BMJ Open

Understanding birthing preferences of women in Benin City, Nigeria: A qualitative study

Journal:	*BMJ Open*
Manuscript ID	bmjopen-2021-054603
Article Type:	Original research
Date Submitted by the Author:	23-Jun-2021
Complete List of Authors:	Eluobaju, Debra; University of Illinois at Chicago College of Medicine, Okonofua , F; Women's Health and Action Research Centre; Centre of Excellence in Reproductive Health Innovation, University of Benin Weine, Stevan; University of Illinois at Chicago, Department of Psychiatry Goba, Gelila; University of Illinois at Chicago College of Medicine
Keywords:	Maternal medicine < OBSTETRICS, PUBLIC HEALTH, OBSTETRICS

I, the Submitting Author has the right to grant and does grant on behalf of all authors of the Work (as defined in the below author licence), an exclusive licence and/or a non-exclusive licence for contributions from authors who are: i) UK Crown employees; ii) where BMJ has agreed a CC-BY licence shall apply, and/or iii) in accordance with the terms applicable for US Federal Government officers or employees acting as part of their official duties; on a worldwide, perpetual, irrevocable, royalty-free basis to BMJ Publishing Group Ltd ("BMJ") its licensees and where the relevant Journal is co-owned by BMJ to the co-owners of the Journal, to publish the Work in this journal and any other BMJ products and to exploit all rights, as set out in our licence.

The Submitting Author accepts and understands that any supply made under these terms is made by BMJ to the Submitting Author unless you are acting as an employee on behalf of your employer or a postgraduate student of an affiliated institution which is paying any applicable article publishing charge ("APC") for Open Access articles. Where the Submitting Author wishes to make the Work available on an Open Access basis (and intends to pay the relevant APC), the terms of reuse of such Open Access shall be governed by a Creative Commons licence – details of these licences and which Creative Commons licence will apply to this Work are set out in our licence referred to above.

Other than as permitted in any relevant BMJ Author's Self Archiving Policies, I confirm this Work has not been accepted for publication elsewhere, is not being considered for publication elsewhere and does not duplicate material already published. I confirm all authors consent to publication of this Work and authorise the granting of this licence.

Title: Understanding birthing preferences of women in Benin City, Nigeria: A qualitative study

Debra Eluobaju, MPH[2]; Friday Okonofua MD, PhD, FRCOG[1]; Stevan Weine, MD[2]; Gelila Goba MD, MPH[2]

Corresponding author: Debra Eluobaju, 2652 w 21st place, Chicago IL, 60608, deluob2@uic.edu, (224)789-0916

Center of Excellence in Reproductive Health Innovation, Benin City Nigeria[1]; University of Illinois at Chicago college of medicine, Chicago USA[2]

Keywords: Maternal health, Obstetric delivery, Childbirth, traditional birth attendant, quality of care

Word Count 4062

Abstract

***Objective**: The aim of this study was to explore birthing preferences and the motivational factors that influence those preferences in women in Benin City; to better understand the low rates of healthcare facility utilization during childbirth.*

***Setting:** Two primary care centers, a community health center, and a church within Benin City Nigeria.*

***Participants:** We conducted one-on-one in-depth interviews with 23 women, and 6 focus groups (FG) with 37 husbands of women who delivered, SBAs, and TBAs in a semi-rural region of Benin City, Nigeria. Subjects were eligible to participate if they were: 1) pregnant with their first child, 2) women who delivered within healthcare facilities (w/SBAs), 3) women who delivered outside of healthcare facilities (w/TBAs), 4) husbands of women who delivered within or outside of healthcare facilities, 5) SBAs, or 6) TBAs.*

***Results:** Women in the study are influenced by several factors in deciding whether to use an SBA/TBA: having a healthy baby, receiving emotional support, decision-making power, clinic cost, avoiding medical interventions, maintaining modesty and cultural needs, such as herbal medicines and labor massages. Women, husbands, and SBAs also reported women experiencing verbal insults, hitting and neglect during labor. Decreasing clinic cost and training SBAs to be more respectful was recommended by study participants.*

***Conclusion:** Women in the study wanted a birthing experience that results in a healthy baby, is respectful, and incorporates cultural practices. Adopting a woman-centered care approach may encourage more women to transition from prenatal care to childbirth with SBAs. Efforts should be placed on training SBAs as well as investigating how nonharmful cultural practices can be integrated into local health care systems.*

Article Summery

Strength and Limitations

- This is the first known qualitative study to explore the childbirth preferences of women, and the social and cultural factors that influence those preferences in Nigeria.
- For a qualitative study a larger sample size was used for the interviews and focus group discussion.
- Study findings are consistent with others regarding treatment of women in healthcare facilities in Nigeria.
- A multiple disciplinary team of researchers with expertise in qualitative study from Nigeria and the United States were involved in development of the interview and focus group guides and the analysis of the results
- The study was limited by the lack of education and financial diversity among husband FGD participants

Introduction

Maternal mortality (MM) has decreased by 44% globally between 1990 to 2015, due to infection control, the management of pregnancy related complications such as preeclampsia, and blood transfusions[1]. However, sub-Saharan African countries maintain the highest maternal mortality rates (MMR) worldwide and have experienced the slowest decline[2]. The average MMR in Sub-Saharan Africa is 547 per 100,000 births, which is more than double the global average of 216 in 100,000 births[3]. Within sub-Saharan Africa, disparities in MM also exist. Nigeria maintains the fourth highest MMR in sub-Saharan Africa with a rate of 814 in 100,000 births[3]. Currently, Nigeria is second only to India globally for absolute numbers of maternal death, accounting for 14% of the world's MM [4].

The most common obstetric causes of MM in Nigeria are pre-eclampsia, primary postpartum hemorrhage, prolonged obstructed labor, maternal sepsis, and antepartum hemorrhage[4]. The most common patient-level factors that result in MM are the use of alternative birth attendants (traditional birth attendants), nonuse of prenatal care, refusal of recommended treatment, and delayed presentation to healthcare facilities,[5]. Despite research indicating that giving birth in

healthcare facilities with skilled birth attendants (SBAs) decrease the likelihood of MM, only 43% of women in Nigeria deliver with an SBA, compared to 58% in sub-Saharan Africa overall and 80% globally[6,7].

Interestingly, SBA utilization in Nigeria is higher during prenatal care 64%, compared to 43% during childbirth[5]. This variance may be due to negative experiences, including dissatisfaction with healthcare facilities and poor attitudes of healthcare providers, as well as lack of transportation, hospital cost, preference for alternative methods such as traditional birth attendants (TBAs), or cultural and/or spiritual reasons [6,8].

Unlike SBAs who are accredited healthcare professionals, WHO defines a TBA as "a person who assists a mother during childbirth and who initially acquired her skills by delivering babies herself or through apprenticeship to other traditional birth attendants [9]." The perceived benefits of TBA utilization is their accessibility, especially in rural areas; affordability, ties to the community, and attentiveness to the cultural needs of women during labor [10,11,12]. By contrast, the disadvantage of utilization of TBAs is that they lack the training to identify and manage complications such as postpartum hemorrhage or birth asphyxia, resulting in the probability of a delay in care when women need to be transferred to healthcare facilities during obstetric emergencies[13,14].

Despite the disadvantages of TBA utilization, women throughout the Global South continue to utilize their services during childbirth for a variety of reasons. Rural women in Ghana reported that poor provider-client interactions and cultural insensitivity in healthcare facilities influenced their use of TBAs over SBAs [10]. A study conducted in Tanzania showed that high rates of home births were due to the fact that neither men nor women associated delivering at home with risk of poor outcomes[15]. In Malawi, factors that influenced delivery outside of healthcare facilities ranged from rainy season-associated transportation difficulties, unexpectedly quick onset of labor, and cultural reasons[16]. Studies in Northern Uganda yielded similar results regarding high rates of home birth, including poor client-provider interactions, cost, and transportation, which explains the decrease delivery with SBA's in healthcare facilities compared to degree of utilization of SBAs for antenatal care [11].

There is little research exploring the childbirth preferences of Nigerian women. However, there are studies indicating a failure of the healthcare system to meet the needs and preferences of women in Nigeria, leading to avoidable MM [17]. Adopting a women-centered approach can begin to address the disconnect between the preferences of mothers and services provided by healthcare facilities in Nigeria. To achieve this, a holistic understanding of the preferences of Nigerian women in childbirth must be attained.

We conducted a qualitative study with women in Benin City, Nigeria, to gain a holistic understanding of their preferences regarding childbirth, including issues related to healthcare facility utilization. The aim of this study was to explore birthing preferences and the motivational factors that influence those preferences in women in Benin City; to better understand the low rates of healthcare facility utilization during childbirth.

Methods

A conceptual framework (Figure 1) was developed based of a literature review and utilized to determine target populations and inform in-depth interview questions and focus group guides. This framework also informed data coding and categorization during analysis.

Patient/Public Involvement

A key stakeholder in the community was actively involved in the creation of the research questions, study design/ execution, and data analysis. Participants in the study were not involved in setting the research question or study design. Participants were central to recruitment of other participants by spreading word of the study by mouth.

Sampling and Recruitment Procedures

We conducted one-on-one in-depth interviews with 23 women, and 6 focus groups (FG) with 37 husbands of women who delivered, SBAs, and TBAs in a semi-rural region of Benin City, Nigeria. Participants were chosen using purposive sampling and were recruited from the Women's Health and Action Research Centre (WHARC), the Centre of Excellence in Reproductive Health Innovation (CERHI), community health centers, and churches in Benin City, Nigeria.

Subjects were eligible to participate if they were: 1) pregnant with their first child, 2) women who delivered within healthcare facilities (w/SBAs), 3) women who delivered outside of healthcare facilities (w/TBAs), 4) husbands of women who delivered within or outside of healthcare facilities, 5) SBAs, or 6) TBAs, and they had to be between the ages of 18-65, English speaking, and able to provide informed consent.

Participants were pre-screened by community health workers from CERHI and introduced to the PI. The PI (Debra Eluobaju, MPH) rescreened participants, explained the purpose of the study, obtained informed consent, and conducted the interviews. Men were recruited from churches, SBAs were recruited from community clinics, and TBAs were recruited from the community. FG participants were screened and consented with the same procedure as the interviewees.

Interviews

In-depth interviews were conducted with women who were pregnant with their first child or who had ever delivered in the past. Two different interview guides were used: one for women who delivered within healthcare facilities (w/ SBAs), and another for women who delivered outside of healthcare facilities (w/ TBAs). Interview guides for the in-depth interviews were developed using the study's conceptual framework (figure 1); they explored women's personal experiences involving childbirth and how that influenced their birthing preferences, and treatment by skilled or traditional labor attendants. The guides also sought to explore the decision-making process of selecting how and where to deliver, and access to healthcare facilities. All participants were asked to give verbal consent to allow for the collection of data and recording of the interview. The interview guides were piloted with three participants, and then revised to ensure that the guide answered the research questions. Additionally, pilot information was used to determine whether questions were easy to understand and appropriate for the target population.

Interviews were conducted in English by the PI. Semi-private locations at the recruitment sites were used to conduct the interviews immediately following screening and consenting.

Focus groups

The categories with which FGs were conducted were SBAs, TBAs, and husbands of women who had delivered with or without SBAs. These FGs contained between 3-10 participants each, lasted between 30 minutes to an hour, and were conducted at a church, clinic, or the location where TBAs took deliveries. FGs were conducted in English (DE). The study's conceptual framework informed the development of FG guides; a FG guide was developed for each category of participants to explore the socio-cultural topics involved with childbirth preferences (Figure 1).

Men

One FG was conducted with men to explore family dynamics, financial burden of delivery, and personal opinions regarding SBAs and TBAs.

SBAs

Three FGs were conducted with SBAs to explore their patient load, perceptions on the treatment of women in labor, why they believe some women prefer TBAs, and possible solutions to the low rates of utilization of clinics for deliveries.

TBAs

Two FGs were conducted with TBAs to explore their cultural significance, why they believed women utilized them, and some of their traditional practices.

Data Analysis

Data analysis was conducted utilizing the Grounded Theory approach [18]. Interviews and FG data were audio recorded and then transcribed. The PI read through the interviews and FG transcripts to identify occurring and reoccurring concepts and patterns within the data. Concepts and patterns were used to develop codes using memoing. A codebook was developed, consisting of 87 codes. Atlas/ti software was used to assist with data analysis.

Data were coded for recurring themes, significant quotes, and information that surprised the PI. Data analysis occurred concurrently with data collection from semi-structured interviews to determine when a saturation of themes had been met. FG data were analyzed by the PI after the completion of all FGs. To ensure accuracy, every fourth transcription and coded document was reviewed by the PI for accuracy of transcription and consistency of coding. To identify quotes of interest and striking passages, memoing was used. Queries, for example for "TBA" and "comfort," were used to further condense data. Condensing of the data and categorization was used to further group data and assess recurring themes. Overarching categories were then identified through analysis and grouped into three themes.

Results

23 interviews were conducted with women, 11 with women who delivered outside of healthcare facilities (w/ TBA), and 12 with women who delivered in a healthcare facility with an SBA. 6 FGs were conducted. One FGD was conducted with 10 men, three FGDs were conducted with a total of 21 SBAs, and two FGDs were conducted with a total of 6 TBAs. Interviews with women illuminated the factors that influence whether they want to deliver within healthcare facilities or with a TBA. FGDs on the other hand showed how family dynamics, treatment of women by SBAs, cultural experiences, and clinic cost influences the childbirth preferences of women. Categories were grouped into the following three themes: 1) women experiencing maltreatment in clinics; 2)

factors women consider; and 3) solutions presented by participants. Details of the qualitative information obtained and analyzed are presented in the supplementary material.

Theme 1. Women suffered many experiences of maltreatment and abuse from SBAs in clinic settings. Stories of maltreatment also dissuaded women from giving birth in clinics.

