Client's Experiences on Skilled Delivery Services among Women of Reproductive Age in Rural Communities in Kenya

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DOI: https://dx.doi.org/10.4314/ajhs.v36i4.10

Abstract

BACKGROUND

Globally Skilled delivery services are critical aspects to combat Maternal and neonatal mortality. In Kenya, skilled deliveries account for 62% of all deliveries; unskilled deliveries pose a higher risk of maternal and neonatal mortality and morbidity. The maternal mortality ratio in Kenya is currently 462 per thousand live births, with 40% of these deaths occurring at home. The main objective of the study was to explore the experiences of women of reproductive age on skilled delivery services.

MATERIALS AND METHODS

The baseline study was conducted between November 2022 and January 2023. It employed a cross-sectional research design involving 347 women of reproductive age. The study aimed to examine their current practices, challenges, and experiences with skilled delivery services. Focus Group Discussions (FGDs) were conducted with 48 recently delivered women (within one year), as well as with 48 Community Health Volunteers (CHVs) and 10 Community Extension Workers (CHEWs). In-depth interviews were also held with local health facility administrators.

Quantitative data analysis was performed using SPSS version 25.0. Measures of central tendency were employed for continuous data tabulation. The analyzed data was then presented through charts, tables, and frequencies. The qualitative data underwent thematic arrangement and analysis using NVIVO version 13 and then triangulated with descriptive data.

RESULTS

The results revealed that (90.6%) of women's previous childbirth experiences influenced their utilization of skilled birth attendance services in subsequent pregnancies. Women who had never given birth in health facilities or had chosen home births were less likely to utilize skilled birth attendance services.

CONCLUSION AND RECOMMENDATIONS

This study identified factors influencing skilled birth attendance use in Kandara Sub-County, highlighting the role of previous childbirth experiences, health facility-related factors, and danger signs during pregnancy. To improve utilization, interventions should focus on health facility conditions, health worker attitudes, and community awareness programs.

Keywords: *Experience, Women of Reproductive Age, Skilled Delivery Services, Cross-Sectional Research and Childbirth*

[*Afr. J. Health Sci*. 2023 36 (4): 425-434]

Introduction

Maternal and neonatal health is a critical global health priority, with the World Health Organization{WHO) estimating that approximately 810 women die every day due to complications related to pregnancy and childbirth (1). Skilled delivery services, which involve care provided by trained healthcare professionals during pregnancy, childbirth, and the postpartum period, are recognized as key interventions to reduce maternal and neonatal mortality and morbidity worldwide (2). However, despite global efforts to increase access to skilled delivery services, challenges persist in many low- and middle-income countries, particularly in rural areas where women face barriers to accessing skilled care during pregnancy and childbirth (3).

In the Sub-Saharan Africa region, where Kenya is located, maternal and neonatal mortality rates remain high, and access to skilled delivery services is a significant concern. According to WHO (1), Sub-Saharan Africa has the highest maternal mortality ratio globally, with an estimated 533 maternal deaths per 100,000 live births in 2017. In Kenya, maternal mortality remains a major public health challenge, with an estimated maternal mortality ratio of 342 per 100,000 live births in 2015 and the availability and utilization of skilled delivery services are critical in addressing this issue (4).

In Kenya, the government has implemented various initiatives to increase access to skilled delivery services, including the implementation of the Free Maternal Health Care and Linda Mama programs, which aim to provide free or subsidized maternal health services to pregnant women (5). However, challenges in accessing skilled delivery services persist, particularly in rural areas where health facilities may be limited, and cultural beliefs and practices may influence women's decision to seek skilled care during pregnancy and childbirth (6). Further research is needed to understand the experiences of women in accessing skilled delivery services in specific areas of Kenya.

Kandara Sub-County, which is located in Murang'a County, Kenya, is a rural area where access to skilled delivery services may be limited. Due to limited health facilities, shortage of skilled birth attendants, cultural beliefs and practices, as well as financial barriers, women may face difficulties in accessing skilled care during pregnancy and childbirth in this area. Therefore, it is crucial to understand the experiences of women of reproductive age concerning skilled delivery services in the study area. This understanding will help to identify gaps in care and inform strategies for improvement, which will ultimately reduce maternal and neonatal morbidity and mortality in the region. The study's focus is on the experiences of women on skilled delivery services which will provide critical insights into the effectiveness of the current healthcare system in the study area. The findings of this study will inform the development of policies and interventions to improve access to quality maternal and neonatal healthcare services, ultimately contributing to the achievement of the Sustainable Development Goals for child health. This study is, therefore, significant as it contributes to the existing body of knowledge on maternal health and will provide evidence-based recommendations to policymakers and healthcare providers on strategies to improve the utilization of skilled delivery services. The main purpose of this research study was to establish the client's experiences of skilled delivery services among women of reproductive age, in Kandara Sub County.

