✓	✗	✗	✓	✓	Moderate	LOW
Adukwu (2015)	✓	✓	✓	✓	✓	✓	✓	✓	✓	Good	HIGH
Al-Mujtaba <i>et al.</i> , (2016)	✓	✓	✗	✓	?	✓	✓	✓	✓	Good	MODERATE
Amakoromo (2016)	✓	✓	✓	✓	✓	?	✓	✓	✓	Good	HIGH
Banke- Thomas <i>et al.</i> , (2017)	✓	✓	✓	✓	✓	✗	✓	✓	✓	Moderate	Moderate
Bohren <i>et al.</i> , (2017)	✓	✓	✓	✓	✓	✓	✓	✓	✓	Good	HIGH
Doctor <i>et al.</i> , (2012)	✓	✓	✓	✓	✓	✓	✓	?	✓	Good	HIGH
Edu <i>et al.</i> , 2017	✓	✓	✓	?	✓	✗	?	✓	✓	Moderate	MODERATE
Esienumoh <i>et al.</i> , (2016)	✓	✓	✓	✓	✓	✗	✓	✓	✓	Good	MODERATE
Exley <i>et al.</i> , (2016)	✓	✓	✓	✓	✓	✓	✓	✓	✓	Good	HIGH
George (2017)	✓	✓	✓	✓	✓	?	✓	✓	✓	Good	HIGH
Igboanugo & Martin (2011)	✓	✓	✓	✓	✓	?	✓	✓	✓	Good	HIGH
Love (2013)	✓	✓	✓	✓	✓	?	✓	?	✓	Good	MODERATE
Oguntunde <i>et al.</i> , (2018)	?	✓	?	✗	✓	✗	✓	?	✓	Moderate	LOW
Ogu <i>et al.</i> , (2017)	✓	✓	✓	✓	✓	✗	✓	✓	✓	Moderate	MODERATE
Ohaja and and Murphy-Lawless (2017)	✓	✓	✓	✓	✓	?	✓	✓	?	Moderate	MODERATE
Ojelade <i>et al.</i> , (2017)	?	✓	✓	✓	✓	✗	✓	✓	✓	Moderate	MODERATE
Okafor <i>et al.</i> , (2014)	✓	✓	✗	✓	✓	✗	✓	?	✓	Moderate	LOW
Okonofua <i>et al.</i> , (2017)	✓	✓	?	✓	✓	?	✓	✓	✓	Good	MODERATE
Okonofua <i>et al.</i> , (2018)	✓	✓	✓	✓	✓	✗	✓	✓	✓	Good	MODERATE
Orpin <i>et al.</i> , (2018)	✓	✓	✓	✓	✓	✓	✓	✓	✓	Good	HIGH
Osubor <i>et al.</i> , (2006)	✓	✓	✗	✗	?	✗	✓	?	✓	Moderate	LOW
Sharma <i>et al.</i> , (2017)	✓	✓	✓	✓	✓	✓	✓	✓	✓	Good	HIGH
Tukur <i>et al.</i> , (2016)	✓	✓	?	✓	✓	?	✓	✓	✓	Good	MODERATE
Wright <i>et al.</i> , (2016)	✓	✓	✓	✓	✓	✗	✓	✓	✓	Moderate	MODERATE
Yahaya <i>et al.</i> , (2019a)	?	✓	?	?	✓	✗	✓	✓	?	Moderate	LOW
Yahaya <i>et al.</i> , (2019b)	✓	✓	✓	✓	✓	?	✓	✓	✓	Good	HIGH

Table 5. CASP qualitative research quality assessments

Table 6. Overview of synthesis themes and sub-themes

1. Perceptions of pregnancy and childbirth	
1a. Perception of risk	Awareness of risks associated with childbirth, influence of previous birth experiences on future delivery choices, and influence of Antenatal Care (ANC) on delivery choice.
1b. Medicalization of Childbirth	Perception that birth is a natural event, lack of supportive attendance at facility deliveries, fear of cutting
1c. Logistics of home birth	Perception that home deliveries are logistically easier than facility deliveries
2. Influence of sociocultural context and care experiences	
2a Influence of others on birthing decisions	Involvement of husbands, partners, family members, and friends on delivery location decisions
2b. Intersection of traditionalism and modernity	Influence of tradition and culture on delivery decisions, delays/difficulty in transition from unskilled to skilled care, cooperation between traditional and biomedical health systems
2c. Plan for childbirth	Plans or lack of plans that a woman or her family make for her delivery
3. Resource availability and access	
3a. Cost	Direct and indirect costs associated with facility birth
3b. Transportation/ access	Perception of the distance and time to a health facility and implications of available transportation options.
4. Perceptions of quality of care	
4a. Abuse or disrespect from health facility staff	Verbal, or even physical, abuse from staff in the health facility or disrespect, including failure to preserve respect and dignity
4b. Human Immunodeficiency Virus (HIV)	Fear of HIV testing, disclosure, and discrimination
4c. Policies	Health policies that may influence the decision to deliver in a facility or at home