Verbal insults and hitting during labor in a clinic setting were reported among women who utilized SBAs and TBAs for their last child birthing experience and husbands. Some women who opted to deliver with TBAs reported their birthing choice was influenced by stories they had heard from other women regarding experiencing insults or hitting during labor by SBAs. Others indicated that their birthing choice was directed by previous negative birthing experiences with SBAs. During FGs, SBAs openly spoke about some of the negative feelings they have towards laboring women, which may inform their maltreatment of these women. During a FG discussion with SBA one reported that:

> "*...by the time you hit that leg, by the time she screams you will see, with that pressure, the baby will come out."*

Theme 2. Women have to balance a host of social, economic, cultural, and environmental factors when deciding where they want to labor.

A woman's labor preference is determined by what factors she prioritizes, and the birthing method she perceives will prioritize those same factors. That, along with the influence of unpredictable situations such as rapid labor and unstaffed clinics, determine whether women deliver in healthcare facilities with SBAs or with TBAs. Most women admitted that the primary motivating factor for their birthing preference is where they believe they will have best chances to have a healthy baby. Many women were willing to endure mistreatment by SBAs because they trusted that hospitals could provide more specialized care and deal with any birthing complications. A women day 2 post op from a cesarean section reported:

> *"Well, you need to endure to get what you want (healthy baby). Normally they shout, they will not regard you as human being, they will treat you without regard. But you need to endure it to get what you want."*

Willingness to undergo medical interventions such as cesarean sections and episiotomies was something women indicated they considered when deciding to labor with a TBA or an SBA. A woman who delivered her first baby with a SBA and opted to use a TBA for a second delivery reported:

> "*The baby was not ready to come and they cut me, the pain is still there up till now. So that is why I do not go to the clinic. The cut is too much."*

Comfort and encouragement during labor was something women, regardless of whether they delivered with TBAs and SBAs, indicated they wanted to receive. Many women who delivered

with TBA cited petting (comfort) in labor as a motivating factor. A woman who delivered her child with TBA stated:

> *"I never liked it in the hospital, and when I got to the traditional I was given the attention that I needed and the love and warm embrace that I really needed at that time in my life."*

Another factor women considered was the desire for cultural experiences. This included the use of cultural practices and traditional medicine. TBAs reported that women come to them in pursuit of herbal remedies for pregnancy complaints and complications. During FGDs a SBA explained:

> "I *think our culture plays a part in it, usually delivery at home with your grandma, your grandniece, with elders in the community or in the neighborhood, so our culture."*

The ability of birth attendants to meet the spiritual needs of women in labor also appeared to influence where they preferred to labor. During a FGD with SBAs some women indicated that they choose to deliver in churches in hope of better birth outcomes:

> *"naturalists believe they want to have their baby within the church premises, where they believe that God is, they have spiritual backup, they have spiritual covering."*

Women and men both indicated that women wield the majority decision-making power regarding where women receive prenatal care and deliver. However, for some women the decision is either shared with their husband or the family matriarch. During FGDs with husbands, one man explained:

> "*she is in charge, she will try to influence, because as a man there is a limit to how much you know."*

Some women did state that due to religion or other cultural factors that they preferred female birthing attendants. However, most women reported that modesty or delivering with a male birth attendant did not influence where they chose to labor, they were more occupied with good birthing outcomes:

> "*I did not have a preference, I just wanted the baby to come out*."

Clinic cost was a concern for some women and their husbands; and enough to deter them from utilizing SBAs. TBAs and some women on the other hand had a different perspective on the impact of cost, indicating that cost was not a decisive factor. A woman who delivered her previous child with a SBA stated:

> "*Hospital cost is expensive, for the second one I would go to native because in the hospital I delivered vaginally it was almost 50000 naira (about $105.0) that I paid, it's expensive, so if I deliver again, I will do it at home."*

Another factor that women indicated influences their choice to either deliver with a TBA or within healthcare facilities was unpredictable circumstances. This includes rapid or painful labor, transportation, booking issues in the clinic settings, and also unstaffed hospitals. These issues can cause women, even some who planned to deliver in health care facilities, to deliver with TBAs as a last resort. These issues speak less to the personal preferences of women but rather systemic infrastructure issues within Nigeria. A woman who planned to deliver with a SBA reported:

> *"The nurse that knows me told me that the doctor had left the area. That is now when I went to the native place."*

Theme 3. Women and SBAs offered systemic and individual level solutions for increasing utilization of healthcare facilities delivery, which included decreasing costs, increasing the ratio of SBAs to patients and SBAs adopting some practices of TBAs, such as providing psychosocial support to women during the perinatal period.

Women have stated that a decrease in clinic cost would incentivize the use of healthcare facilities. A woman who delivered with a TBA was asked if she would be more inclined to utilize the clinic for delivers if it was free, she reported:

> *"If the clinic was free, I would go, I will go anywhere that is free."*

A general sentiment among everyone interviewed was the fact that nurses are overworked and decreasing the ratio of SBAs to patients can relieve some stress on care teams. Also, it may improve SBAs attitudes with patients allowing SBAs the time to attend to each patient properly, and combat SBA burn out. A husband described the experience of understaffed SBAs:

> "*You may have 5 patients to attend to at the same time, and the facilities do not have the capacity. So, you may not have the supplies you need, so you are getting frustrated, and the patients are shouting because you are taking a long time."*

SBAs were in agreement that a negative attitude among the healthcare team plays a role in women's apprehension to utilize clinics.

> "*I think that is what is driving them away, we must also work on our attitude. More empathetic to our clients.*"

During a FGD, SBAs recommended studying the techniques of TBAs, and adopting their non-harmful practices to improve women's birth experiences.

> *"Because you cannot rule out traditional belief, if it is not harmful, why not. I think we also need to at least study, let's know these beliefs and add the ones that are not harmful into our own practice."*

Discussion/Implications

This study provides the first qualitative evidence of women's birthing preferences in Nigeria. Understanding these preferences will allow Nigeria's maternal healthcare system to develop

methods to accommodate them, thereby increasing healthcare facility utilization for childbirth. This study found that women have to balance a host of factors when deciding where to deliver. Women have indicated that they want a birthing experience that is dignified, results in a healthy baby, and is within their cultural scope. Contrary to some studies indicating that healthcare facility cost is the predominant motivating factor for the use of TBAs, the women interviewed report this factor playing a less significant role [19,20].

Study findings are consistent with other studies that indicate women's preference for childbirth outside of healthcare facilities is associated with maltreatment by SBAs in healthcare facilities [21,22,,23]. Abuse of women in Nigeria within clinical settings including physical abuse, restraining women, and verbal abuse such as shouting is common practice [21,22]. During interviews many women who chose to deliver with TBAs did so because they believed that they would receive better treatment than they would in a healthcare facility. Women at times traveled further and paid more for services to utilize TBAs. Even women who chose to utilize SBAs reported maltreatment, but the risk of poor birth outcomes outweighed the concerns for abuse.

Delivering respectful care during childbirth by SBAs has been shown to increase the utilization of healthcare facilities [24]. However, nurses admit to having negative attitudes towards laboring women, and believe that retraining will improve their attitudes [25,26]. Thus SBAs should be educated on the implications of their behavior on healthcare facility utilization. Additionally, they can be retrained regarding professionalism and how to provide women-centered care.

In addition, allowing women to bring labor companions can provide them with desired emotional and cultural support during labor. Importantly, women who receive emotional support during labor tend to have quicker labor, better pain management, and require less medical intervention[28]. Because SBAs reported being stressed and short staffed, requesting them to also act as labor companions would only further overextend them[27]. Hospital policies should consider accommodating labor companions for all women. Studies conducted in Nigeria showed that women would like a policy that would allow labor support from family and friends[29]. Due to cultural norms and the lack of privacy in many healthcare facilities, many birthing attendants believe that male birthing companions would be inappropriate; however female birthing companions should be accommodated [30,31].

System level implications of our study include efforts placed on integrating cultural practices and TBAs into local health care systems to increase utilization of healthcare facilities [32,33]. Many women appreciated the security that delivering in a healthcare facility provided but opted to utilize TBAs for a more cultural experience [34,35] Healthcare facilities can neglect cultural needs, and traditional practices in exchange for standardized protocol [36]. To adopt more Western standards of practice, healthcare systems in Nigeria may have done so at the expense of cultural sensitivity in the form of traditional medicinal practices [37] Efforts should be made to develop a maternal healthcare system in Nigeria that is inclusive of both Western biomedicine and traditional practices.

Conclusion

The women of Benin City, Nigeria, were far more concerned with delivering a healthy baby in a supportive environment, than factors such as modesty or spiritual needs. To increase healthcare facility utilization, Nigeria's healthcare system should provide women the option to deliver a baby within a clinic setting, in a manner that is emotionally supportive, and within their cultural scope.

Acknowledgment
We would like to express our sincere appreciation to the women, husbands, SBA, and TBAs who participated in this study. Thank you also to Dr. Marteen Bosland, Kathleen Anaza and Cortez Alexander who provided feedback on earlier drafts of this manuscript.

Data sharing
All relevant data is included in the manuscript of supplemental documents.

Contribution Statement
Author D.E and F.O developed the research question. D.E and S.W designed the experiment. D.E carried out the experiment and data transcription and analysis. D.E wrote the manuscript with input from F.O, S.W, and G.G

Ethics Statement
Prior to the initiation of the study, Institutional Review Board approval was received from both the University of Benin-College of Medical Sciences (CMS/REC/2019/082) and University of Illinois at Chicago (Protocol # 2019-0683).

Funding
No

Competing Interest
We as authors have no conflict of interest to disclose.

Data Sharing
All relevant data is including in manuscript and supplements documents, no additional data is available

References

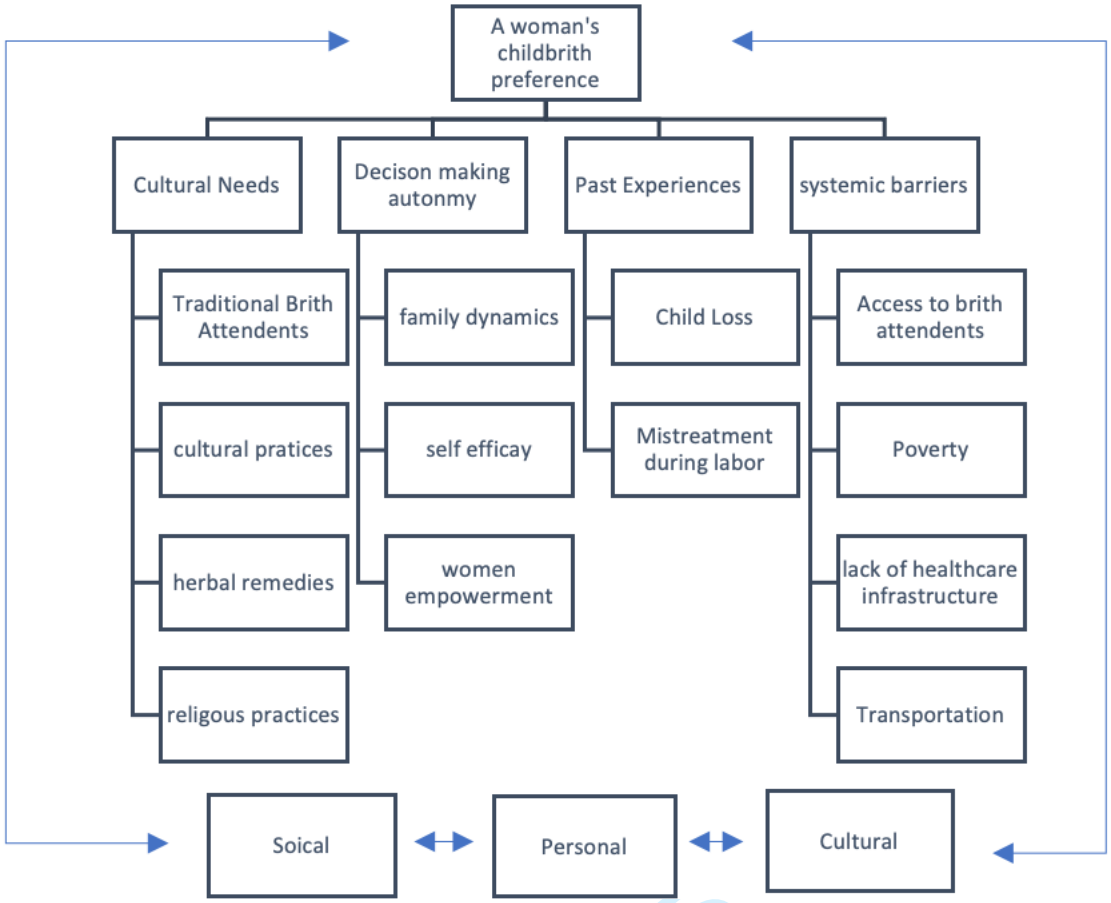
1. The World Health Organization (2018). *Maternal Morality*. Retrieved from https://ourworldindata.org/measurement-matters-the-decline-of-maternal-mortality
2. Zureick-Brown, S., Newby, H., Chou, D., Mizoguchi, N., Say, L., Suzuki, E., & Wilmoth, J. (2013). Understanding global trends in maternal mortality. *International perspectives on sexual and reproductive health*, *39*(1).
3. WHO, U. (2015). UNFPA, World Bank Group and the United Nations Population Division. Trends in maternal mortality: 1990 to 2015. Estimates by WHO, UNICEF.
4. Okonofua, F., Imosemi, D., Igboin, B., Adeyemi, A., Chibuko, C., Idowu, A., & Imongan, W. (2017). Maternal death review and outcomes: An assessment in Lagos State, Nigeria. *PloS one*, *12*(12), e0188392.
5. Okonofua, F., Randawa, A., Ogu, R., Agholor, K., Okike, O., Abdus-salam, R. A., ... & WHARC WHO FMOH MNCH Implementation Research Study Team. (2017). Views of senior health personnel about quality of emergency obstetric care: a qualitative study in Nigeria. *PloS one*, *12*(3), e0173414.
6. Okonofua, F. E., Ntoimo, L. F. C., & Ogu, R. N. (2018). Women's perceptions of reasons for maternal deaths: Implications for policies and programs for preventing maternal deaths in low-income countries. *Health care for women international*, *39*(1), 95-109.