Materials and Methods

Study design and setting

The cross-sectional design was employed as it efficiently captures diverse data, enabling researchers to draw conclusions and inform policy.

The study was conducted in Kandara Sub County, which is located approximately 45 km north of Nairobi, Kenya, and covers an area of 235 km2. It is one of the seven sub-counties in Murang'a County.

To ensure the study's relevance and validity, the inclusion criteria encompassed women of reproductive age who had given birth within the past year and had been residing in the area for at least one year. Additionally, CHVs and CHEWs who had been working in the study area for the last six months were included. Women of unsound minds were excluded from the study to ensure that participants could provide reliable and informed responses. The inclusion of these specific criteria aimed to target individuals directly relevant to the research objectives and minimize potential biases in the study population. The study included a sample size calculation to determine the number of participants needed for a robust analysis.

For the women of reproductive age, the projected total population (N) at the time of the study was 2,121 women. The sample size (n) was calculated using Fisher's formula, with a 10% contingency, as recommended by (6). The calculated sample size was 315 plus a contingency of 32, resulting in a total of 347 respondents.

In addition to women, the study involved Community Health Volunteers (CHVs), Community Extension Workers (CHEWs), and health administrators. For the CHVs, Stratified Random Sampling was employed where stratification was based on community health units. Then, simple random sampling was used to select 48 CHV participants. A census approach was utilized to sample all the 10 CHEWs. Lastly, purposeful sampling was employed to recruit 7 health administrators from 3 selected health facilities in the study area.

To address potential sources of bias in the study, multiple measures were implemented. A rigorous sampling approach was utilized, ensuring a representative and diverse sample. Open-ended and closed-ended questionnaires were employed to collect data, allowing for a combination of qualitative and quantitative information. Focused group discussions and key informant in-depth interviews were conducted to capture different perspectives. The research assistants involved in data collection were trained, and a pilot study was conducted to ensure data quality.

Study tools

The study utilized various data collection tools, including semi-structured questionnaires for eligible women, focused group discussions with women and CHVs, and key informant in-depth interviews with CHEWs and health facility administrators. The questionnaires contained both open and closed-ended questions and the FGDs generated in-depth data while KII provided detailed information on the experiences and challenges faced by health personnel in providing skilled delivery services. The use of different data collection tools provided a comprehensive understanding of the factors influencing the utilization of skilled delivery services in the study area,

Data management

The study utilized SPSS version 25.0 to code, enter, and clean data, and to tabulate continuous data using measures of central tendency while presenting the analyzed data in tables, charts, and figures. Inductive thematic data analysis was adopted and followed a process from. In this study, the coding served as a way of patterning, classifying, and later reorganizing each datum into categories and themes for further analysis. Transcripts were prepared in the MS Word document format and imported to the NVIVO qualitative data analysis software as a primary document, assigned labels by code list. (7)

Ethical considerations

The researcher sought Clearance from JKUAT Ethics Review Committee (approval

number JKU/IERC/02316/0431) dated 18th Nov 2021). Authority to carry out the study was obtained from the National Commission for Science, Technology and Innovations (NACOSTI) (Approval number 303892 dated 6th Jan 2023). Authority to carry out the study was also obtained from the county Government of Murang'a (REF NO: MOH/GEN/MUR/VOL.V/58 Dated 14th Dec 2021). A written Informed consent was sought from study participants

Results

Response rate

The study distributed 347 questionnaires and received 344 valid responses, resulting in a satisfactory response rate of 99%. A response rate above 77% is very good (8).

Social demographic characteristics

The study involved respondents with ages ranging from 16 to 45 years, with a mean age of 28.56 and a mode of 25 years. The age of the respondents' last child during the questionnaire ranged from less than a month to 12 months, with a mean of 6 months and a mode of 8 months. All respondents had lived in the study area for the past 12 months. The number of children ever delivered ranged from 1 to 8, with an average of at least 2 children, and the majority of respondents had 3 children. In terms of education, the respondents were categorized into 5 levels, with 47.1% attaining secondary education and only 0.6% attaining university level. The majority of respondents were married (78.1%), while only 2% were widowed. Most of the respondents (99.7%) identified as Christian, with only one respondent (0.3%) identifying as Muslim.