Further data supporting these themes are in in the [Online Supplementary Document, Appendix S4](#).

lar concern was where women were managed by male staff, against the preferences of husbands, the women themselves or both.

Again, such sub-standard care is uneven with other women expressing appreciation for the standards of the facilities and the availability of medicines and equipment. Women would also contrast past and current standards of cleanliness, praising such improvement.³⁴ They would also contrast unfavourable treatment in previous facilities with favourable staff behaviours and attitudes.³⁵

Women may be suspicious of facilities if they believe that they will be insulted or poorly treated.³¹ Other studies corroborate this finding, including instances of women being slapped by health staff or yelled at for not bringing in supplies or not complying with health provider demands.⁴¹ Further lack of trust was seen in the belief that healthcare workers will swap their babies with a dead baby.³²

Other policies and procedures, separate from mandatory HIV testing, also exerted an influence over the choice of place of birth. These can operate in either a “push” or “pull” direction. For example, TBAs may not readily refer women with complications to hospital. Instead they may use the health facilities as a place of last resort once they have exhausted other options.³⁵

DISCUSSION

IMPLICATIONS FOR NIGERIA

Given that FBD is considered expensive there is a need to explore different funding options. These funding options may include a need to review delivery fees either in form of a discount, health insurance package or a free service especially for women residing in rural areas.⁵¹

Poor access to health facilities, identified either as lack of transportation services or bad condition of the roads, constitutes a major challenge to women residing in local areas. This has made the women settle for other alternatives that are close and convenient. It could be argued that a lack of health service proximity particularly exists for rural Nigeria. This highlights the urgency to address rural-urban disparities in Nigeria. ETS interventions, designed to improve pregnant women's access to health facilities, offer a response in many underserved communities. In northern Nigeria, these schemes have required collaboration between government departments, development partners, and transport unions with various donor-funded projects providing scale-up within the region.³⁸ However, our review identified reported difficulties in being admitted to facilities when transported by an ETS driver, leading to a recommendation that ETS programmes ensure that drivers are provided with identification to facilitate prompt admission.

The utilisation of FBD services in Nigeria is deeply influ-

enced by widespread socio-cultural determinants, diverse perceptions and experiences. These sociocultural factors are influenced by anecdote and stories which can operate either positively or negatively which can be used as a tool for change. Changing negative perceptions can be achieved through the institutionalisation of the Safe Motherhood Action Groups (SMAGs) which are community-based volunteer groups that seek to address knowledge gaps and change long-held perceptions. Studies of SMAGs from Zambia have demonstrated the relevance of this intervention in improving institutional births in poor rural settings.^{52,53} The SMAGs are particularly effective when the volunteers are indigenous beneficiaries of facility delivery. A similar community-based volunteer group called Voluntary Community Mobilisers (VCM) has been used, particularly targeting childhood immunization, in some states in Nigeria.⁵⁴ The VCM were found to be instrumental in improving immunisation uptake. Such policy implications may extend to FBBs for pregnant women in Nigeria.

This review identified in passing that the prospect of gifts for women after delivery may further shape the perceptions of women and their subsequent choice of place of birth. This incentive was found to be a cost-effective way of increasing facility delivery in rural Zambia.⁵⁵

IMPLICATION ON THE THREE-DELAY MODEL

In 1994, Thaddeus & Maine proposed a “three delay model” against which to define interventions that address maternal mortality. The first delay relates to the ‘*decision to seek care*’. The second phase constitutes ‘*identifying and reaching the medical facility*’. Finally, ‘*receipt of adequate and appropriate treatment*’ is required. In subsequent years, the three delays model has emerged as an important visualisation of challenges faced in delivering FBB and has been a relevant framework particularly in LMICs. Our QES offers an amplification to certain social factors that complement these delays and a conceptualisation, which reveals a complex interplay of factors, of which lies a pregnant woman at the centre who is continually subject to influences. So, an otherwise predetermined decision may be modified by situational factors, such as the sudden onset of labour, by actual or presumed experiences of the mother or influential others, or by available resources (such as the availability of transport). Others have previously led the critique of the three-delay model such as Sorensen et al⁵⁶ in their work in Tanzania

As an alternative, we propose a relationship between four broad themes which, if addressed, should lead to greater participation in FBD and improve overall maternal mortality indices. These four themes are adapted from the four overarching themes presented in the result section (care quality, resource availability and access, influence of sociocultural context and care, and beliefs and perceptions of pregnancy). The fourth of these factors, relating to the woman’s beliefs and perceptions, based on actual, vicarious and assumed experience acknowledges the unique contribution of qualitative research and places the woman at the centre of decision-making.