7. World Bank. (2018). Births Attended by Skilled Health Staff. Retrieved from https://data.worldbank.org/indicator/SH.STA.BRTC.ZS
8. Okonofua, F., Ogu, R., Agholor, K., Okike, O., Abdus-Salam, R., Gana, M., ... & Galadanci, H. (2017). Qualitative assessment of women's satisfaction with maternal health care in referral hospitals in Nigeria. *Reproductive health*, *14*(1), 44.
9. Carlough, Martha, and Maureen McCall. "Skilled birth attendance: what does it mean and how can it be measured? A clinical skills assessment of maternal and child health workers in Nepal." *International journal of gynecology & obstetrics* 89.2 (2005): 200-208.
10. Nakua, E. K., Sevugu, J. T., Dzomeku, V. M., Otupiri, E., Lipkovich, H. R., & Owusu-Dabo, E. (2015). Home birth without skilled attendants despite millennium villages project intervention in Ghana: insight from a survey of women's perceptions of skilled obstetric care. *BMC pregnancy and childbirth*, *15*(1), 243.
11. Anastasi, E., Borchert, M., Campbell, O. M., Sondorp, E., Kaducu, F., Hill, O., ... & Lange, I. L. (2015). Losing women along the path to safe motherhood: why is there such a gap between women's use of antenatal care and skilled birth attendance? A mixed methods study in northern Uganda. *BMC pregnancy and childbirth*, *15*(1), 287.
12. Titaley, Christiana R., et al. "Why do some women still prefer traditional birth attendants and home delivery?: a qualitative study on delivery care services in West Java Province, Indonesia." *BMC pregnancy and childbirth* 10.1 (2010): 43.
13. Sibley, Lynn M., Theresa Ann Sipe, and Danika Barry. "Traditional birth attendant training for improving health behaviours and pregnancy outcomes." *Cochrane database of systematic reviews* 8 (2012).
14. Geleto, Ayele, et al. "Barriers to access and utilization of emergency obstetric care at health facilities in sub-Saharan Africa: a systematic review of literature." *Systematic reviews* 7.1 (2018): 183.
15. Moshi, F., & Nyamhanga, T. (2017). Understanding the preference for homebirth; an exploration of key barriers to facility delivery in rural Tanzania. *Reproductive health*, *14*(1), 132.
16. Kumbani, L., Bjune, G., Chirwa, E., & Odland, J. Ø. (2013). Why some women fail to give birth at health facilities: a qualitative study of women's perceptions of perinatal care from rural Southern Malawi. *Reproductive health*, *10*(1), 9.
17. Hirose, A., Owolabi, O., Imamura, M., Okonofua, F., & Hussein, J. (2017). Systematic review of obstetric care from a women-centered perspective in Nigeria since 2000. *International Journal of Gynecology & Obstetrics*, *136*(1), 13-18.
18. Chun Tie, Ylona, Melanie Birks, and Karen Francis. "Grounded theory research: A design framework for novice researchers." *SAGE open medicine* 7 (2019): 2050312118822927.
19. Sarker, Bidhan Krishna, et al. "Reasons for preference of home delivery with traditional birth attendants (TBAs) in rural Bangladesh: a qualitative exploration." *PloS one* 11.1 (2016): e0146161.
20. Allou, Leander Achageba. "Factors influencing the utilization of TBA services by women in the Tolon district of the northern region of Ghana." *Scientific African* 1 (2018): e00010.

21. Bohren, Meghan A., et al. "Mistreatment of women during childbirth in Abuja, Nigeria: a qualitative study on perceptions and experiences of women and healthcare providers." *Reproductive health* 14.1 (2017): 9.
22. Okafor, Innocent I., Emmanuel O. Ugwu, and Samuel N. Obi. "Disrespect and abuse during facility-based childbirth in a low-income country." *International Journal of Gynecology & Obstetrics* 128.2 (2015): 110-113.
23. Ishola, Foluso, Onikepe Owolabi, and Veronique Filippi. "Disrespect and abuse of women during childbirth in Nigeria: a systematic review." *PloS one* 12.3 (2017): e0174084.
24. Galadanci, H. S., et al. "Programs and policies for reducing maternal mortality in Kano State, Nigeria: a review." *African journal of reproductive health* 14.3 (2010): 31-36.
25. Onasoga, O. A., et al. "Factors Influencing Midwives' Attitude Towards Women In Labour In Selected Hospitals In Niger Delta Region Of Nigeria." *Tropical Journal of Health Sciences* 25.4 (2018): 40-45.
26. Farotimi, Adekunbi Abosede, et al. "Effectiveness of training program on attitude and practice of infection control measures among nurses in two teaching hospitals in Ogun State, Nigeria." *Journal of education and health promotion* 7 (2018).
27. James, Oyira Emilia, Ndiok Akon Emmauel, and I. Y. Ademuyiwa. "Challenges, And Nurses' Job Performance in the University of Calabar Teaching Hospital, Calabar Cross River State Nigeria."
28. Fathi Najafi, Tahereh, Robab Latifnejad Roudsari, and Hossein Ebrahimipour. "The best encouraging persons in labor: A content analysis of Iranian mothers' experiences of labor support." *Plos one* 12.7 (2017): e0179702.
29. Dim, Cyril C., et al. "Labor support: an overlooked maternal health need in Enugu, south-eastern Nigeria." *The Journal of Maternal-Fetal & Neonatal Medicine* 24.3 (2011): 471-474.
30. Adeniran, Abiodun, et al. "Attitude and practice of birth attendants regarding the presence of male partner at delivery in Nigeria." *Ethiopian Journal of Health Sciences* 27.2 (2017): 107-114.
31. Afulani, Patience, et al. "Companionship during facility-based childbirth: results from a mixed-methods study with recently delivered women and providers in Kenya." *BMC pregnancy and childbirth* 18.1 (2018): 1-28.
32. Chi, Primus Che, and Henrik Urdal. "The evolving role of traditional birth attendants in maternal health in post-conflict Africa: A qualitative study of Burundi and northern Uganda." *SAGE open medicine* 6 (2018): 2050312117753631.
33. SulaymanH, AdajiS. "Integration of traditional birth attendants (TBAs) into the health sector for improving maternal health in Nigeria: A systematic review." *Sub-Saharan African Journal of Medicine* 6.2 (2019): 55.
34. Adatara, Peter, et al. "Cultural beliefs and practices of women influencing home births in rural Northern Ghana." *International Journal of Women's Health* 11 (2019): 353.
35. Esienumoh, Ekpoanwan E., et al. "Cultural diversity in childbirth practices of a rural community in Southern Nigeria." *J Preg Child Health* 3.280 (2016): 2.
36. Ibeneme, Sam, et al. "Roads to health in developing countries: understanding the intersection of culture and healing." *Current Therapeutic Research* 86 (2017): 13-18.
37. Abdullahi, Ali Arazeem. "Trends and challenges of traditional medicine in Africa." *African journal of traditional, complementary and alternative medicines* 8.5S (2011).

Figure 1: This conceptual framework combines data from the initial literature review and highlights variables that were explored via data collection materials.

Figure 1: conceptual framework



Supplemental

Theme 1

Insults: Many women interviewed cited some level of verbal insults either during their prenatal care or while laboring. One woman who delivered in a clinic recalled, *"They shout, slap me all those things, insults."* Another woman stated, *"I would recommend the clinic, but if you deliver here it is not easy, you will receive a lot of insults."* A woman was asked whether finances, or transportation influenced her decision to deliver with a TBA. She replied, "*No, it was because of the insults.*" When husbands were asked about their treatment of women in labor, there was a consensus that women were spoken to in a manner that was disrespectful at times. A man recalled some ways that SBAs mocked woman *"You weren't complaining when you were having sex, don't complain now. They actually told a friend of mine's wife that, and she actually just started weeping."* Another man recalled, *"Yes they say things like "why are you complaining is this your first child?"*

Hitting: Women, SBAs, and men also reported physical abuse by SBA's in the form of slapping their legs while they were in labor to get them to cooperate. During a FG an SBA reported that they have to hit the woman at times to help with the labor process, "*...by the time you hit that leg, by the time she screams you will see, with that pressure, the baby will come out."* When husbands were asked what women may not like about delivering in a clinic sitting one reply, "*Like yelling at them and hitting them.*"

Rumors of insults and neglect: Due to the prevalence of mistreatment during labor, another woman's story of mistreatment is enough to dissuade some women from delivering in a clinic setting. A woman who received prenatal care but opted to deliver with a TBA reported, *"Most of them here in Benin are not nice, they will even nag you, yell at you. From what I have heard, I haven't been there."* Another woman reported that her husband convinced her to deliver with a TBA due to fears that she would be neglected, "*In fact, I wanted to go to the clinic to deliver but my husband advised me not to. He told me they would make me wait a long time, and pass through a lot of stress before attending to me. So that is why I decided to go to the native (native is a colloquial term to describe a TBA)."*

Prior negative experiences: Some women who chose to deliver their first child with an SBA decided to deliver their subsequent child with a TBA due to negative birthing experiences with SBAs. A woman who delivered her first child with an SBA but opted to use a TBA for her second child reported, "*From my first experience I do not want a clinic."* Another woman reported, *"When I first delivered the first baby, they did not take care of me well."* A woman with a similar experience stated "*they did not attend to me well. The injection that they give me swell up, I report to them and they don't attend to me."* During a FG with husbands a man stated,*" Patients are not seen as patients, they are not seen as equal. They are seen as stubborn."*

Rationalization for insults and hitting: During FGs, SBAs openly spoke about some of the negative feelings they have towards laboring women, which may inform their maltreatment of these women. When questioned about treatment of women in labor a midwife responded, "*Before she is shouting maybe you are doing something that she does not like."* Another cited that it was the bad attitude of the patients that influenced their behavior "*we try as much as possible to put on*

the right attitude. It depends on your level of tolerance. Because most of our patients are very rude, and sarcastic."

Theme 2

Healthy baby: Most women admitted that the primary motivating factor for their birthing preference is where they believe they will have best chances to have a healthy baby. Many women were willing to endure mistreatment by SBAs because they trusted that hospitals can provide more specialized care and deal with any birthing complications. A woman who reported maltreatment in the clinic but still preferred SBAs to TBAs stated, *Well, you need to endure to get what you want (healthy baby). Normally they shout, they will not regard you as human being, they will treat you without regard. But you need to endure it to get what you want."* Another woman when asked why she delivered with a SBA reported, *"In the hospital, if there is anything wrong with the baby they can quickly detect it. But with a native doctor if something is wrong with the baby, by the time you get to the hospital it may be worse."* Another woman was asked if she preferred delivering in a clinic. She responded, *"Yes, because if you go native and something happens to the baby they are not quick to act like the hospital."*

Avoid medical intervention: A willingness to undergo medical interventions such as cesarean sections and episiotomies is something women must consider when deciding to labor with a TBA or an SBA. Some women who chose to deliver with TBAs did so to avoid medical intervention that they experienced in the previous delivery; or because they were informed that they would need to undergo a cesarean and they wanted to avoid the procedure. A TBA recalled that, *"She went to the clinic and they told her they wanted to give her a cesarean section. She came quickly to me. When I checked the baby I told her not to return to the clinic. She delivered normally with me"* A woman recalled a story of a woman that she knew, *"they told her that she was going to deliver with cs but she did not go to the hospital. She later went to the traditional. In the end she labored and lost the baby. The baby was too big, and she said she cannot have a c-section."* A woman who delivered her first child with an SBA but opted to use a TBA for her subsequent child did so due to the episiotomy she received, she stated, "*The baby was not ready to come and they cut me, the pain is still there up till now. So that is why I do not go to the clinic. The cut is too much."*

Petting (comfort): Women often used the pigeon slang petting, which roughly translates, to "there there"; to describe the comfort they wished to receive during labor. Comfort and encouragement during labor is something that women both who delivered with TBAs and SBAs indicated they wanted to receive. Most women who delivered with TBA cited petting in labor as a motivating factor. Despite the fact that women who delivered with TBAs reported not always being able to have family provide their emotional support in the labor room, the TBAs provided them with the support that they needed. A woman who delivered with a TBA stated, *"I never liked it in the hospital, and when I got to the traditional I was given the attention that I needed and the love and warm embrace that I really needed at that time in my life."* She continued to state, "*They give you a lot of care, love, keep you comfortable at home, especially when you're about delivering, they will make you feel like you are not alone. And when probably when it gets to the time for you to push you also get help".* Another woman echoed similar thoughts, "*You are under pain now, you want someone to comfort you. But if you come to hospital they do not do that.* Another woman was asked why she would recommend a TBA to other women, she responded, "*Because the woman gives person encouragement, and tells you how to take care of*

your newborn. Then she pets you." However, women who delivered with SBAs reported not experiencing the level of support they wanted. A woman was asked if the SBAs made her feel comfortable and met her emotional needs, she replied sarcastically, "*Hospital pamper you? They are on their way."* Another woman was asked whether her husband was allowed to enter the labor ward to give her support during labor. She replied, "*They will not allow him to enter!"*

Cultural practices: Another factor women consider when determining where to labor was the desire for cultural experiences; this included the use of cultural practices and traditional medicine. TBAs reported that women come to them in pursuit of herbal remedies for pregnancy complaints and complications, "*Why women prefer to come to this place is that some women when they are pregnant have a swollen body, swollen legs, and they are not comfortable, there are roots and herbs to treat that."* Another TBA reported, "*We massage the pelvis, then you see we have some leaves we call it alligator pepper; we give it to the woman and make the baby bounce."* A TBA detailed her ability to improve birth outcomes, *"Some babies are not too strong, they are fragile, there are roots and herbs to correct that. And if the baby is too big to pass through the normal process, in terms of delivery, there are roots and herbs to take down the shape."* When asked about the cultural practices that TBAs are able to provide to their clients a SBA responded, "*most of the time it is psychological, rub oils, it's not that it is performing any magic it is not doing anything."* Another SBA highlighted the cultural significance of home births, "I *think our culture plays a part in it, usually delivery at home with your grandma, your grandniece, with elders in the community or in the neighborhood, so our culture."*