Reliability

After the Pilot study, a reliability test was conducted for all the subscales in the respondents' questionnaire using Cronbach's alpha. In this case, an alpha of 0.7 or above was deemed acceptable. The test was carried out to determine whether the responses provided by the respondents adequately addressed each item on the subscales about women's attitudes and knowledge towards health facilities delivery and choice of place of delivery for mothers seeking child welfare services

Experiences of the respondents on skilled delivery services

Place of delivery of the last child. Respondents gave their responses on where they delivered their last child. 69.2% were in hospitals, 28.8% gave birth at home and the remaining 2% delivered on their way to the hospital. Table 1 gives a summary of the analysis. These findings were supported by results of qualitative data analysis which revealed that most mothers who delivered at home were assisted by relatives during delivery as was cited by one respondent's statement:

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Table 1:
Place of delivery of the last child

	Frequency	Percent	Valid Percent	Cumulative Percent
Home	99	28.8	28.8	28.8
Hospital	238	69.2	69.2	98.0
Others	7	2.0	2.0	100.0
Total	344	100.0	100.0	

***Table 2*:**
Choices of home delivery

	Frequency	Percent	Valid Percent	Cumulative Percent
Delivered other children safely at home	29	8.4	8.4	99.1
Hadn't gone to the clinic	1	.3	.3	99.4
Religious belief	2	.6	.6	100.0

"*I only visit the clinic for ANC check-ups to ensure that my baby and I have no problem but when my time to give birth comes, I call a relative at home to assist me. The staff in the hospital are very rude. (WFGD, 2-1).*

Reasons for choosing to deliver at home. The clients were asked to explain the reason why they opted to deliver at home by choice rather than at the health facility.

Table 2 shows the choices that led to home delivery with most saying that having previously delivered safely at home was the greatest cause to choose to deliver at home.

Circumstances that led to home delivery. The respondents were requested to state the circumstances that led them to deliver at home and gave various reasons as shown in Table 3. The circumstance that forced the majority not to deliver in the hospital was due to ignorance of their delivery date.

Results of qualitative data analysis found that quick labour, Lack of individual birth plan and lack of personal preparedness, the experience of safe deliveries, Lack of knowledge on the importance of skilled birth attendance services and Delays in seeking medical help were some of the circumstances that led to unskilled deliveries among the respondents

Unexpected quick labour was the main reason cited by the respondents for not utilizing skilled birth attendance services. One of the participants mentioned the following statements:

"I delivered on the way while I was trying to go to the health Centre. I would have given birth in the HC but labour was so fast and delivered immediately after I left home for the health centre", (WFGD, 5-5)

*"I was gardening; all of a sudden I felt a sharp pain in my lower abdomen. I didn't have time to call for an ambulance I delivered immediately after I entered my house. (*WFGD, 6-6)

Treatment by healthcare providers. Those who delivered in the hospital gave their responses on how they were treated by the health care providers. The majority constituting 73.7% gave a positive response while the remainder gave a negative response.

Findings from qualitative data revealed that harsh treatment by health workers was one of the factors that hindered hospital delivery as was cited by one respondent's statement:

"*I went through hell that day, I was admitted and when the time for the baby came, I was told to lie on a bed and open my legs. I didn't get the instructions well and when I asked the nurse what she meant she slapped me twice and asked me about my level of education if I could not follow simple instructions.*

I remember that day to date and I would not like any other woman to pass through what I went." (WFGD 5-1)

Table 3:
Circumstances of home delivery

	Frequency	Percent	Valid Percent	Cumulative Percent
Delay in transport	12	3.5	3.5	83.4
Didn't know the delivery date	20	5.8	5.8	89.2
The facility was too congested	2	.6	.6	89.8
Hadn't gone to the clinic	1	.3	.3	90.1
Lack of money for transport	6	1.7	1.7	91.9
Poor road and it was raining	6	1.7	1.7	93.6
Short labour	19	5.5	5.5	99.1
Was told to return home and dilate more	3	.9	.9	100.0

Conduct of healthcare workers. A further question on how exactly the health care providers conducted themselves during the last delivery was asked. The majority constituting 73.7% gave a positive response while the rest mainly reported unkindness by the healthcare workers as shown in Table 4.

Qualitative data revealed that negative attitudes towards health workers, misconception of health system procedures and harsh treatment by health workers were some of the factors that emanated from this theme; the following statements were recorded.