IMPLICATIONS ON WIDER SIMILAR CONTEXTS

Comparison of findings from this QES with the multi-context review funded by the WHO⁴, and with a single country QES for Kenya⁷ co-produced by one of the authors, reveals some interesting insights. At a mid-range level, the same constraints pertain across geographical and cultural contexts; for example, how the availability of genuine choice is limited by the rapid onset of labour or by the occurrence of obstetric emergencies. Specifically, however, transport options may differ across countries and arrangements for access to facilities may be organised differently. Prevailing religious beliefs may differ but the influence of religion, traditional beliefs and family attitudes typically combine to impact upon decision-making. Health staff may differ in their attitudes to the women in labour but respect for the women varies more by degree than by its importance. This review can therefore inform an understanding of the decision-making context within which FBB is contemplated and actioned in similar contexts but cannot replace the nuanced interpretation of these factors offered by qualitative research specifically from those contexts.

METHODOLOGICAL STRENGTHS AND LIMITATIONS

This context-specific qualitative evidence synthesis on perceived barriers to FBB in Nigeria demonstrates how concentrating study identification and analysis on a single context offers more studies, thicker contextual detail and a nuanced understanding of context, when compared to multi-context reviews (i.e. with included studies from multiple countries).¹¹

One methodological concern is that multi-context reviews access a fraction of relevant evidence. The multi-context review⁴, a high-quality qualitative synthesis, only identified 2 studies from Nigeria. Our forensic efforts to identify additional studies by searching institutional repositories, by following up citations and by pursuing Internet pointers unearthed sixteen studies. Eleven (69%) out of these sixteen studies were identifiable from MEDLINE alone suggesting a trade-off between exhaustivity and informativeness for country-specific reviews. Importantly, 12 of these 16 studies (75%) have been published since the publication of the multi-context review. Use of a five-year-old multi-context review in decision-making may under-represent the evidence base, for one country alone, by a factor of eight.

Being a context-specific review, the findings of this synthesis may have limited generalisability to similar settings in SSA. However, the congruence of findings with the framework of the multi-context review⁴ suggests that similar issues influence the choice of place of giving birth in other regions.

Further work should further explore “relevance”. Noyes et al⁵⁷ describe relevance as the extent to which data from primary studies is applicable to a context. Context here would mean the setting or population. Nigeria enjoys multiple tribes and ethnic origins represented by included studies. Detailed examination would reveal whether regions included in the review are homogeneous, for example, in health system infrastructure and government policies or heterogeneous based on tribe, language group, religion and

ethnicity. This will further drive the applicability of the review findings by policy makers in their respective settings and perhaps an extension to other LMICs contexts.

CONCLUSIONS

Addressing structural gaps in facility-based services alone is insufficient in improving maternal mortality indices in Nigeria. Wider social determinants, such as socio-cultural beliefs and care experience, operate as key factors to influence the utilisation of maternity health services. SMAGs offer one potential solution for addressing community-level factors identified in this review. Future research should be undertaken to determine their effectiveness and relevance in different contexts in Nigeria. In the meantime, FBD services, particularly in rural areas of Nigeria, continue to encounter gaps involving distance and access. We recommend that ETS should become part of standard service provision in such areas to address such inequalities.

This review demonstrates clear benefits from accessing a richer and more diverse set of qualitative studies for Nigeria when compared with a multi-context review that contains a mere fraction of includable studies. However, as previously stated country-specific reviews constitute an expensive resource and must be commissioned judiciously.

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SM and CA did the preliminary search and protocol with a robust and update search done by AB. SM and CV separately did the quality assessments of the included studies with AB as the third assessor. All authors jointly did the data extraction and contributed in the draft write up and editing.

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The authors completed the Unified Competing Interest form at www.icmje.org/coi_disclosure.pdf (available upon request from the corresponding author), and declare no conflicts of interest.

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