Spiritual needs: The ability of birth attendants to meet the spiritual needs of women in labor influences where they preferred to labor. During a FG with SBAs they indicated that some women choose to deliver in churches in hope of better birth outcomes, *"naturalists believe they want to have their baby within the church premises, where they believe that God is, they have spiritual backup, they have spiritual covering."* A SBA explained that church members with medical backgrounds at times recruit women in church, *"Some of them are members. They now use medical personnel in the church now, so they can refer when it is early."*

Female decision makers: Women must also consider their decision-making autonomy, when deciding where to deliver. Women and men both indicated that women weld the majority decision-making power regarding where women receive prenatal care and deliver. When asked about her decision to deliver with a SBA, a woman reported, "*I know that a doctor is better than native, I made the decision myself that I need to meet a doctor."* A woman who delivered with a TBA reported that her husband and her disagreed, however she made the final decision, *"He said I should go to hospital, I said no."* When men were asked who decided where a woman delivers many of them agreed that the decision is majority the woman's, "*she is in charge, she will try to influence, because as a man there is limit to how much you know."* Another husband stated, "*Even though the man appears to make the decision, it is informed by the woman's information."* Some TBAs also agreed that women hold the majority of the decision-making power in regard to where a woman will labor and receive prenatal care, "*It is the woman. Not the family, the women."* Other TBAs require the consent of the husband before they will treat the woman, independent of what she decides, "*And before they start treating them they always ask if their husband is aware that they are coming here. And if he is, or sometimes they will send for the husband, they want to see before they issue a prenatal card."*

Husband/other decision makers: However, for some women the decision is either shared with their husband, or the family matriarch. A husband reported that, *"The man is the real decision maker."* During a FGs with SBAs some of them also agreed that the husband makes the final decision on where a woman labors, "*Of course it is the husband. It's the belief of the husband is also a reflection of what the mother-in-law thinks."* Another SBA recalled an instance where a husband forced his wife to the clinic, "Yes*, he forced her to the hospital, she believed in going to the birth attendant. But the man said no, I do not want my child to be delivered there."* Also, during FGs with husbands they emphasized the influence of female figures in a woman's decision, "*The mother-in-law is very influential. She might have convection if her mother has enough experience. And she knows the decision to make."* Another man recalled, "*I remember when I took my wife for an antenatal care, it was even her mother's decision that made her come there."*

Gender of birth attendant: Most women stated that modesty or delivering with a male birth attendant did not influence where they chose to labor, they were more occupied with good birthing outcomes. However, some women did state that due to religion or other cultural factors that they preferred female birthing attendants. A husband recalled a woman's experience with a male doctor, "*She refused. She said the only person who is allowed, I am quoting her, to see her nakedness is her husband, so she does not prefer no man outside of her husband."* A woman who delivered with a TBA explained why she preferred a woman to attend her birth, "*They pet you. they give me hope."* Another woman explained her choice of female birth attendants, "*Women, because our religion does not allow for man to deliver us.* FGs with SBAs supported this statement reporting, "*The Muslims, they prefer a female nurse, rather than a male doctor or a male nurse."*
However, many women reported being indifferent to who attends their birth or preferring a male attendant. A woman who delivered with an SBA reported, "*I do not care so long as they are ok and are professional."* Another woman claimed, "*I did not have a preference, I just wanted the baby to come out*." A woman who delivered with a TBA stated, "*Anyone as long as the baby comes down safely."* Some women on the other hand preferred male attendants, "*I don't really like women… I don't know why but I do not like women to deliver me."* During the FG with husbands, they provided clarity to why some women may prefer male attendants reporting, "*The male attendant they feel that they are more compassionate to them compared to female."*

Cost: The cost of a woman delivering with an SBA vs a TBA is a concern for many women and their husbands. For some women the cost of delivering in the clinic was enough to deter them. A woman who delivered with a TBA reported, "*The reason was because of money. I registered in a private hospital, but the cost of delivering there was too high."* For others, a history of uncomplicated births within the clinic setting influences them to deliver at home in an attempt to save money. A woman who delivered her previous child with a SBA stated, "*Hospital cost is expensive, for the second one I would go to native because in the hospital I delivered vaginally it was almost 50000 that I paid, it's expensive, so if I deliver again I will do it at home."* That sentiment was shared by another woman who stated, "*I won't go back to the hospital. The money was too big, if it is native, I will go."* Husbands also reported the impact of clinic cost on TBA utilization, "*Cost is something. They will tell you that they cannot afford. Why some people go to TBA is because they cannot afford the hospital bill.* During FGs SBAs also acknowledged the effects of cost on where women choose to labor, *"It is the cost. They feel that it is cheaper to go*

to TBA, then in the hospital. And naturally within an environment where most people live below average. Cost is always a major factor."

TBAs on the other hand have a different perspective on the impact of cost on their utilization, "*They come here because what they are looking for, they find it. Not because of the money. Sometimes if you look at ours, we charge more."* Another stated*, "It is not because it is cheaper, because there are many women who believe in tradition."*

However, some women were indifferent to laboring costs. A woman who chose to deliver with an SBA claimed, "*Because I had the money, I said let me go to the hospital. I like hospital."* A woman who chose to deliver with a TBA reported, "*I did not go to that place because of money. They can deliver well."*

Unpredictable situations: The last factor that women indicated influences their choice to either deliver with a TBA or within healthcare facilities is unpredictable circumstances. This includes rapid or painful labor, transportation, booking issues in the clinic settings, and also unstaffed hospitals. These issues can cause women, even some who planned to deliver in health care facilities, to deliver with TBAs as a last resort. These issues speak less to the personal preferences of women but rather systemic infrastructure issues within Nigeria. Before a woman can deliver in a clinic there are a series of tests she must complete. Women who do not begin the process or, begin the process and do not complete it, are considered unbooked. Clinics often will not deliver the baby of a woman who is "unbooked". A woman who found herself in that situation while she was in labor reported that she was forced to utilize a TBA as an alternative, *"I registered for hospital, when they sent me to do an ultrasound, after I did the ultrasound I gave them the paper, but they said it never reached them. I was in so much pain, that's why I went to the TBA."* A woman who delivered with a TBA was asked why she chose a TBA she responded, "*No I wanted to deliver in a clinic, but because of the pain I delivered with the TBA."* Another woman reported that the SBA was absent at the time of their labor, *"The nurse that knows me called me and said, madam what are you waiting for. I told her 'I am in labor and you are asking me this question.' She then told me that the doctor had left the area. That is now when I went to the native place."* Another woman with a similar situation reported, "*The doctor was not around, so we went to native place, that is the reason that I went there."*

Theme 3

Decrease clinic cost: Women have stated that a decrease in clinic cost would incentivize them to use healthcare facilities rather than TBAs. A woman who delivered with a TBA was asked if she would be more inclined to go to the clinic to deliver if it was free, she reported, *"If the clinic was free I would go, I will go anywhere that is free."* When SBAs were asked what they think would motivate women to utilize clinics more, cost was a recurring theme. A nurse reported, "*Make hospitals cheap. Some women come for antenatal that hardly have anything."* Another nurse stated, *"They should reduce the amount they pay here, that is number one*."

Retraining SBAs: SBAs were in agreement that a negative attitude among the healthcare team plays a role in women's apprehension to utilize clinics. During a FG a nurse stated, "*I think that is what is driving them away, we must also work on our attitude. More empathetic to our clients.*" Another suggested that SBAs adopt a better demeanor when treating patients, "*Friendly, just be friendly to them, If you shout at them there has to be a reason that you are shouting*." During the FGs with husbands, a man advised that the lack of training may be to blame

for the negative attitude of SBAs, *"Health personnel, they need to be retrained in the way they interact with patients."* He went on to say that, *"Education does not teach you how to relate to people, you need to be trained in that aspect.*

Increased number of SBAs: A general sentiment among everyone interviewed was the fact that nurses are overworked and increasing the number of workers can relieve some stress on the care team. Also, it may improve SBAs attitudes with patients. A nurse recalled, "*On a very busy day we will have 30 deliveries to just 6 nurses."* Another reported that the ratio of patients to SBA is skewed, "*You will see four women ready to push and I have to prepare to receive a baby. So I can say the ratio 1 SBA to 10/12 patients.* When asked about working conditions a nurse replied, *"We are overworked. That is the truth."* Another stated, *"We also need more workers, manpower."* During the FGs with husbands a man pointed out the fact that being overworked can affect the SBA patient relationship, "*You may have 5 patients to attend to at the same time, and the facilities do not have the capacity. So, you may not have the supplies you need, so you are getting frustrated, and the patients are shouting because you are taking a long time."*

Adopt non-harmful TBA techniques: During a FG, SBAs recommended studying the techniques of TBAs, and adopting their non-harmful practices, "*we actually need to find out why women are visiting TBAs. So at least we will be able to bring in some of these practices into our own practice."* SBAs also shared an understanding that TBAs hold a cultural significance, *"Because you cannot rule out traditional belief, if it is not harmful, why not. I think we also need to at least study, let's know these beliefs and add the ones that are not harmful into our own practice."* They were also in agreement that integrating some TBA practices in their own practice is feasible for them, "*Ok psychological support, of course we do. Maybe it's the rubbing of the back, the rubbing of the back is therapeutic, we also can do that.* Despite being open to adopting techniques from TBA's; both SBAs and TBA's were resistant to working collaboratively. When an SBA was asked about her willingness to work with TBAs she responded, *"Never, what do they know. I was trained, can I say I know it all? Talk less of someone who has not seen the four walls of a school.* When a TBA was asked about collaboration with SBAs she responded, *"their field is different from my own field. So I can't praise them, and they can't praise me. Most of them are doctors, they disregard us, they say we don't know anything.*"

Table 1 Consolidated criteria for reporting qualitative studies (COREQ): 32-item checklist

No	Item	Guide questions/description
Domain 1: Research team and reflexivity		
Personal Characteristics		
1.	Interviewer/facilitator	Which author/s conducted the interview or focus group?
2.	Credentials	What were the researcher's credentials? *E.g. PhD, MD*
3.	Occupation	What was their occupation at the time of the study?
4.	Gender	Was the researcher male or female?
5.	Experience and training	What experience or training did the researcher have?
Relationship with participants		
6.	Relationship established	Was a relationship established prior to study commencement?
7.	Participant knowledge of the interviewer	What did the participants know about the researcher? e.g. *personal goals, reasons for doing the research*
8.	Interviewer characteristics	What characteristics were reported about the interviewer/facilitator? e.g. *Bias, assumptions, reasons and interests in the research topic*
Domain 2: study design		
Theoretical framework		
9.	Methodological orientation and Theory	What methodological orientation was stated to underpin the study? *e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis*
Participant selection		
10.	Sampling	How were participants selected? *e.g. purposive, convenience, consecutive, snowball*
11.	Method of approach	How were participants approached? e.g. *face-to-face, telephone, mail, email*
12.	Sample size	How many participants were in the study?
13.	Non-participation	How many people refused to participate or dropped out? Reasons?
Setting		
14.	Setting of data collection	Where was the data collected? e.g. *home, clinic, workplace*
15.	Presence of non-participants	Was anyone else present besides the participants and researchers?
16.	Description of sample	What are the important characteristics of the sample? *e.g. demographic data, date*
Data collection		
17.	Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested?
18.	Repeat interviews	Were repeat interviews carried out? If yes, how many?
19.	Audio/visual recording	Did the research use audio or visual recording to collect the data?
20.	Field notes	Were field notes made during and/or after the interview or focus group?
21.	Duration	What was the duration of the interviews or focus group?
22.	Data saturation	Was data saturation discussed?
23.	Transcripts returned	Were transcripts returned to participants for comment and/or correction
Domain 3: analysis and findingsz		
Data analysis		
24.	Number of data coders	How many data coders coded the data?
25.	Description of the coding tree	Did authors provide a description of the coding tree?
26.	Derivation of themes	Were themes identified in advance or derived from the data?
27.	Software	What software, if applicable, was used to manage the data?
28.	Participant checking	Did participants provide feedback on the findings?
Reporting		
29.	Quotations presented	Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? e.g. *participant number*
30.	Data and findings consistent	Was there consistency between the data presented and the findings?
31.	Clarity of major themes	Were major themes clearly presented in the findings?
32.	Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes?

BMJ Open

Understanding birthing preferences of women in Benin City, Nigeria: A qualitative study

Journal:	*BMJ Open*
Manuscript ID	bmjopen-2021-054603.R1
Article Type:	Original research
Date Submitted by the Author:	03-Feb-2022
Complete List of Authors:	Eluobaju, Debra; University of Illinois at Chicago College of Medicine, Okonofua , F; Women's Health and Action Research Centre; Centre of Excellence in Reproductive Health Innovation, University of Benin Weine, Stevan; University of Illinois at Chicago, Department of Psychiatry Goba, Gelila; University of Illinois at Chicago College of Medicine
Primary Subject Heading:	Obstetrics and gynaecology
Secondary Subject Heading:	Global health, Public health
Keywords:	Maternal medicine < OBSTETRICS, PUBLIC HEALTH, OBSTETRICS

I, the Submitting Author has the right to grant and does grant on behalf of all authors of the Work (as defined in the below author licence), an exclusive licence and/or a non-exclusive licence for contributions from authors who are: i) UK Crown employees; ii) where BMJ has agreed a CC-BY licence shall apply, and/or iii) in accordance with the terms applicable for US Federal Government officers or employees acting as part of their official duties; on a worldwide, perpetual, irrevocable, royalty-free basis to BMJ Publishing Group Ltd ("BMJ") its licensees and where the relevant Journal is co-owned by BMJ to the co-owners of the Journal, to publish the Work in this journal and any other BMJ products and to exploit all rights, as set out in our licence.

The Submitting Author accepts and understands that any supply made under these terms is made by BMJ to the Submitting Author unless you are acting as an employee on behalf of your employer or a postgraduate student of an affiliated institution which is paying any applicable article publishing charge ("APC") for Open Access articles. Where the Submitting Author wishes to make the Work available on an Open Access basis (and intends to pay the relevant APC), the terms of reuse of such Open Access shall be governed by a Creative Commons licence – details of these licences and which Creative Commons licence will apply to this Work are set out in our licence referred to above.