"*I can't withstand the harassment and rudeness of the nurses at the hospital as I give birth. Giving birth is a natural process and the presence of healthcare workers does not benefit us in any way as the baby will be born with or without the*ir assistance. (WFGD, 5-2)

"*I fear giving birth at the hospital the midwives there don't explain to you what they want to do with your body. You find them preparing instruments, putting on funny clothes and then telling you to lie on the couch they want to do a procedure on you. I even don't understand them*" (WFGD, 1-2)

Attitudes towards health facility delivery services

The respondents were asked about aspects of attitudes towards health facilities delivery and choice of place of delivery for mothers seeking child welfare services. Response ranged from 1 to where: 1= Strongly Disagree (SD); 2 = Disagree (D); 3 = Neutral (N); 4 = Agree (A); 5 = Strongly Agree (SA). Table 5 gives a cross-tabulation summary of the responses.

Table 4:
Conduct of the health workers during your last delivery

	Frequency	Percent	Valid Percent	Cumulative Percent
negative, unfriendly, unwelcoming, rude	2	.6	.6	.6
negative, unfriendly, unwelcoming, unkind	4	1.2	1.2	1.7
rude, unkind	6	1.7	1.7	3.5
negative, unfriendly, unwelcoming	9	2.6	2.6	6.1
Rude	14	4.1	4.1	10.2
Unkind	29	8.4	8.4	18.6
positive, friendly and welcoming	179	52.0	52.0	100.0

Table 5:
Attitudes towards hospital delivery versus home delivery

Item	Strongly disagree	Disagree %	Neutral	Agree	Strongly Agree
	%		%	%	%
Poor delivery environment and lack of privacy discourage women from delivering in health facilities	80 23%	75 22%	40 12%	85 25%	64 19%
Lack of satisfaction with service delivery encourages women to deliver at home	68 20%	36 10%	56 16%	90 26%	94 27%
Harsh settings in hospitals encourage delivery at home	73 21%	56 16%	26 8%	85 25%	104 30%
Lack of respect for cultural beliefs encourages delivery at home	81 24%	71 21%	61 18%	51 15%	80 23%

"*One of the midwives told me that I got a tear during delivery and that I needed to be stitched but there were no materials to stitch me unless I buy. I had to wait till the next day when my husband came to visit me, he went back and bought the materials only for me to be treated 48 hours later, and I never went back to that facility.*" (WFGD, 5-3)

Another one said:

"*Before I was admitted to the health centre the staff gave me a list of things I needed to buy before admission, they explained to me that the resources went out of stock two months ago and therefore women have to buy including gloves, cotton wool and other personal materials. Am telling you it is that bad nowadays*." (WFGD, 4-3)

Qualitative data results

The qualitative data analysis led to the emergence of four major themes and several categories/labels related to the respondents' experiences with skilled delivery services.

Theme 1: factors that hindered the utilization of skilled birth attendance services. One major factor that was highlighted was health facility-related reasons, which included the lack of essential medical resources such as medication, equipment, and supplies, no 24-hour services, no food provided, and a lack of birth companions. Health workers' negative attitudes towards clients were also noted as a barrier to accessing skilled delivery services, with respondents reporting that some health workers were rude, dismissive, and unresponsive to their needs. Sociocultural and religious factors such as the belief in traditional birth attendants, cultural practices, and religious beliefs also posed challenges to the utilization of skilled delivery services. Individual factors such as short labour, myths and misconceptions, lack of an individual birth plan, past negative experiences, and lack of knowledge were also identified as hindrances to the utilization of skilled delivery services. These findings suggest that improving the availability and quality of healthcare resources, addressing negative attitudes among health workers, and addressing sociocultural and individual factors are crucial in promoting the uptake of skilled delivery services.

Theme 2: factors that motivated women to utilize skilled delivery services. The availability of health services such as transport and referral services, life-saving interventions during emergencies, fear of danger signs and complications, past experiences, and services received during antenatal care visits were all noted as key motivators for utilizing skilled delivery services. Respondents reported that good interpersonal relationships between healthcare workers and clients were important in building trust and confidence in skilled delivery services. This finding highlights the importance of providing comprehensive antenatal care services that address clients' fears, concerns, and experiences and ensure that healthcare providers establish good relationships with their clients.

Theme 3: Benefits of skilled birth attendance services. The provision of information and advice on maternal and newborn health, good newborn care practices, disease prevention and treatment services, prevention, and management of obstetric and neonatal emergencies, and ensuring the good health of the mother and newborn were all noted as important benefits of skilled delivery services. The findings suggest that ensuring access to skilled delivery services not only promotes better maternal and newborn health outcomes but also helps prevent and manage complications and illnesses that could arise during pregnancy and childbirth.