Other than as permitted in any relevant BMJ Author's Self Archiving Policies, I confirm this Work has not been accepted for publication elsewhere, is not being considered for publication elsewhere and does not duplicate material already published. I confirm all authors consent to publication of this Work and authorise the granting of this licence.

Title: Understanding birthing preferences of women in Benin City, Nigeria: A qualitative study

Debra Eluobaju, MPH[2]; Friday Okonofua MD, PhD, FRCOG[1]; Stevan Weine, MD[2]; Gelila Goba MD, MPH[2]

Corresponding author: Debra Eluobaju, 2652 w 21st place, Chicago IL, 60608, deluob2@uic.edu, (224)789-0916

Center of Excellence in Reproductive Health Innovation, Benin City Nigeria[1]; University of Illinois at Chicago college of medicine, Chicago USA[2]

Keywords: Maternal health, Obstetric delivery, Childbirth, traditional birth attendant, quality of care

Word Count 4391

Abstract

***Objective**: The aim of this study was to explore women's birthing preferences and the motivational and contextual factors that influence their preferences in Benin City, Nigeria, so as to better understand the low rates of healthcare facility utilization during childbirth.*

***Setting:** Two primary care centers, a community health center, and a church within Benin City Nigeria.*

***Participants:** We conducted one-on-one in-depth interviews with 23 women, and six focus groups (FGDs) with 37 husbands of women who delivered, skilled birth attendants (SBAs), and traditional birth attendants (TBAs) in a semi-rural region of Benin City, Nigeria.*

***Results:** Three themes emerged in the data: 1) women reported frequently experiencing maltreatment from SBAs in clinic settings and hearing stories of maltreatment dissuaded women from giving birth in clinics, 2) Women reported that the decision of where to deliver is impacted by how they sort through a range of social, economic, cultural, and environmental factors; 3) Women and SBAs offered systemic and individual level solutions for increasing utilization of healthcare facilities delivery, which included decreasing costs, increasing the ratio of SBAs to patients and SBAs adopting some practices of TBAs, such as providing psychosocial support to women during the perinatal period.*

***Conclusion**: Women in Benin City Nigeria indicated that they want a birthing experience that is emotionally supportive, results in a healthy baby, and is within their cultural scope. Adopting a woman-centered care approach may encourage more women to transition from prenatal care to childbirth with SBAs. Efforts should be placed on training SBAs as well as investigating how nonharmful cultural practices can be integrated into local health care systems.*

Article Summery

Strength and Limitations

- Study findings are consistent with others regarding treatment of women in healthcare facilities in Nigeria.
- A multiple disciplinary team of researchers with expertise in qualitative research from Nigeria and the United States were involved in development of the interview and focus group guides and the analysis of the data.
- This study also had a few limitations, recall bias by study participants being asked to recall past pregnancy incidents that occurred weeks to years ago
- Cultural bias, the study's PI is an American born Yoruba Nigerian American
- The study also had a non-representative sample of husbands

Introduction

Maternal mortality (MM) has decreased by 44% globally between 1990 to 2015, due to infection control, the management of pregnancy related complications such as preeclampsia, and blood transfusions[1]. However, sub-Saharan African countries maintain the highest maternal mortality rates (MMR) worldwide and have experienced the slowest decline[2]. The average MMR in Sub-Saharan Africa is 547 per 100,000 births, which is more than double the global average of 216 in 100,000 births[3]. Within sub-Saharan Africa, disparities in MM also exist. Nigeria maintains the fourth highest MMR in sub-Saharan Africa with a rate of 814 in 100,000 births[3]. Currently, Nigeria is second only to India globally for absolute numbers of maternal death, accounting for 14% of the world's MM [4].

The most common obstetric causes of MM in Nigeria are pre-eclampsia, primary postpartum hemorrhage, prolonged obstructed labor, maternal sepsis, and antepartum hemorrhage[4]. The most common patient-level factors that result in MM are the use of alternative birth attendants (traditional birth attendants), nonuse of prenatal care, refusal of recommended treatment, and delayed presentation to healthcare facilities,[5]. Despite research indicating that giving birth in healthcare facilities with skilled birth attendants (SBAs) decrease the likelihood of MM, only 43%

of women in Nigeria deliver with an SBA, compared to 58% in sub-Saharan Africa overall and 80% globally[6,7].

Interestingly, SBA utilization in Nigeria is higher during prenatal care 64%, compared to 43% during childbirth[5]. This variance may be due to negative experiences, including dissatisfaction with healthcare facilities and poor attitudes of healthcare providers, as well as lack of transportation, hospital cost, preference for alternative methods such as traditional birth attendants (TBAs), or cultural and/or spiritual reasons [6,8].

Unlike SBAs who are accredited healthcare professionals, WHO defines a TBA as "a person who assists a mother during childbirth and who initially acquired her skills by delivering babies herself or through apprenticeship to other traditional birth attendants [9]." The perceived benefits of TBA utilization is their accessibility, especially in rural areas; affordability, ties to the community, and attentiveness to the cultural needs of women during labor [10,11,12]. By contrast, the disadvantage of utilization of TBAs is that they lack the training to identify and manage complications such as postpartum hemorrhage or birth asphyxia, resulting in the probability of a delay in care when women need to be transferred to healthcare facilities during obstetric emergencies[13,14].

Despite the disadvantages of TBA utilization, women throughout sub-Saharan Africa continue to utilize their services during childbirth for a variety of reasons. Rural women in Ghana reported that poor provider-client interactions and cultural insensitivity in healthcare facilities influenced their use of TBAs over SBAs [10]. A study conducted in Tanzania showed that high rates of home births were due to the fact that neither men nor women associated delivering at home with risk of poor outcomes[15]. In Malawi, factors that influenced delivery outside of healthcare facilities ranged from rainy season-associated transportation difficulties, unexpectedly quick onset of labor, and cultural reasons[16]. Studies in Northern Uganda yielded similar results regarding high rates of home birth, including poor client-provider interactions, cost, and transportation, which explains the decrease delivery with SBA's in healthcare facilities compared to degree of utilization of SBAs for antenatal care [11].

There is little research exploring the childbirth preferences of Nigerian women. However, there are studies indicating a failure of the healthcare system to meet the needs and preferences of women in Nigeria, leading to avoidable MM [17]. Adopting a women-centered approach can begin to address the disconnect between the preferences of mothers and services provided by healthcare facilities in Nigeria. To achieve this, a holistic understanding of the preferences of Nigerian women in childbirth must be attained.

We conducted a qualitative study with women in Benin City, Nigeria, to gain a holistic understanding of their preferences regarding childbirth, including issues related to healthcare facility utilization. The aim of this study was to explore women's birthing preferences and the motivational and contextual factors that influence their preferences in Benin City, Nigeria, so as to better understand the low rates of healthcare facility utilization during childbirth.

Methods

A conceptual framework (Figure 1) was developed based on a literature review and utilized to determine target populations and inform in-depth interview questions and focus group guides. It

also informed data coding and categorization during analysis. The framework explored how cultural, personal and social factors influence a woman's childbirth preference.

Patient/Public Involvement

A key stakeholder in the community was actively involved in the creation of the research questions, study design/ execution, and data analysis. Participants in the study were not involved in setting the research question or study design. Participants were central to recruitment of other participants via snowball sampling.

Sampling and Recruitment Procedures

We conducted one-on-one in-depth interviews with 23 women, 11 with women who had previously delivered, or planned to deliver outside of healthcare facilities (with a TBA), and 12 with women who had previously delivered or planned to delivery in a healthcare facility with an SBA. Six FGs were conducted. One FGD was conducted with 10 men, three FGDs were conducted with a total of 21 SBAs, and two FGDs were conducted with a total of 6 TBAs in a semi-rural region of Benin City, Nigeria. Participants were chosen using purposive, and snowball sampling and were recruited from the Women's Health and Action Research Centre (WHARC), the Centre of Excellence in Reproductive Health Innovation (CERHI), community health centers, and churches in Benin City, Nigeria.

Subjects were eligible to participate if they were: 1) pregnant with their first child, 2) women who delivered within healthcare facilities (with a SBAs), 3) women who delivered outside of healthcare facilities (with a TBAs), 4) husbands of women who delivered within or outside of healthcare facilities, 5) SBAs, or 6) TBAs, and they had to be between the ages of 18-65, English speaking, and able to provide informed consent.

Participants were pre-screened by community health workers from CERHI and introduced to the principal investigator (PI). The PI (Debra Eluobaju, MPH) rescreened participants, explained the purpose of the study, obtained informed consent, and conducted the interviews. Men were recruited from churches, SBAs were recruited from community clinics, and TBAs were recruited from the community. FG participants were screened and consented with the same procedure as the interviewees.

Interviews

In-depth interviews were conducted with women who were pregnant with their first child or who had ever delivered in the past. Two different interview guides were used: one for women who delivered within healthcare facilities (with a SBA), and another for women who delivered outside of healthcare facilities (with a TBA). Interview guides for the in-depth interviews were developed using the study's conceptual framework (figure 1); they explored women's personal experiences involving childbirth and how that influenced their birthing preferences, and treatment by skilled or traditional labor attendants. The guides also sought to explore the decision-making process of selecting how and where to deliver, and access to healthcare facilities. All participants were asked to give verbal consent to allow for the collection of data and recording of the interview. The interview guides were piloted with three participants, and then revised to ensure that the guide answered the research questions. Additionally, pilot information was used to determine whether questions were easy to understand and appropriate for the target population.

Interviews were conducted in English by the PI. Semi-private locations at the recruitment sites were used to conduct the interviews immediately following screening and consenting.

Focus groups

The categories with which FGs were conducted were SBAs, TBAs, and husbands of women who had delivered with or without SBAs. Groups were not mixed to avoid gender and cultural dynamics that may prohibit participants from speaking freely. These FGs contained between 3-10 participants each, lasted between 30 minutes to an hour, and were conducted at a church, clinics, or the location where TBAs took deliveries. FGs were conducted in English by the PI. The study's conceptual framework informed the development of FG guides; a FG guide was developed for each category of participants to explore the socio-cultural topics involved with childbirth preferences (Figure 1).

Men

One FG was conducted with 14 male participants to explore family dynamics, financial burden of delivery, and personal opinions regarding SBAs and TBAs.

SBAs

Three FGs were conducted with 17 SBA participants to explore their patient load, perceptions on the treatment of women in labor, why they believe some women prefer TBAs, and possible solutions to the low rates of utilization of clinics for deliveries.

TBAs

Two FGs were conducted with 6 TBA participants to explore their cultural significance, why they believed women utilized them, and some of their traditional practices.

Data Analysis

Data analysis was conducted utilizing the Grounded Theory approach [18]. Interviews and FG data were audio recorded and then transcribed. The PI read through the interviews and FG transcripts to identify occurring and reoccurring concepts and patterns within the data. Concepts and patterns were utilized to develop codes via memoing. A codebook was developed, consisting of 87 codes. Atlas/ti software was employed to assist with data analysis.

Data were coded for recurring themes, significant quotes, and information that surprised the PI. Data analysis occurred concurrently with data collection from semi-structured interviews to determine when a saturation of themes had been met. FG data were analyzed by the PI after the completion of all FGs. To ensure quality criteria, every fourth transcription and coded document was reviewed by the PI for accuracy of transcription and consistency of coding. To identify quotes of interest and striking passages, memoing was employed. Queries, for example for "TBA" and "comfort," were applied to further condense data. Condensing of the data and categorization was applied to further group data and assess recurring themes. Overarching categories were then identified through analysis and grouped into three themes.

Results

Three major themes and 17 subthemes emerged in the data (Table 1). The major themes include 1) women experiencing maltreatment from SBAs; 2) factors women reported they consider; and

Themes	Subthemes	Evidence
Theme 1: Women reported frequently experiencing maltreatment from SBAs in clinic settings, and hearing stories of maltreatment dissuaded women from giving birth in clinics.	Hitting	*"…by the time you hit that leg, by the time she screams you will see, with that pressure, the baby will come out."*
	Insults	*"'You weren't complaining when you were having sex, don't complain now.' They actually told a friend of mine's wife that, and she actually just started weeping."*
	Rumors of neglect and hitting	*"Most of them here in Benin are not nice, they will even nag you, yell at you. From what I have heard, I haven't been there."*
	Negative prior experience	*"They did not attend to me well. The injection that they give me swell up, I report to them and they don't attend to me."*
Theme 2: Women reported that the decision of where to deliver is impacted by how they sort through a range of social, economic, cultural, and environmental factors.	Healthy baby	*"Well, you need to endure to get what you want (healthy baby). Normally they shout, they will not regard you as human being, they will treat you without regard. But you need to endure it to get what you want."*
	Avoid medical intervention	*"The baby was not ready to come and they cut me, the pain is still there up till now. So that is why I do not go to the clinic. The cut was too much."*
	Comfort and encouragement (petting)	*"I got to the traditional I was given the attention that I needed and the love and warm embrace that I really needed at that time in my life."*
	Cultural experience	*"I think our culture plays a part in it, usually delivery at home with your grandma, your grandniece, with elders in the community or in the neighborhood, so our culture."*
	Spiritual needs	*"Naturalists believe they want to have their baby within the church premises, where they believe that God is, they have spiritual backup, they have spiritual covering."*
	Decision making	*"Even though the man appears to make the decision, it is informed by the woman's information."*
	Gender of birth attendant	*"I did not have a preference, I just wanted the baby to come out."*
	Cost	*"I won't go back to the hospital. The money was too big, if it is native, I will go."*
	Unpredictable situations	*"The nurse that knows me called me and said, madam what are you waiting for. I told her 'I am in labor and you are asking me this question.' She then told me that the doctor had left the area. That is now when I went to the native place."*
	Decrease clinic cost	*"If the clinic was free I would go, I will go anywhere that is free."*

3) solutions presented by participants (Table 1). Details of the qualitative information obtained and analyzed are presented in the supplementary material.

Theme 3: Women and SBAs offered systemic and individual level solutions for increasing utilization of healthcare facilities delivery, which included decreasing costs, increasing the ratio of SBAs to patients and SBAs adopting some practices of TBAs, such as providing psychosocial support to women during the perinatal period.	Increase number of SBAs	*"You may have 5 patients to attend to at the same time, and the facilities do not have the capacity. You may not have the supplies you need, so you are getting frustrated; and your delay causes patients to shout increasing your frustration."*
	Retrain SBAs	*"I think that is what is driving them away, we must also work on our attitude. More empathetic to our clients."*
	Adopt non-harmful TBA practices	*"Because you cannot rule out traditional belief, if it is not harmful, why not. I think we also need to at least study, let's know these beliefs and add the ones that are not harmful into our own practice."*

Table 1: This table displays the study's findings which include, 3 themes, 17 subthemes and associated evidence.

Theme 1. Women reported frequently experiencing maltreatment from SBAs in clinic settings, and hearing stories of maltreatment dissuaded women from giving birth in clinics.

Four subthemes ((italicized and bolded) were identified: hitting, verbal insults, rumors of neglect or hitting, and prior negative experiences. ***Hitting and verbal insults*** during labor in a clinic setting were reported among women who utilized SBAs and TBAs for their last child birthing experience and husbands. During FGs, SBAs openly spoke about some of the negative feelings they have towards laboring women, which may inform their maltreatment of these women. During a FG discussion with SBA one reported that:

> "*…by the time you hit that leg, by the time she screams you will see, with that pressure, the baby will come out."*

A man recalled some ways that SBAs verbally insult woman:

> *"'You weren't complaining when you were having sex, don't complain now.' They actually told a friend of mine's wife that, and she actually just started weeping."*

Some women who opted to deliver with TBAs reported their birthing choice was influenced by ***rumors*** they had heard from other women regarding experiencing insults or hitting during labor by SBAs. A woman who received prenatal care but opted to deliver with a TBA reported:

> *"Most of them here in Benin are not, they will even nag you, yell at you. From what I have heard, I haven't been there."*

Others indicated that their birthing choice was directed by ***previous negative birthing experiences*** with SBAs. A woman who delivered her first child with a SBA but opted to use an TBA for her second reported:

> "*From my first experience I do not want to use the clinic anymore.*

Theme 2. Women reported that the decision of where to deliver is impacted by how they sort through a range of social, economic, cultural, and environmental factors.

Below we summarized the seven factors/subthemes which women reported. Most women reported that their birthing preference was largely influenced by what method gave them the best chance to have a ***healthy baby***. Many women were willing to endure mistreatment by SBAs because they trusted that hospitals could provide more specialized care and deal with any birthing complications. A women day two post op from a cesarean section reported:

> *"Well, you need to endure to get what you want (healthy baby). Normally they shout, they will not regard you as human being, they will treat you without regard. But you need to endure it to get what you want."*

Willingness to undergo medical interventions such as cesarean sections and episiotomies was something women indicated they considered when deciding to labor with a TBA or an SBA. A woman who delivered her first baby with a SBA and opted to use a TBA for a second delivery reported:

> "*The baby was not ready to come and they cut me, the pain is still there up till now. So that is why I do not go to the clinic. The cut is too much."*

Comfort and encouragement during labor was something women, regardless of whether they delivered with TBAs and SBAs, indicated they wanted to receive. Many women who delivered with TBA cited petting (comfort) in labor as a motivating factor. A woman who delivered her child with TBA stated:

> *"I never liked it in the hospital, and when I got to the traditional I was given the attention that I needed and the love and warm embrace that I really needed at that time in my life."*

Another factor women considered was the ***desire for cultural experiences***. This included the use of cultural practices and traditional medicine. TBAs reported that women come to them in pursuit of herbal remedies for pregnancy complaints and complications. During FGDs a SBA explained:

> "I *think our culture plays a part in it, usually delivery at home with your grandma, your grandniece, with elders in the community or in the neighborhood, so our culture."*

The ability of birth attendants to meet the ***spiritual needs*** of women in labor also appeared to influence where they preferred to labor. During a FGD with SBAs some women indicated that they choose to deliver in churches in hope of better birth outcomes:

> *"naturalists believe they want to have their baby within the church premises, where they believe that God is, they have spiritual backup, they have spiritual covering."*

Women and men both indicated that the majority of ***decision-making power*** regarding where to receive prenatal care and deliver was wielded by women. However, for some women the decision

is either shared with their husband or the family matriarch. During FGDs with husbands, one man explained:

> "*she is in charge, she will try to influence, because as a man there is a limit to how much you know."*

Some women did state that due to religion or other cultural factors that they ***preferred female birthing attendants***. However, most women reported that modesty or delivering with a male birth attendant did not influence where they chose to labor, they were more occupied with good birthing outcomes:

> "*I did not have a preference, I just wanted the baby to come out*."

Clinic cost was a concern for some women and their husbands; and enough to deter them from utilizing SBAs. TBAs and some women on the other hand had a different perspective on the impact of cost, indicating that cost was not a decisive factor. A woman who delivered her previous child with a SBA stated:

> "*Hospital cost is expensive, for the second one I would go to native because in the hospital I delivered vaginally it was almost 50000 naira (about $105.0) that I paid, it's expensive, so if I deliver again, I will do it at home."*

Another factor that women indicated influences their choice to either deliver with a TBA or within healthcare facilities was ***unpredictable circumstances***. This includes rapid or painful labor, transportation, booking issues in the clinic settings, and also unstaffed hospitals. These issues can cause women, even some who planned to deliver in health care facilities, to deliver with TBAs as a last resort. These issues speak less to the personal preferences of women but rather systemic infrastructure issues within Nigeria. A woman who planned to deliver with a SBA reported:

> *"The nurse that knows me told me that the doctor had left the area. That is now when I went to the native place."*

Theme 3. Women and SBAs offered systemic and individual level solutions for increasing utilization of healthcare facilities delivery, which included decreasing costs, increasing the ratio of SBAs to patients and SBAs adopting some practices of TBAs, such as providing psychosocial support to women during the perinatal period.

Women reported that a ***decrease in clinic cost*** would incentivize the use of healthcare facilities. A woman who delivered with a TBA was asked if she would be more inclined to utilize the clinic for delivers if it was free, she reported:

> *"If the clinic was free, I would go, I will go anywhere that is free."*

A general sentiment among everyone interviewed was the fact that nurses are overworked and ***decreasing the ratio of SBAs to patients*** can relieve some stress on care teams. Also, it may

improve SBAs attitudes with patients allowing SBAs the time to attend to each patient properly, and combat SBA burn out. A husband described the experience of understaffed SBAs:

> "*You may have 5 patients to attend to at the same time, and the facilities do not have the capacity. You may not have the supplies you need, so you are getting frustrated; and your delay causes patients to shout increasing your frustration."*

SBAs were in agreement that a ***negative attitude*** among the healthcare team plays a role in women's apprehension to utilize clinics.

> *"I think that is what is driving them away, we must also work on our attitude. More empathetic to our clients.*"

During a FGD, SBAs recommended studying the techniques of TBAs, and ***adopting their non-harmful practices*** to improve women's birth experiences.

> *"Because you cannot rule out traditional belief, if it is not harmful, why not. I think we also need to at least study, let's know these beliefs and add the ones that are not harmful into our own practice."*

Discussion/Implications

This study provides the first qualitative evidence of women's birthing preferences in Nigeria. Understanding these preferences will allow Nigeria's maternal healthcare system to develop methods to accommodate them, thereby increasing healthcare facility utilization for childbirth. This study found that women have to balance a host of factors when deciding where to deliver. Most women indicated that they want a birthing experience that is dignified, results in a healthy baby, and is within their cultural scope, other factors like gender of their birth attendant were far less important. Contrary to some studies indicating that healthcare facility cost is the predominant motivating factor for the use of TBAs, the women interviewed report this factor playing a less significant role [19,20].

Study findings are consistent with other studies that indicate women's preference for childbirth outside of healthcare facilities is associated with maltreatment by SBAs in healthcare facilities [21,22,,23]. Abuse of women in Nigeria within clinical settings including physical abuse, restraining women, and verbal abuse such as shouting is common practice [21,22]. During interviews many women who chose to deliver with TBAs did so because they believed that they would receive more dignified treatment than they would in a healthcare facility with a SBA. Women at times traveled further and paid more for services to utilize TBAs. Even women who chose to utilize SBAs reported maltreatment, but the risk of poor birth outcomes outweighed their concerns for abuse.

Delivering respectful care during childbirth by SBAs has been shown to increase the utilization of healthcare facilities [24]. However, nurses admit to having negative attitudes towards laboring women, and believe that retraining will improve their attitudes [25,26]. Thus SBAs should be educated on the implications of their behavior on healthcare facility utilization. Additionally, they can be retrained regarding professionalism and how to provide women-centered care.

In addition, allowing women to bring labor companions can provide them with desired emotional and cultural support during labor. Importantly, women who receive emotional support during labor tend to have quicker labor, better pain management, and require less medical intervention[27]. Because SBAs reported being stressed and short staffed, requesting them to also act as labor companions would only further overextend them[28]. Hospital policies should consider accommodating labor companions for all women. Studies conducted in Nigeria showed that women would like a policy that would allow labor support from family and friends[29]. Due to cultural norms and the lack of privacy in many healthcare facilities, many birthing attendants believe that male birthing companions would be inappropriate; however female birthing companions should be accommodated [30,31].

System level implications of our study include efforts placed on integrating cultural practices and TBAs into local health care systems to increase utilization of healthcare facilities [32,33]. Many women appreciated the security that delivering in a healthcare facility provided but opted to utilize TBAs for a more cultural experience [34,35] Healthcare facilities can neglect cultural needs, and traditional practices in exchange for standardized protocol [36]. To adopt more Western standards of practice, healthcare systems in Nigeria may have done so at the expense of cultural sensitivity in the form of traditional medicinal practices [37,38] Efforts should be made to develop a maternal healthcare system in Nigeria that is inclusive of both Western biomedicine and traditional practices.

This study had several limitations. One is the possibility of recall bias of participants, given that most were asked to recall incidents that occurred weeks of even years ago. Cultural bias is another possible limitation. Although many similarities exist between different tribal groups in Nigeria, and despite trying to ensure cultural competence the PI's Yoruba American ethnicity may influence data interpretation. Another limitation of this study was the lack of educational and financial diversity amongst the husbands who participated in the FGD. Men were recruited on the University of Benin campus and therefore not representative of the general Benin City's population.

However, the strength of this study is that it is the first known qualitative study to explore the childbirth preferences of women and the social and cultural factors that influence those preferences in Nigeria. Additionally, the study's findings regarding treatment of women by SBAs is consistent with other published works.

Conclusion

A woman's labor preference is determined by what factors she prioritizes, and the birthing method she perceives will prioritize those same factors. That, along with the influence of unpredictable situations such as rapid labor and unstaffed clinics, determined whether women deliver in healthcare facilities with SBAs or with TBAs. The women of Benin City, Nigeria, were far more concerned with delivering a healthy baby in a supportive and culturally competent environment, than factors such as modesty or spiritual needs. To encourage the transition from prenatal care to childbirth in a healthcare facilities a women-centered approached must be adopted. Healthcare system in Nigeria should retrain SBAs, and integrated nonharmful cultural practices; this will allow women the option to deliver a baby within a clinic setting, in a manner that is emotionally supportive, and within their cultural scope.

Acknowledgment

We would like to express our sincere appreciation to the women, husbands, SBA, and TBAs who participated in this study. Thank you also to Dr. Marteen Bosland, Kathleen Anaza and Cortez Alexander who provided feedback on earlier drafts of this manuscript.

Data sharing
All relevant data is included in the manuscript of supplemental documents.

Contribution Statement
Author D.E and F.O developed the research question. D.E and S.W designed the experiment. D.E carried out the experiment and data transcription and analysis. D.E wrote the manuscript with input from F.O, S.W, and G.G

Ethics Statement
Prior to the initiation of the study, Institutional Review Board approval was received from both the University of Benin-College of Medical Sciences (CMS/REC/2019/082) and University of Illinois at Chicago (Protocol # 2019-0683).

Funding
No

Competing Interest
We as authors have no conflict of interest to disclose.

Data Sharing
All relevant data is including in manuscript and supplements documents, no additional data is available

References

1. The World Health Organization (2018). *Maternal Morality*. Retrieved from https://ourworldindata.org/measurement-matters-the-decline-of-maternal-mortality
2. Zureick-Brown, S., Newby, H., Chou, D., Mizoguchi, N., Say, L., Suzuki, E., & Wilmoth, J. (2013). Understanding global trends in maternal mortality. *International perspectives on sexual and reproductive health*, *39*(1).
3. WHO, U. (2015). UNFPA, World Bank Group and the United Nations Population Division. Trends in maternal mortality: 1990 to 2015. Estimates by WHO, UNICEF.
4. Okonofua, F., Imosemi, D., Igboin, B., Adeyemi, A., Chibuko, C., Idowu, A., & Imongan, W. (2017). Maternal death review and outcomes: An assessment in Lagos State, Nigeria. *PloS one*, *12*(12), e0188392.
5. Okonofua, F., Randawa, A., Ogu, R., Agholor, K., Okike, O., Abdus-salam, R. A., ... & WHARC WHO FMOH MNCH Implementation Research Study Team. (2017). Views of senior health personnel about quality of emergency obstetric care: a qualitative study in Nigeria. *PloS one*, *12*(3), e0173414.
6. Okonofua, F. E., Ntoimo, L. F. C., & Ogu, R. N. (2018). Women's perceptions of reasons for maternal deaths: Implications for policies and programs for preventing maternal deaths in low-income countries. *Health care for women international*, *39*(1), 95-109.