Theme 4: The role of the community in supporting women to utilize skilled birth attendance services. Respondents noted that advice and follow-up by community health Volunteers, transport support, assistance with household activities, and community advice and

encouragement were all crucial in promoting the uptake of skilled delivery services. This finding highlights the importance of community engagement in maternal and newborn health care and suggests that interventions to promote the uptake of skilled delivery services should involve the community at all levels.

Discussion

The study found that previous places of childbirth influenced the utilization of skilled birth attendance services in subsequent pregnancies, which is in line with a study conducted in Ethiopia that found women who had no prior experience of giving birth in health facilities and those who had given birth at home did not use skilled birth attendance services (9). The study also identified that harsh treatment by health workers was a major factor that hindered hospital delivery, which aligns with a study conducted in Ethiopia that revealed that substandard care, previous bad experiences with health workers and lack of knowledge on the advantages of skilled birth attendance services led to the lack of utilization of skilled delivery services (10).

This also relates to another study done in India that maltreatment of women during labour by health care workers was one of the factors that deterred the women from seeking skilled delivery services (11) Health facility-related reasons such as lack of essential medical resources, lack of 24-hour services, and lack of food provision, lack of a birth partner, and misconceptions and myths about health facility delivery were also identified as factors influencing the choice of place of delivery. These findings are consistent with a study conducted in developing countries that proved that the perceptions of the delivery process as a natural experience, unfamiliar delivery procedures in health facilities, phobia of episiotomies, lack of privacy, and lack of support during the process of childbearing emerged as some of the hindrances for women opting for a health facility childbirth (12).

The presence of an underlying danger sign during pregnancy influenced women to deliver at the health facility, which is similar to the findings of another study done in developing countries which revealed that the present health status of a woman, past poor health status or pregnancy complications, health knowledge, socio-economic, and sociocultural determinants influenced the perceived need for skilled birth attendance services (13).

The study findings revealed that the availability of essential life-saving interventions in health facilities influenced them to utilize skilled birth attendance services in their previous deliveries this correlates with a study done in Northern Ethiopia that revealed that TBAs could do little at home when complications occurred and that women felt that health facilities were better primed to handle obstetric complications once they occurred (14). The study findings also revealed that the health care workers are well equipped with skills to deal with an emergency during birth hence agreeing with findings of another study done in Gambia that revealed that women perceived that the health care workers have the skills to handle complications, and is in custody of relevant equipment to handle any complication that may occur during the delivery process and therefore preferred to deliver under skilled health personnel (15). Experience of obstetric complications in previous childbirths influenced women to utilize skilled birth attendance services in their future deliveries. This concurs with a study conducted in rural Zambia that revealed that women, who have had severe life-threatening complications, like prolonged labour, excessive bleeding, or breach presentation expressed their preference for health facility childbirth (16). The study findings reveal that the women are likely to deliver in the same previous place of delivery if they were satisfied with the care given however these findings contraindicate the findings of a study done in North West Ethiopia that found out that previous

delivery in a health facility was independently and significantly attributed to 45% decreased probability of subsequent visit for health facility delivery (17).

Study Limitations

Participants may have been inclined to provide answers that they believed were socially desirable or favourable to the researchers. This may have influenced their responses and made it difficult to obtain accurate information on their experiences. The researcher addressed the bias in designing surveys and interviews in a way that encouraged honest and unbiased responses, assured participants of confidentiality and anonymity and trained the interviewers to be neutral and non-judgmental. Participants may have difficulty recalling specific details of their experiences during childbirth, particularly if they occurred several months or years ago. This could lead to inaccurate or incomplete information being provided to the researchers. Prompts to improve the accuracy of responses were used to address the bias.

Conclusion and Recommendations

In conclusion, the study highlights the factors that influence the utilization of skilled birth attendance services among women in Kandara Sub County, Kenya. It revealed that previous childbirth experiences, health facility-related factors, and underlying danger signs during pregnancy are significant factors that affect the choice of place of delivery. Harsh treatment by health workers and misconceptions about health facility delivery were also identified as barriers to hospital delivery. The researcher recommends targeted interventions to improve health facility conditions, enhance health worker attitudes, and address misconceptions about health facility deliveries. Additionally, community awareness programs should be implemented to inform women about the benefits of skilled delivery services.

Acknowledgements: We acknowledge the role played by the participants who willingly participated in the study, any other person who played a role in this study and the ethics committees, and the administration of Murang'a County for granting authority and permission to carry out the study in the area.

Competing interests: The authors declare no competing interests

Source of funding: This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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