7. World Bank. (2018). Births Attended by Skilled Health Staff. Retrieved from https://data.worldbank.org/indicator/SH.STA.BRTC.ZS
8. Okonofua, F., Ogu, R., Agholor, K., Okike, O., Abdus-Salam, R., Gana, M., ... & Galadanci, H. (2017). Qualitative assessment of women's satisfaction with maternal health care in referral hospitals in Nigeria. *Reproductive health*, *14*(1), 44.
9. Carlough, Martha, and Maureen McCall. "Skilled birth attendance: what does it mean and how can it be measured? A clinical skills assessment of maternal and child health workers in Nepal." *International journal of gynecology & obstetrics* 89.2 (2005): 200-208.
10. Nakua, E. K., Sevugu, J. T., Dzomeku, V. M., Otupiri, E., Lipkovich, H. R., & Owusu-Dabo, E. (2015). Home birth without skilled attendants despite millennium villages project intervention in Ghana: insight from a survey of women's perceptions of skilled obstetric care. *BMC pregnancy and childbirth*, *15*(1), 243.
11. Anastasi, E., Borchert, M., Campbell, O. M., Sondorp, E., Kaducu, F., Hill, O., ... & Lange, I. L. (2015). Losing women along the path to safe motherhood: why is there such a gap between women's use of antenatal care and skilled birth attendance? A mixed methods study in northern Uganda. *BMC pregnancy and childbirth*, *15*(1), 287.
12. Titaley, Christiana R., et al. "Why do some women still prefer traditional birth attendants and home delivery?: a qualitative study on delivery care services in West Java Province, Indonesia." *BMC pregnancy and childbirth* 10.1 (2010): 43.
13. Sibley, Lynn M., Theresa Ann Sipe, and Danika Barry. "Traditional birth attendant training for improving health behaviours and pregnancy outcomes." *Cochrane database of systematic reviews* 8 (2012).
14. Geleto, Ayele, et al. "Barriers to access and utilization of emergency obstetric care at health facilities in sub-Saharan Africa: a systematic review of literature." *Systematic reviews* 7.1 (2018): 183.
15. Moshi, F., & Nyamhanga, T. (2017). Understanding the preference for homebirth; an exploration of key barriers to facility delivery in rural Tanzania. *Reproductive health*, *14*(1), 132.
16. Kumbani, L., Bjune, G., Chirwa, E., & Odland, J. Ø. (2013). Why some women fail to give birth at health facilities: a qualitative study of women's perceptions of perinatal care from rural Southern Malawi. *Reproductive health*, *10*(1), 9.
17. Hirose, A., Owolabi, O., Imamura, M., Okonofua, F., & Hussein, J. (2017). Systematic review of obstetric care from a women-centered perspective in Nigeria since 2000. *International Journal of Gynecology & Obstetrics*, *136*(1), 13-18.
18. Chun Tie, Ylona, Melanie Birks, and Karen Francis. "Grounded theory research: A design framework for novice researchers." *SAGE open medicine* 7 (2019): 2050312118822927.
19. Sarker, Bidhan Krishna, et al. "Reasons for preference of home delivery with traditional birth attendants (TBAs) in rural Bangladesh: a qualitative exploration." *PloS one* 11.1 (2016): e0146161.
20. Allou, Leander Achageba. "Factors influencing the utilization of TBA services by women in the Tolon district of the northern region of Ghana." *Scientific African* 1 (2018): e00010.

21. Bohren, Meghan A., et al. "Mistreatment of women during childbirth in Abuja, Nigeria: a qualitative study on perceptions and experiences of women and healthcare providers." *Reproductive health* 14.1 (2017): 9.
22. Okafor, Innocent I., Emmanuel O. Ugwu, and Samuel N. Obi. "Disrespect and abuse during facility-based childbirth in a low-income country." *International Journal of Gynecology & Obstetrics* 128.2 (2015): 110-113.
23. Ishola, Foluso, Onikepe Owolabi, and Veronique Filippi. "Disrespect and abuse of women during childbirth in Nigeria: a systematic review." *PloS one* 12.3 (2017): e0174084.
24. Galadanci, H. S., et al. "Programs and policies for reducing maternal mortality in Kano State, Nigeria: a review." *African journal of reproductive health* 14.3 (2010): 31-36.
25. Onasoga, O. A., et al. "Factors Influencing Midwives' Attitude Towards Women In Labour In Selected Hospitals In Niger Delta Region Of Nigeria." *Tropical Journal of Health Sciences* 25.4 (2018): 40-45.
26. Farotimi, Adekunbi Abosede, et al. "Effectiveness of training program on attitude and practice of infection control measures among nurses in two teaching hospitals in Ogun State, Nigeria." *Journal of education and health promotion* 7 (2018).
27. Fathi Najafi, Tahereh, Robab Latifnejad Roudsari, and Hossein Ebrahimipour. "The best encouraging persons in labor: A content analysis of Iranian mothers' experiences of labor support." *Plos one* 12.7 (2017): e0179702.
28. James, Oyira Emilia, Ndiok Akon Emmauel, and I. Y. Ademuyiwa. "Challenges, And Nurses' Job Performance in the University of Calabar Teaching Hospital, Calabar Cross River State Nigeria."
29. Fathi Najafi, Tahereh, Robab Latifnejad Roudsari, and Hossein Ebrahimipour. "The best encouraging persons in labor: A content analysis of Iranian mothers' experiences of labor support." *Plos one* 12.7 (2017): e0179702.
30. Dim, Cyril C., et al. "Labor support: an overlooked maternal health need in Enugu, south-eastern Nigeria." *The Journal of Maternal-Fetal & Neonatal Medicine* 24.3 (2011): 471-474.
31. Adeniran, Abiodun, et al. "Attitude and practice of birth attendants regarding the presence of male partner at delivery in Nigeria." *Ethiopian Journal of Health Sciences* 27.2 (2017): 107-114.
32. Afulani, Patience, et al. "Companionship during facility-based childbirth: results from a mixed-methods study with recently delivered women and providers in Kenya." *BMC pregnancy and childbirth* 18.1 (2018): 1-28.
33. Chi, Primus Che, and Henrik Urdal. "The evolving role of traditional birth attendants in maternal health in post-conflict Africa: A qualitative study of Burundi and northern Uganda." *SAGE open medicine* 6 (2018): 2050312117753631.
34. SulaymanH, AdajiS. "Integration of traditional birth attendants (TBAs) into the health sector for improving maternal health in Nigeria: A systematic review." *Sub-Saharan African Journal of Medicine* 6.2 (2019): 55.
35. Adatara, Peter, et al. "Cultural beliefs and practices of women influencing home births in rural Northern Ghana." *International Journal of Women's Health* 11 (2019): 353.
36. Esienumoh, Ekpoanwan E., et al. "Cultural diversity in childbirth practices of a rural community in Southern Nigeria." *J Preg Child Health* 3.280 (2016): 2.

37. Ibeneme, Sam, et al. "Roads to health in developing countries: understanding the intersection of culture and healing." *Current Therapeutic Research* 86 (2017): 13-18.
38. Abdullahi, Ali Arazeem. "Trends and challenges of traditional medicine in Africa." *African journal of traditional, complementary and alternative medicines* 8.5S (20

Figure 1: The conceptual framework combines data from the initial literature review and highlights variables that were explored via data collection materials.

Figure 1: Conceptual Framework

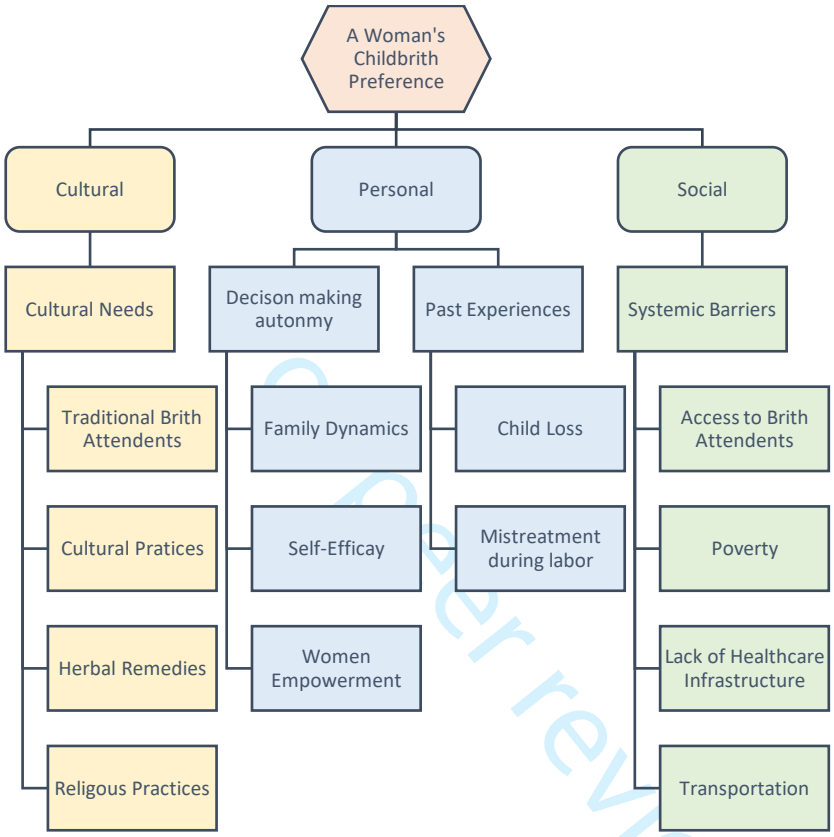


Figure 1: This conceptual framework combines data from the initial literature review and highlights variables that were explored via data collection materials.

Supplemental

Theme 1

Insults: Many women interviewed cited some level of verbal insults either during their prenatal care or while laboring. One woman who delivered in a clinic recalled, *"They shout, slap me all those things, insults."* Another woman stated, *"I would recommend the clinic, but if you deliver here it is not easy, you will receive a lot of insults."* A woman was asked whether finances, or transportation influenced her decision to deliver with a TBA. She replied, "*No, it was because of the insults.*" When husbands were asked about their treatment of women in labor, there was a consensus that women were spoken to in a manner that was disrespectful at times. A man recalled some ways that SBAs mocked woman *"You weren't complaining when you were having sex, don't complain now. They actually told a friend of mine's wife that, and she actually just started weeping."* Another man recalled, *"Yes they say things like "why are you complaining is this your first child?"*

Hitting: Women, SBAs, and men also reported physical abuse by SBA's in the form of slapping their legs while they were in labor to get them to cooperate. During a FG an SBA reported that they have to hit the woman at times to help with the labor process, "*...by the time you hit that leg, by the time she screams you will see, with that pressure, the baby will come out."* When husbands were asked what women may not like about delivering in a clinic sitting one reply, "*Like yelling at them and hitting them.*"

Rumors of insults and neglect: Due to the prevalence of mistreatment during labor, another woman's story of mistreatment is enough to dissuade some women from delivering in a clinic setting. A woman who received prenatal care but opted to deliver with a TBA reported, *"Most of them here in Benin are not nice, they will even nag you, yell at you. From what I have heard, I haven't been there."* Another woman reported that her husband convinced her to deliver with a TBA due to fears that she would be neglected, "*In fact, I wanted to go to the clinic to deliver but my husband advised me not to. He told me they would make me wait a long time, and pass through a lot of stress before attending to me. So that is why I decided to go to the native (native is a colloquial term to describe a TBA)."*

Prior negative experiences: Some women who chose to deliver their first child with an SBA decided to deliver their subsequent child with a TBA due to negative birthing experiences with SBAs. A woman who delivered her first child with an SBA but opted to use a TBA for her second child reported, "*From my first experience I do not want a clinic."* Another woman reported, *"When I first delivered the first baby, they did not take care of me well."* A woman with a similar experience stated "*they did not attend to me well. The injection that they give me swell up, I report to them and they don't attend to me."* During a FG with husbands a man stated,*" Patients are not seen as patients, they are not seen as equal. They are seen as stubborn."*

Rationalization for insults and hitting: During FGs, SBAs openly spoke about some of the negative feelings they have towards laboring women, which may inform their maltreatment of these women. When questioned about treatment of women in labor a midwife responded, "*Before she is shouting maybe you are doing something that she does not like."* Another cited that it was the bad attitude of the patients that influenced their behavior "*we try as much as possible to put on*

the right attitude. It depends on your level of tolerance. Because most of our patients are very rude, and sarcastic."

Theme 2

Healthy baby: Most women admitted that the primary motivating factor for their birthing preference is where they believe they will have best chances to have a healthy baby. Many women were willing to endure mistreatment by SBAs because they trusted that hospitals can provide more specialized care and deal with any birthing complications. A woman who reported maltreatment in the clinic but still preferred SBAs to TBAs stated, *Well, you need to endure to get what you want (healthy baby). Normally they shout, they will not regard you as human being, they will treat you without regard. But you need to endure it to get what you want."* Another woman when asked why she delivered with a SBA reported, *"In the hospital, if there is anything wrong with the baby they can quickly detect it. But with a native doctor if something is wrong with the baby, by the time you get to the hospital it may be worse."* Another woman was asked if she preferred delivering in a clinic. She responded, *"Yes, because if you go native and something happens to the baby they are not quick to act like the hospital."*

Avoid medical intervention: A willingness to undergo medical interventions such as cesarean sections and episiotomies is something women must consider when deciding to labor with a TBA or an SBA. Some women who chose to deliver with TBAs did so to avoid medical intervention that they experienced in the previous delivery; or because they were informed that they would need to undergo a cesarean and they wanted to avoid the procedure. A TBA recalled that, *"She went to the clinic and they told her they wanted to give her a cesarean section. She came quickly to me. When I checked the baby I told her not to return to the clinic. She delivered normally with me"* A woman recalled a story of a woman that she knew, *"they told her that she was going to deliver with cs but she did not go to the hospital. She later went to the traditional. In the end she labored and lost the baby. The baby was too big, and she said she cannot have a c-section."* A woman who delivered her first child with an SBA but opted to use a TBA for her subsequent child did so due to the episiotomy she received, she stated, "*The baby was not ready to come and they cut me, the pain is still there up till now. So that is why I do not go to the clinic. The cut is too much."*

Petting (comfort): Women often used the pigeon slang petting, which roughly translates, to "there there"; to describe the comfort they wished to receive during labor. Comfort and encouragement during labor is something that women both who delivered with TBAs and SBAs indicated they wanted to receive. Most women who delivered with TBA cited petting in labor as a motivating factor. Despite the fact that women who delivered with TBAs reported not always being able to have family provide their emotional support in the labor room, the TBAs provided them with the support that they needed. A woman who delivered with a TBA stated, *"I never liked it in the hospital, and when I got to the traditional I was given the attention that I needed and the love and warm embrace that I really needed at that time in my life."* She continued to state, "*They give you a lot of care, love, keep you comfortable at home, especially when you're about delivering, they will make you feel like you are not alone. And when probably when it gets to the time for you to push you also get help".* Another woman echoed similar thoughts, "*You are under pain now, you want someone to comfort you. But if you come to hospital they do not do that.* Another woman was asked why she would recommend a TBA to other women, she responded, "*Because the woman gives person encouragement, and tells you how to take care of*

your newborn. Then she pets you." However, women who delivered with SBAs reported not experiencing the level of support they wanted. A woman was asked if the SBAs made her feel comfortable and met her emotional needs, she replied sarcastically, "*Hospital pamper you? They are on their way."* Another woman was asked whether her husband was allowed to enter the labor ward to give her support during labor. She replied, "*They will not allow him to enter!"*

Cultural practices: Another factor women consider when determining where to labor was the desire for cultural experiences; this included the use of cultural practices and traditional medicine. TBAs reported that women come to them in pursuit of herbal remedies for pregnancy complaints and complications, "*Why women prefer to come to this place is that some women when they are pregnant have a swollen body, swollen legs, and they are not comfortable, there are roots and herbs to treat that."* Another TBA reported, "*We massage the pelvis, then you see we have some leaves we call it alligator pepper; we give it to the woman and make the baby bounce."* A TBA detailed her ability to improve birth outcomes, *"Some babies are not too strong, they are fragile, there are roots and herbs to correct that. And if the baby is too big to pass through the normal process, in terms of delivery, there are roots and herbs to take down the shape."* When asked about the cultural practices that TBAs are able to provide to their clients a SBA responded, "*most of the time it is psychological, rub oils, it's not that it is performing any magic it is not doing anything."* Another SBA highlighted the cultural significance of home births, "I *think our culture plays a part in it, usually delivery at home with your grandma, your grandniece, with elders in the community or in the neighborhood, so our culture."*

Spiritual needs: The ability of birth attendants to meet the spiritual needs of women in labor influences where they preferred to labor. During a FG with SBAs they indicated that some women choose to deliver in churches in hope of better birth outcomes, *"naturalists believe they want to have their baby within the church premises, where they believe that God is, they have spiritual backup, they have spiritual covering."* A SBA explained that church members with medical backgrounds at times recruit women in church, *"Some of them are members. They now use medical personnel in the church now, so they can refer when it is early."*

Female decision makers: Women must also consider their decision-making autonomy, when deciding where to deliver. Women and men both indicated that women weld the majority decision-making power regarding where women receive prenatal care and deliver. When asked about her decision to deliver with a SBA, a woman reported, "*I know that a doctor is better than native, I made the decision myself that I need to meet a doctor."* A woman who delivered with a TBA reported that her husband and her disagreed, however she made the final decision, *"He said I should go to hospital, I said no."* When men were asked who decided where a woman delivers many of them agreed that the decision is majority the woman's, "*she is in charge, she will try to influence, because as a man there is limit to how much you know."* Another husband stated, "*Even though the man appears to make the decision, it is informed by the woman's information."* Some TBAs also agreed that women hold the majority of the decision-making power in regard to where a woman will labor and receive prenatal care, "*It is the woman. Not the family, the women."* Other TBAs require the consent of the husband before they will treat the woman, independent of what she decides, "*And before they start treating them they always ask if their husband is aware that they are coming here. And if he is, or sometimes they will send for the husband, they want to see before they issue a prenatal card."*

Husband/other decision makers: However, for some women the decision is either shared with their husband, or the family matriarch. A husband reported that, *"The man is the real decision maker."* During a FGs with SBAs some of them also agreed that the husband makes the final decision on where a woman labors, "*Of course it is the husband. It's the belief of the husband is also a reflection of what the mother-in-law thinks."* Another SBA recalled an instance where a husband forced his wife to the clinic, "Yes*, he forced her to the hospital, she believed in going to the birth attendant. But the man said no, I do not want my child to be delivered there."* Also, during FGs with husbands they emphasized the influence of female figures in a woman's decision, "*The mother-in-law is very influential. She might have convection if her mother has enough experience. And she knows the decision to make."* Another man recalled, "*I remember when I took my wife for an antenatal care, it was even her mother's decision that made her come there."*

Gender of birth attendant: Most women stated that modesty or delivering with a male birth attendant did not influence where they chose to labor, they were more occupied with good birthing outcomes. However, some women did state that due to religion or other cultural factors that they preferred female birthing attendants. A husband recalled a woman's experience with a male doctor, "*She refused. She said the only person who is allowed, I am quoting her, to see her nakedness is her husband, so she does not prefer no man outside of her husband."* A woman who delivered with a TBA explained why she preferred a woman to attend her birth, "*They pet you. they give me hope."* Another woman explained her choice of female birth attendants, "*Women, because our religion does not allow for man to deliver us.* FGs with SBAs supported this statement reporting, "*The Muslims, they prefer a female nurse, rather than a male doctor or a male nurse."*
However, many women reported being indifferent to who attends their birth or preferring a male attendant. A woman who delivered with an SBA reported, "*I do not care so long as they are ok and are professional."* Another woman claimed, "*I did not have a preference, I just wanted the baby to come out*." A woman who delivered with a TBA stated, "*Anyone as long as the baby comes down safely."* Some women on the other hand preferred male attendants, "*I don't really like women… I don't know why but I do not like women to deliver me."* During the FG with husbands, they provided clarity to why some women may prefer male attendants reporting, "*The male attendant they feel that they are more compassionate to them compared to female."*

Cost: The cost of a woman delivering with an SBA vs a TBA is a concern for many women and their husbands. For some women the cost of delivering in the clinic was enough to deter them. A woman who delivered with a TBA reported, "*The reason was because of money. I registered in a private hospital, but the cost of delivering there was too high."* For others, a history of uncomplicated births within the clinic setting influences them to deliver at home in an attempt to save money. A woman who delivered her previous child with a SBA stated, "*Hospital cost is expensive, for the second one I would go to native because in the hospital I delivered vaginally it was almost 50000 that I paid, it's expensive, so if I deliver again I will do it at home."* That sentiment was shared by another woman who stated, "*I won't go back to the hospital. The money was too big, if it is native, I will go."* Husbands also reported the impact of clinic cost on TBA utilization, "*Cost is something. They will tell you that they cannot afford. Why some people go to TBA is because they cannot afford the hospital bill.* During FGs SBAs also acknowledged the effects of cost on where women choose to labor, *"It is the cost. They feel that it is cheaper to go*

to TBA, then in the hospital. And naturally within an environment where most people live below average. Cost is always a major factor."

TBAs on the other hand have a different perspective on the impact of cost on their utilization, "*They come here because what they are looking for, they find it. Not because of the money. Sometimes if you look at ours, we charge more."* Another stated*, "It is not because it is cheaper, because there are many women who believe in tradition."*

However, some women were indifferent to laboring costs. A woman who chose to deliver with an SBA claimed, "*Because I had the money, I said let me go to the hospital. I like hospital."* A woman who chose to deliver with a TBA reported, "*I did not go to that place because of money. They can deliver well."*

Unpredictable situations: The last factor that women indicated influences their choice to either deliver with a TBA or within healthcare facilities is unpredictable circumstances. This includes rapid or painful labor, transportation, booking issues in the clinic settings, and also unstaffed hospitals. These issues can cause women, even some who planned to deliver in health care facilities, to deliver with TBAs as a last resort. These issues speak less to the personal preferences of women but rather systemic infrastructure issues within Nigeria. Before a woman can deliver in a clinic there are a series of tests she must complete. Women who do not begin the process or, begin the process and do not complete it, are considered unbooked. Clinics often will not deliver the baby of a woman who is "unbooked". A woman who found herself in that situation while she was in labor reported that she was forced to utilize a TBA as an alternative, *"I registered for hospital, when they sent me to do an ultrasound, after I did the ultrasound I gave them the paper, but they said it never reached them. I was in so much pain, that's why I went to the TBA."* A woman who delivered with a TBA was asked why she chose a TBA she responded, "*No I wanted to deliver in a clinic, but because of the pain I delivered with the TBA."* Another woman reported that the SBA was absent at the time of their labor, *"The nurse that knows me called me and said, madam what are you waiting for. I told her 'I am in labor and you are asking me this question.' She then told me that the doctor had left the area. That is now when I went to the native place."* Another woman with a similar situation reported, "*The doctor was not around, so we went to native place, that is the reason that I went there."*

Theme 3

Decrease clinic cost: Women have stated that a decrease in clinic cost would incentivize them to use healthcare facilities rather than TBAs. A woman who delivered with a TBA was asked if she would be more inclined to go to the clinic to deliver if it was free, she reported, *"If the clinic was free I would go, I will go anywhere that is free."* When SBAs were asked what they think would motivate women to utilize clinics more, cost was a recurring theme. A nurse reported, "*Make hospitals cheap. Some women come for antenatal that hardly have anything."* Another nurse stated, *"They should reduce the amount they pay here, that is number one*."

Retraining SBAs: SBAs were in agreement that a negative attitude among the healthcare team plays a role in women's apprehension to utilize clinics. During a FG a nurse stated, "*I think that is what is driving them away, we must also work on our attitude. More empathetic to our clients.*" Another suggested that SBAs adopt a better demeanor when treating patients, "*Friendly, just be friendly to them, If you shout at them there has to be a reason that you are shouting*." During the FGs with husbands, a man advised that the lack of training may be to blame

for the negative attitude of SBAs, *"Health personnel, they need to be retrained in the way they interact with patients."* He went on to say that, *"Education does not teach you how to relate to people, you need to be trained in that aspect.*

Increased number of SBAs: A general sentiment among everyone interviewed was the fact that nurses are overworked and increasing the number of workers can relieve some stress on the care team. Also, it may improve SBAs attitudes with patients. A nurse recalled, "*On a very busy day we will have 30 deliveries to just 6 nurses."* Another reported that the ratio of patients to SBA is skewed, "*You will see four women ready to push and I have to prepare to receive a baby. So I can say the ratio 1 SBA to 10/12 patients.* When asked about working conditions a nurse replied, *"We are overworked. That is the truth."* Another stated, *"We also need more workers, manpower."* During the FGs with husbands a man pointed out the fact that being overworked can affect the SBA patient relationship, "*You may have 5 patients to attend to at the same time, and the facilities do not have the capacity. So, you may not have the supplies you need, so you are getting frustrated, and the patients are shouting because you are taking a long time."*

Adopt non-harmful TBA techniques: During a FG, SBAs recommended studying the techniques of TBAs, and adopting their non-harmful practices, "*we actually need to find out why women are visiting TBAs. So at least we will be able to bring in some of these practices into our own practice."* SBAs also shared an understanding that TBAs hold a cultural significance, *"Because you cannot rule out traditional belief, if it is not harmful, why not. I think we also need to at least study, let's know these beliefs and add the ones that are not harmful into our own practice."* They were also in agreement that integrating some TBA practices in their own practice is feasible for them, "*Ok psychological support, of course we do. Maybe it's the rubbing of the back, the rubbing of the back is therapeutic, we also can do that.* Despite being open to adopting techniques from TBA's; both SBAs and TBA's were resistant to working collaboratively. When an SBA was asked about her willingness to work with TBAs she responded, *"Never, what do they know. I was trained, can I say I know it all? Talk less of someone who has not seen the four walls of a school.* When a TBA was asked about collaboration with SBAs she responded, *"their field is different from my own field. So I can't praise them, and they can't praise me. Most of them are doctors, they disregard us, they say we don't know anything.*"

Table 1 Consolidated criteria for reporting qualitative studies (COREQ): 32-item checklist

No	Item	Guide questions/description
Domain 1: Research team and reflexivity		
Personal Characteristics		
1.	Interviewer/facilitator	Which author/s conducted the interview or focus group?
2.	Credentials	What were the researcher's credentials? *E.g. PhD, MD*
3.	Occupation	What was their occupation at the time of the study?
4.	Gender	Was the researcher male or female?
5.	Experience and training	What experience or training did the researcher have?
Relationship with participants		
6.	Relationship established	Was a relationship established prior to study commencement?
7.	Participant knowledge of the interviewer	What did the participants know about the researcher? e.g. *personal goals, reasons for doing the research*
8.	Interviewer characteristics	What characteristics were reported about the interviewer/facilitator? e.g. *Bias, assumptions, reasons and interests in the research topic*
Domain 2: study design		
Theoretical framework		
9.	Methodological orientation and Theory	What methodological orientation was stated to underpin the study? *e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis*
Participant selection		
10.	Sampling	How were participants selected? *e.g. purposive, convenience, consecutive, snowball*
11.	Method of approach	How were participants approached? e.g. *face-to-face, telephone, mail, email*
12.	Sample size	How many participants were in the study?
13.	Non-participation	How many people refused to participate or dropped out? Reasons?
Setting		
14.	Setting of data collection	Where was the data collected? e.g. *home, clinic, workplace*
15.	Presence of non-participants	Was anyone else present besides the participants and researchers?
16.	Description of sample	What are the important characteristics of the sample? *e.g. demographic data, date*
Data collection		
17.	Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested?
18.	Repeat interviews	Were repeat interviews carried out? If yes, how many?
19.	Audio/visual recording	Did the research use audio or visual recording to collect the data?
20.	Field notes	Were field notes made during and/or after the interview or focus group?
21.	Duration	What was the duration of the interviews or focus group?
22.	Data saturation	Was data saturation discussed?
23.	Transcripts returned	Were transcripts returned to participants for comment and/or correction
Domain 3: analysis and findingsz		
Data analysis		
24.	Number of data coders	How many data coders coded the data?
25.	Description of the coding tree	Did authors provide a description of the coding tree?
26.	Derivation of themes	Were themes identified in advance or derived from the data?
27.	Software	What software, if applicable, was used to manage the data?
28.	Participant checking	Did participants provide feedback on the findings?
Reporting		
29.	Quotations presented	Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? e.g. *participant number*
30.	Data and findings consistent	Was there consistency between the data presented and the findings?
31.	Clarity of major themes	Were major themes clearly presented in the findings?
32.	Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes?