

# Perceptions and Experiences of New Mothers Diagnosed With Tokophobia; Regarding the Quality of Maternal Healthcare Services in Public Hospitals: A Qualitative Study

David Onchonga (✉ [onchonga.david@etk.pte.hu](mailto:onchonga.david@etk.pte.hu))

University of Pecs

Margaret Keraka

Kenyatta University

Vahideh MoghaddamHosseini

University of Pecs

Ákos Várnagy

University of Pecs

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## Research Article

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# Abstract

**Background:** Quality of maternal care offered in hospitals significantly determines the health outcomes of expectant women and their newborns. The study aimed at understanding the perceptions and experiences of new mothers diagnosed with tokophobia; regarding the quality of maternal services offered in public hospitals in Kenya.

**Methods:** This was a qualitative study consisting of in-depth interviews with 29 women who had given birth recently in a referral hospital in Kenya; and had been screened and found with high fear of childbirth at 22 weeks' gestation period. The framework for assessing the quality of care of institutional maternity services developed by the University of Southampton was adopted in this study. Thematic analysis was used in this study.

**Results:** The identified challenges were categorized into two: the provision of care and the actual experience of care. In the provision of care, there were perceptions and experiences relating to human and physical resources, inadequate referral systems, and inadequate management of emergencies. In regards to the actual experience of care, there were perceptions and experiences relating to inadequacies in human and physical resources, lack of cognition, lack of respect, dignity and equity, and inadequacies in emotional support.

**Conclusion:** The study identified systemic challenges related to the provision of maternal care and actual experience of care contributing to tokophobia. In this regard, there is a need to judiciously analyze all the critical steps identified in the framework for assessing the quality of maternal care, as this will reduce the intangible challenges identified in this study.

## Background

Among expectant women, the childbirth process significantly impacts their lives based on its outcomes, and the process may have long-term impact both at an individual level and as a member of a community [1]. According to research, the estimated level of severe tokophobia is between 6 and 10 % globally, which cuts across both primigravida and multigravida women [2–5]. Additionally, as documented, tokophobia thwarts about 7.6 to 18% of pregnancies globally [6, 7]. Often, childbirth experiences among women impact their future decisions on subsequent pregnancies [8]. As a result, their choices would both positively and negatively impact their peers' decisions, mentees, and other potential mothers close to them [9, 10].

Tokophobia has been linked with increased apprehension and grief during pregnancy [11]. This, coupled with maternal stress, is associated mainly with risks of preterm delivery [12] and such neonates have higher possibilities of dying within 28 days of birth, which would cause an enduring grief to the mother and her family [13, 14]. Maternal anxiety is acknowledged as a predictor of poor obstetric outcomes [15, 16]. They include convoluted labor, prolonged labor [17], instrumental delivery [18], and emergency caesarian section [3, 16].

From statistics, approximately 300,000 maternal mortalities occur every year globally [19, 20], with virtually 85 % of the cases being reported in South Asia and Sub-Saharan Africa. In the recent past, international and local organizations have endeavored to increase hospital births. However, about 30 million expectant women globally still give birth in the absence of trained birth attendants [21]. Studies however suggest that adequate skilled birth attendance could reduce the risks of stillbirths emerging from intrapartum related complications by approximately 20 % [22–24].

According to research, significant disparities exist between resource constrained areas and urban expectant mothers on access to skilled birth attendants. Skilled birth attendants attend about 67 percent of expectant women in rural areas compared to almost 90 percent in urban settings. This trajectory cuts across wealth quintiles, and in several nations, especially those classified as middle and high income, where most deliveries take place in hospitals [21]. Home delivery preferences are caused by domestic conflicts, high poverty indices, inequalities amongst communities, socio-cultural dynamics, and political instability in most developing countries [25].

From the available literature, most population-based studies evaluated have failed to quantify the preference for hospital deliveries despite providing vital information on the subject [26]. Notably, the available studies fail to comprehensively capture the expectant mothers' opinions on facility-based deliveries and how they contribute to tokophobia [27]. The current health models recommend that users of health services, especially maternal and child health services should be allowed to express their opinions on the positive and negative aspects of their experience [28]. In this regard, qualitative research methodology was employed in the current study to extract information on women's experience from hospital births and its influence on tokophobia.

## **Methods**

### **Research design and procedure**

This study was conducted in a county referral hospital in Kenya, and qualitative study design was employed. The study was part of a larger study on the impact of integrated prenatal education on the fear of childbirth among women of reproductive age. The current study aimed to provide an understanding on the perceptions and experiences of new mothers diagnosed with tokophobia; regarding the quality of maternal healthcare services they received in public hospitals in Kenya.

### **Study instruments**

Semi-structured in-depth interview guide which was adopted from the Framework for Assessing the Quality of Care (FAQC) of institutional maternity services developed by the University of Southampton [29] was used for data collection. In this framework, quality of care would be achieved through provision of care and actual experience of care (as indicated in Fig. 1). In this regard, the items included in the interview guide consisted of perceptions and experience of study participants regarding provision of care

and the actual experience of care. Open ended questions were asked followed by probing further as and when it was considered appropriate.

## **Study settings, population and data collection process**

The study enrolled a section of women who were part of the main study mentioned above. During their 22nd gestation week, participants were screening for tokophobia and individuals who had a score of above 66, which is considered high fear of childbirth as per Wijma Delivery Experience Questionnaire (W-DEQ) version A scale, [30] were asked if they would be willing to be interviewed after successful delivery. Approximately 46 women aged between 18–45 years accepted to take part and their details such as their mobile phone numbers, the expected date of delivery, physical address, and address of their spouse/guardians were recorded and kept by the first author. After delivery, they were contacted, congratulated for successful childbirth and reminded of the interview. The study included women who had normal delivery, had live births and were willing to participate in the study after giving birth. Women who had experienced complications during childbirth, those who were unable to speak either in English or Kiswahili, and individuals who delivered at home were excluded from the study. Although 46 women had expressed interest to participate, we finished the interviews at the 29th participant as the saturation principle has been reached since we used an iterative approach by looking at the data right from the time of data collection [31].

In this study, we used an interview guide which was both in English and Kiswahili languages, as these are the commonly spoken language in the study area. The interview guide was pre-tested before using it for data collection and amendments were made as deemed appropriate, and the asked questions comprised of items like “ what would you say about the quality of maternity services in the hospital where you gave birth?”, what is your experience on the referral system in the health facility where you gave birth?”, “what is your experience and perception regarding the human and physical resources available in the health facility where you gave birth?”. The study was conducted between January and February 2020 and the individual interviews lasted for about 42 minutes on average. The interviews were conducted in a private room at the post-natal clinics in the hospital. Three research assistants who were midwives conducted the in-depth interviews after undergoing a short orientation/training on conducting in-depth interviews, correct use of recorders, appropriate use of interview guides in qualitative research, ways of obtaining informed consent from study participants and methods of probing further to enrich data collection. The criteria for choosing research assistants was mainly their previous experience working with expectant women in similar studies. The information collected was arranged according to the University of Southampton’s Quality of Care Framework. The framework has been customized to fit the current study as illustrated in Fig. 1.

## **Data processing and analysis**

An iterative approach [31] was employed in this study. This approach was appropriate for this study as it is a reflective process, key in sparking insights and developing meaning by looking at the data right from the initial time of data collection. After the data collection on each day, the first author (DO) reviewed the

recorded interviews and provided feedback to the research assistants on any issues that were outside the scope of the study. The audio-recorded interviews were transcribed by (K.M). The first author (D.O) read the transcripts, deliberated on the content, and agreed to the interpretations. The transcripts were cautiously and thoughtfully appraised to attain an inclusive logic of the contents of the study participants' reactions to asked questions.

Content analysis [32] was used for data analysis, initially there was reading through the transcripts several times followed by categorization of each item in a way that offered a meaningful description. The next step was to identify if themes were to be linked in anyway by listing them as major and minor themes. The major and minor themes were compared and contrasted again for possible marching. This step was followed by reviewing the themes in order to ensure that the information was well categorized as it ought to be in order to answer the research questions comprehensively. Finally, selective coding was done to come up with the results of the study. Excerpts from the study participants were applied to describe any emerging issues. To ensure trustworthiness of the collected data, individual checking was undertaken throughout the process of data collection to ensure that the researchers rightly deduced what the study participants stated in order to reduce unnecessary repetitions and monotonous statements made.

## **Ethical considerations**

The declaration of Helsinki recommendations in conducting research with human subjects were adhered to in the current study. The researchers obtained ethical approval from Jaramogi Oginga Odinga Ethical Review Committee (IERC/JOOTRH/209/20). The aim, scope and significance of the study was explained to all study participants. Also, the right of study participants to confidentiality and voluntarily withdraw from the study at any stage was assured. We sought informed consent from the study participants for the in-depth interviews and audio recording. All collected information including audio recordings and transcripts were securely stored and accessible only to the research team.

## **Results**

### **Participant characteristics**

A total of 29 new mothers aged between 18–34 years old participated in the study. Nearly 34% were between 25–29 years old with about 34% having college education. Among the participants, 68% were married. The majority of the participants (48%) had one child and 34% were from rural areas (Table 1).

Table 1  
Demographic characteristics of the respondents

<b>Code</b>	<b>Age</b>	<b>Education</b>	<b>Residency</b>	<b>Marital status</b>	<b>Employment</b>	<b>No of children</b>
RP1	18	Primary	Rural	Single	Formal	1
RP2	23	Secondary	Peri-urban	Married	Formal	1
RP3	25	College	Rural	Married	Formal	1
RP4	30	College	Peri-urban	Single	self employed	2
RP5	19	Secondary	Urban	Married	self employed	1
RP6	31	Primary	Rural	Married	self employed	2
RP7	26	Secondary	Urban	Married	self employed	1
RP8	20	college	Peri-urban	Single	Formal	1
RP9	27	College	Rural	Married	self employed	1
RP10	32	Primary	Urban	Single	self employed	3
RP11	30	College	Peri-urban	Married	self employed	4
RP12	21	Secondary	Rural	Married	Formal	1
RP13	28	Primary	Urban	Married	Housewife	2
RP14	33	Secondary	Peri-urban	Married	Housewife	3
RP15	31	Primary	Urban	Married	Formal	3
RP16	22	Primary	Rural	Single	self employed	1
RP17	34	Secondary	Urban	Married	self employed	1
RP18	29	College	Rural	Married	self employed	1
RP19	25	Primary	Peri-urban	Married	Formal	1
RP20	23	College	Rural	Single	Formal	1
RP21	30	Primary	Urban	Married	Housewife	3
RP22	26	Secondary	Peri-urban	Married	Self employed	1
RP23	31	College	Urban	Married	Formal	2
RP24	24	Secondary	Peri-urban	Single	Housewife	2
RP25	27	Secondary	Rural	Married	Formal	2
RP26	32	College	Urban	Single	Housewife	3
RP27	28	College	Peri-urban	Married	Housewife	2

Code	Age	Education	Residency	Marital status	Employment	No of children
RP28	24	College	Rural	Married	self employed	2
RP29	29	Primary	Peri-urban	Single	self employed	2

## Participant's perceptions and experience regarding the quality of maternal healthcare services in the public health facilities in Kenya.

The study participants were asked about their perceptions and experiences regarding the quality of maternal healthcare services they received at the public health facility during their previous pregnancy and if it contributed to tokophobia. The quality of care framework developed by the University of Southampton was customized in this study and the interview guide was developed based on it. All the interviewed women revealed that indeed there were challenges regarding the quality of maternal healthcare and two themes with eight sub-themes were identified (Table 2).

Table 2

Themes and sub-themes that hampered the provision of quality maternal healthcare services in public health facilities in Kenya

Themes	Sub-themes
1. Participant's perceptions and experience relating to provision of care	<ul style="list-style-type: none"> <li>i. Inadequacies related to human and physical resources</li> <li>ii. Inadequate referral systems</li> <li>iii. Challenges with internationally recognized best practices</li> <li>iv. Challenges in management of emergencies.</li> </ul>
2. Participant's perceptions and experience relating to actual experience of care	<ul style="list-style-type: none"> <li>i. Lack of enough human resources for health and inadequate investment in physical resources</li> <li>ii. Lack of cognition</li> <li>iii. Lack of respect, dignity and equity</li> <li>iv. Inadequate emotional support</li> </ul>

## Participant's perceptions and experience regarding the provision of quality maternal healthcare in public health facilities

In-depth questions were asked about the participant's perspectives and experiences regarding the provision of quality maternal healthcare services. From the collected data, 2 major themes emerged: 1) Participant's perceptions and experience relating to provision of care and 2) perceptions and experience relating to the actual experience of care. Further details of these two themes and their corresponding sub-themes are subsequently highlighted below.

# 1. Participant's perceptions and experience relating to provision of care.

The adopted quality of care framework identifies six elements related to provision of care namely: human and physical resources; the referral system; the appropriate use of available technologies; internationally recognized best practices; and management of emergencies. Although the interview guide had questions aligned to all the six elements, the responses from the study participants would conclusively elicit four elements (therein referred as sub-themes); namely: i) challenges with human and physical resources, ii) challenges relating with referral systems, iii) challenges with internationally recognized best practices, and iv) *challenges with management of emergencies*. The four sub-themes are explained below.

## i. human and physical resources

The study indicated that most participants experienced challenges with patient flow at the maternity wing of the hospital, inadequate staffing at the maternity wing, unclear signage and/ or organizational management structure of labor, delivery and postpartum sections of the hospital, general infrastructure of the hospital's maternity wing, and unclear/ less elaborate management structures.

Participants described their frustration on the manner in which the flow of patients was being handled. They noted that due to unclear patient flow, much time was wasted in finding their way within the hospital. This was commonly reported by women who were giving birth for the first time.

*"I did not clearly understand the patient flow...this was my first pregnancy". [RP22]*

*"During antenatal visits, the nurses should guide us on the flow of patients". [RP12]*

Participants identified staff shortages especially in maternity wings as a major challenge the health facility was struggling with.

*"The nurses were very few compared to the number of women delivering" [RP7].*

Participants reported that the hospital did not have clear signage written in the local language. Also, they noted that the direction to labor wards, delivery rooms and postpartum sections of the maternity wing was not labelled in the local languages, and this made it difficult for the first-time mothers to follow, more so those that were not able to read in English and Kiswahili.

*“There was no clear signage, I got lost at first but the hospital staff assisted me” [RP2]*

## **ii. Referral system**

Participants reported that there were challenges with time taken to be admitted, timely examination and referral of a woman presenting with birth complications. Four participants experienced a very slow admission procedure, which led to delayed referral to a more advanced hospital.

*“They are slow, I had complications, and my chances of surviving were low” [RP28].*

Also, there were reports of challenges with reliable transport on a 24-hour basis. Participants mentioned that due to rough terrains particularly in rural settings, it was challenging to get means of transport more so at night. Although the hospital was reported to be having a number of ambulances, it was mentioned that they were unreliable. They also mentioned that due to their low economic status, it was expensive hiring private taxis and more often than not, the taxis were not available in the villages.

*“Ambulances in the hospitals are unreliable, they do not respond on time,” [RP25].*

It was reported that although the hospital had a hotline phone numbers, they were unreliable.

*“I called and they said the ambulance had gone for another referral” [RP11].*

In regards to the availability of staff, essential drugs and equipment at the local health facilities to stabilize expectant women with complications before referral, the participants reported that the local health facilities such as dispensaries were not operating on a 24 hours basis.

*“Our dispensary is closed at night and during weekends” [RP20].*

## **iii. Internationally recognized best practices**

Allowing women to have social support of her own during labor and childbirth and assessment of women’s physical well-being throughout labor are among the globally recommended best practices. In this study participants reported that they were not allowed to be accompanied into labor and delivery wards by persons of their choice.

*“The hospital does not allow anyone to be accompanied by a relative or family member to labor wards and delivery rooms” [RP15]*

## **iv. Management of emergencies**

Two participants mentioned that they were aware of three of their relatives who had birth complications and had lost their lives as a result of late reporting to the health facility which led to delays in managing the emergency. Also, they mentioned that unsafe abortion were common but the local health facilities did not have the capacity to handle emergency abortions as they do not operate on a 24 hours basis.

*“There are women in our villages who have lost their lives due to unsafe abortions and other pregnancy complications because the hospital is far from rural areas” [RP13].*

## **2. Participant’s perceptions and experience relating to actual experience of care**

Based on the quality of care framework used for drafting the interview guide, the focus was on the Participant’s perceptions and experience related to their actual experience of care, namely: i) human and physical resources, ii) cognition, iii) respect, dignity and equity, and iv) emotional support. Participants noted a litany of challenges and inadequacies related to these factors. The challenges are discussed next.

### **i. Human and physical resources**

The in-depth interviews were aligned towards the physical infrastructure, overall maternity environment, and contact time with qualified healthcare workers, cultural norms regarding gender of midwives and the competence of healthcare workers to offer quality maternal services. Concerns were raised over the state of wards, more specifically the quality of beds and bedsheets, hospital meals, toilets and bathrooms.

*“There is a need to improve the quality of hospital linen and beds” [RP19]*

*“I wish they can improve the quality of meals they offer to inpatients” [RP14].*

Regarding contact time with qualified healthcare workers, the majority of the participants noted that the hospital was understaffed.

*“Only one doctor and about three nurses in the labor ward. We were seven” [RP10].*

Cultural norms regarding the gender of midwives assisting women during delivery was mentioned by all study participants. All participants preferred to be assisted by female midwives and doctors but lamented that the hospital had mostly male healthcare workers.

*“The hospital had only male nurses” [RP17].*

### **ii. Cognition**

In this study, participants noted that necessary information regarding their scheduled childbirth was not relayed effectively in a language they all understood. Equally, participants reported that they were not fully prepared for the childbirth process and they did not understand the existing options. Regarding postpartum care, the participants reported that they were not psychologically prepared for all possible outcomes of their pregnancy.

*“They only looked at my maternity card and told me to go to the labor ward” [RP8].*

*“Although I had questions, I wouldn’t ask because I was worried” [RP23].*

### iii. Respect, dignity and equity

In the current study, fear of hostile treatment from midwives and nursing staff was echoed by study participants during the in-depth interviews. Their explanation for why women avoid facility-based deliveries were met with agreement by many of the other study participants.

*“The nurses aren’t kind, compared to the traditional birth attendants” [RP18].*

*“Actually, most midwives do not treat women with dignity” [RP24].*

In contrast to their often-negative impressions of facility-based midwives, participants largely submitted that the care provided by traditional birth attendants was of compassion, humility and absolute psychosocial support. They stated that traditional birth attendants encouraged them during labor and assisted them with tenderness and compassion.

*“Traditional birth attendants will speak with you with kindness” [RP25]*

*“My experience was inspiring; the traditional birth attendant was empathetic” [RP3]*

It was reported that the effects of not attending all the required antenatal care clinics during pregnancy created anxiety and fear among some study participants. Similarly, other participants explained how they had heard stories from women delivering in health facilities that caused fear and anxiety. In some cases, study participants confessed that these fears discouraged many of their peers from going for health facility deliveries

*“There are stories of women being slapped at the hospital during labor” [RP26].*

*“I was not able to attend all antenatal visits; the nurse was very harsh on me” [RP1].*

Participants also stated that the health facility did not have a designated office responsible for assessing socioeconomic and cultural needs of the expectant women. Also, most of the study participants felt that they did not receive appropriate respect from the healthcare providers. Participants noted that cultural practices that do not interfere with quality of care such as being assisted to give birth by a female healthcare worker should be practiced.

Participants noted that not all expectant women were treated with the same standard of care. They said that those who were well known by the healthcare workers received better treatment than the ordinary women.

*“We were not treated equally, some received better treatment than others” [RP27].*

*“Some women were given special favors. This is common in public hospitals” [RP9].*

### iv. Emotional support

In the current study, participants were asked if: i) they were able to freely choose the social support they were comfortable with, ii) if they were treated with honesty, kindness and understanding, and iii) if the health staff were cognizant of their supportive role in the provision of care during labor, delivery and immediately postpartum period.

None of the participants reported having a companion of their choice during labor and delivery. The hospital was said to have strict protocols that would not allow such practices.

Participants reported that most midwives did not offer any physical, or emotional support during labor and childbirth, and this was largely as a result of understaffing.

*“The nurses were overwhelmed. We were seven and they were only three” [RP4].*

## Discussion

This study sheds light on important basics of maternity care from the perspective of actual users. In this study, participants voiced their concerns regarding the quality of maternal healthcare service offered in public health facilities and its contribution to tokophobia. Indeed, all the 29 study participants admitted experiencing challenges during labor and childbirth. These findings are consistent with the findings from Namibia which reported that expectant women had similar concerns regarding the quality of maternity care [33].

## Provision of care

Regarding the findings on the challenges on the provision of care, the study highlighted four sub-themes. Human resources for health comprise the quantity and quality of health and non-health personnel employed for providing and supporting the delivery of healthcare in the health facilities. It also includes staff arrangement, management styles, and internationally accepted staffing norms [34]. In the current study, there were concerns regarding understaffing, unclear signage, unclear organizational management structure of the maternity wing of the hospital and poor management of patient flow in the maternity. Similar challenges with human resources for health have been reported from studies conducted in other developing countries [35–37].

In regards to physical resources, there were inadequacies with hospital physical infrastructure, such as depilated state of the maternity and wards, poor quality of hospital beds and beddings, poor quality of hospital meals and general unhygienic hospital environment. There are similar studies that have shown infrastructural challenges that hampers better maternal health services [38, 39].

The current study highlighted a myriad of challenges emanating from erratic and unreliable referral systems from the lower level health facility to the referral hospital. There were also reports of inadequate ambulances, poor coordination of the existing ambulatory services and unreliable communication system. This finding is in tandem with a similar study carried out in Ghana which was looking at the

views of women, healthcare providers, public and quasi-private sector regarding maternal care shortcomings [40].

Regarding the internationally recognized best practices, the current study noted that currently there exist numerous procedures in maternal healthcare that have, through cautiously designed randomized controlled trials, been shown to be of value to the mothers and their infants. It was however reported that expectant women were not allowed to have social support of their own during labor and childbirth. The effects of social support during labor and childbirth has been reported to have a considerable impact on the new mothers which persist into the postpartum periods [41].

Studies have indicated that the leading causes of maternal mortalities globally include hemorrhages, sepsis, hypertensive disorder, unsafe abortions and obstructed labor. Our study noted that these equipment and drugs were not available in lower level facilities, and this finding agrees with similar studies that have identified substandard emergency obstetric care which contributes to maternal deaths [42].

## **Actual experience of care**

Whereas the quality of the provision of care in health facilities is essential in guaranteeing effective maternal healthcare, expectant women's actual experience of care is equally significant. If their overall experience at a health facility is such that it dissuades them from returning for a subsequent hospital childbirth, or leads to speculations to the same effect in the wider community, then the definite quality of healthcare provided is questionable.

The proportion of male to female healthcare workers was also a concern as the majority of the participants wished to be attended by female healthcare workers but the majority were male. The findings of this study agrees with similar studies that have reported challenges with the experience of care of expectant women regarding the state of infrastructure at the health facilities [43].

Cognition entails seamless communication between a patient and healthcare provider regarding both diagnosis and the determination of preferences for treatment. The relationship between these two parties should be depicted through empathy, privacy, discretion, informed choice, trustworthiness, discernment and compassion. In the current study, less than half of the study participants were explained by the healthcare workers in their local dialect. Majority of them noted that the nurses did not explain to them the diagnosis and procedures they underwent. Also, regarding postpartum care, the information was not conveyed to them, and this contributed to anxiety and depression, leading to preference to caesarean delivery. This result agrees with similar cognitive factors related to childbirth and their effects on women's delivery preference, that was taken in Tehran [44].

Respect, dignity and equity are fundamental principles and basic human rights that all expectant women should enjoy irrespective of the prevailing circumstances. Participants noted that the healthcare workers did not observe privacy during physical examinations, late labor and delivery, and according to them, this

was a violation of their rights. Similar studies have indicated that most women in public health facilities are not treated with dignity and respect as it ought to be [45–47].

According to study participants, cultural norms and practices that do not interfere with high quality care such as preference for female nurses to assist women during childbirth were denied. Our study is in agreement with a mixed-methods systematic review on the mistreatment of women during childbirth in health facilities globally [48].

Finally, the current study looked at the challenges with emotional support of expectant women during labor and childbirth. It was noted that women were not allowed to choose freely the social support they receive during labor and delivery. Also, there were reported instances where women were not treated with kindness, honesty and understanding. Although all healthcare workers working in maternity are supposed to undertake a supportive role in the provision of care during labor, childbirth and postpartum period, the in-depth interview revealed that a high percentage of women were not satisfied with the interpersonal care accorded to them by the healthcare workers. There is need for continued emotional support during labor and childbirth as it has been demonstrated in similar studies [49, 50]

## **Strengths, limitations and future research**

The study findings add to the existing literature regarding the quality of maternal healthcare services offered in public hospitals in Kenya. The author believes that a detailed description of the sample, meticulous data collection procedure, data coding, transcribing, and analysis exhibits the transparent nature of this study, which makes the findings significant and valuable. It is worth noting that research participants were open and articulate in their responses, and they were freely allowed to share their views and thoughts. On study limitations, it has been critiqued that in qualitative research, data collected generally lack randomization, and there is a possibility of bias when giving the interpretation. It is also argued that the sample size is relatively small. Finally, it should be noted that the interview guide used for in-depth interviews was widely supported by a broad review of the existing literature. Thus, the research outcomes could be beneficial to persons and organizations interested in increasing the uptake of health facility deliveries, especially in public health facilities.

## **Conclusion And Recommendations**

The presence of maternal health services doesn't warranty their usage. Healthcare management should critically analyze the intangible question of why the existing health facilities do not offer services that expectant women will accept without reservations. This can be achieved through a critical analysis of a number of definite yet integrated components of a framework for the evaluation of quality of care in maternity services which has been applied in this study. This framework will help in undertaking a brief yet comprehensive situation analysis of the quality of care as provided at the health facility and experienced by service users. This has been recommended as it touches ten important components of quality of care namely; human and physical resources, referral system, maternity information system, use of appropriate technologies, internationally recognized best practices and management of emergencies,

human and physical resources (as experienced by healthcare users), cognition, respect, dignity and equity, and emotional support. If all these items are critically appraised, the quality of care in public health facilities are likely to improve.

## List Of Abbreviations

FOC- Fear of childbirth

W-DEQ-A Wijma Delivery Experience Questionnaire (W-DEQ) version A

FAQC-Framework for Assessing the Quality of Care (FAQC)

R.P- Research Participant

## Declarations

### Ethics approval and consent to participate

Study protocols were submitted, reviewed, and approved by Jaramogi Oginga Odinga Ethical Review Committee (IERC/JOOTRH/209/20). Informed consent was sought from the study participants for the in-depth interviews and audio recording of the interviews.

### Consent for publication

All authors have read and approved the content, and agree to submit it for consideration for publication in your journal.

### Availability of data and materials

Datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

### Competing interests

The authors declare that they have no competing interests

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### Authors' contributions

**D.O:** Conceptualization, Methodology, Formal analysis, Investigation, Data curation, Writing - original draft, Visualization,

**V.M:** Conceptualization, Methodology, Investigation, Writing original draft.

**M.K:** Formal analysis, Investigation, Data curation,

**Á.V:** Conceptualization, Methodology, Review & editing.

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## References

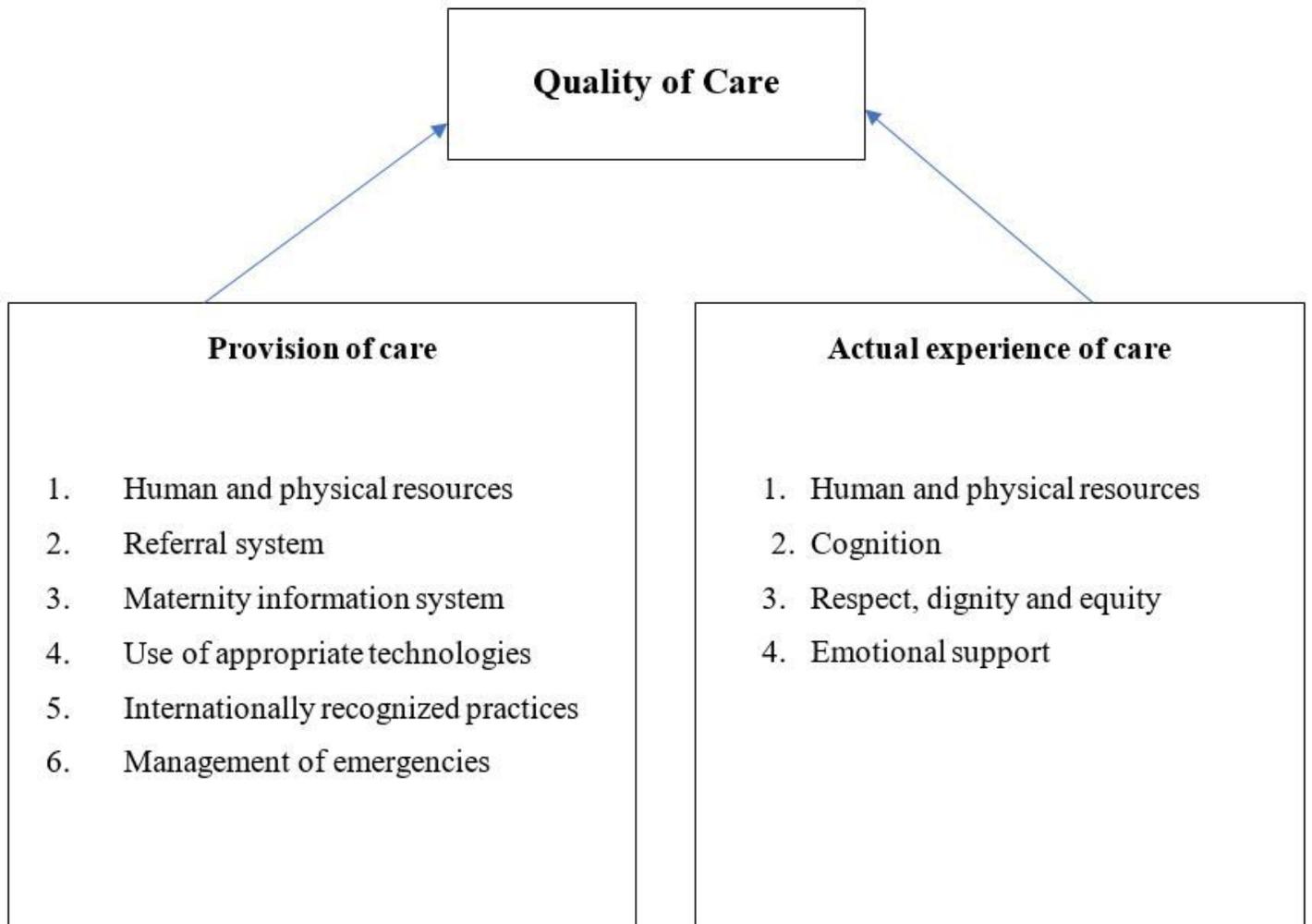
1. Areskog B, Kjessler B, Uddenberg N. Identification of women with significant fear of childbirth during late pregnancy. *Gynecol Obstet Invest* 1982;13:98–107. <https://doi.org/10.1159/000299490>.
2. Melender H-L. Experiences of fears associated with pregnancy and childbirth: a study of 329 pregnant women. *Birth* 2002;29:101–11.
3. Rouhe H, Salmela-Aro K, Toivanen R, Tokola M, Halmesmäki E, Saisto T. Obstetric outcome after intervention for severe fear of childbirth in nulliparous women - Randomised trial. *BJOG An Int J Obstet Gynaecol* 2013;120:75–84. <https://doi.org/10.1111/1471-0528.12011>.
4. Nieminen K, Andersson G, Wijma B, Ryding EL, Wijma K. Treatment of nulliparous women with severe fear of childbirth via the Internet: A feasibility study. *J Psychosom Obstet Gynecol* 2016;37:37–43. <https://doi.org/10.3109/0167482X.2016.1140143>.
5. Toohill J, Creedy DK, Gamble J, Fenwick J. A cross-sectional study to determine utility of childbirth fear screening in maternity practice – An Australian perspective. *Women and Birth* 2015;28:310–6. <https://doi.org/10.1016/j.wombi.2015.05.002>.
6. Laursen M, Hedegaard M, Johansen C. Fear of childbirth: predictors and temporal changes among nulliparous women in the Danish National Birth Cohort. *BJOG An Int J Obstet Gynaecol* 2008;115:354–60. <https://doi.org/10.1111/j.1471-0528.2007.01583.x>.
7. Nilsson C, Hessman E, Sjöblom H, Dencker A, Jangsten E, Mollberg M, et al. Definitions, measurements and prevalence of fear of childbirth: a systematic review. *BMC Pregnancy Childbirth* 2018;18:28. <https://doi.org/10.1186/s12884-018-1659-7>.
8. MoghaddamHosseini V, Makai A, Varga K, Ács P, Prémusz V, Várnagy Á. Assessing fear of childbirth and its predictors among Hungarian pregnant women using Wijma Delivery Expectancy/Experience Questionnaire subscales. *Psychol Health Med* 2019;24:879–89. <https://doi.org/10.1080/13548506.2019.1572904>.
9. Peeler S, Stedmon J, Chung MC, Skirton H. Women's experiences of living with postnatal PTSD. *Midwifery* 2018;56:70–8. <https://doi.org/10.1016/j.midw.2017.09.019>.
10. Osborne LM, Monk C. Perinatal depression—the fourth inflammatory morbidity of pregnancy?: Theory and literature review. *Psychoneuroendocrinology* 2013;38:1929–52. <https://doi.org/10.1016/j.psyneuen.2013.03.019>.

11. Onchonga D, MoghaddamHosseini V, Keraka M, Várnagy Á. Prevalence of fear of childbirth in a sample of gravida women in Kenya. *Sex Reprod Healthc* 2020;24:100510. <https://doi.org/10.1016/j.srhc.2020.100510>.
12. Moghaddam Hosseini V, Nazarzadeh M, Jahanfar S. Interventions for reducing fear of childbirth: A systematic review and meta-analysis of clinical trials. *Women and Birth* 2018;31:254–62. <https://doi.org/10.1016/j.wombi.2017.10.007>.
13. Saigal S, Lancet LD-T, 2008 U. An overview of mortality and sequelae of preterm birth from infancy to adulthood. Elsevier 2008.
14. Glynn LM, Schetter CD, Hobel CJ, Sandman CA. Pattern of perceived stress and anxiety in pregnancy predicts preterm birth. *Health Psychol* 2008;27:43–51. <https://doi.org/10.1037/0278-6133.27.1.43>.
15. Hall WA, Stoll K, Hutton EK, Brown H. A prospective study of effects of psychological factors and sleep on obstetric interventions, mode of birth, and neonatal outcomes among low-risk British Columbian women. *BMC Pregnancy Childbirth* 2012;12:78. <https://doi.org/10.1186/1471-2393-12-78>.
16. Saunders TA, Lobel M, Veloso C, Meyer BA. Prenatal maternal stress is associated with delivery analgesia and unplanned cesareans. *J Psychosom Obstet Gynecol* 2006;27:141–6. <https://doi.org/10.1080/01674820500420637>.
17. Adams SS, Eberhard-Gran M, Eskild A. Fear of childbirth and duration of labour: a study of 2206 women with intended vaginal delivery. *Br J Obstet Gynaecol* 2012;119:1238–46. <https://doi.org/10.1111/j.1471-0528.2012.03433.x>.
18. Sydsjö G, Sydsjö A, Gunnervik C, Bladh M, Josefsson A. Obstetric outcome for women who received individualized treatment for fear of childbirth during pregnancy. *Acta Obstet Gynecol Scand* 2012;91:44–9. <https://doi.org/10.1111/j.1600-0412.2011.01242.x>.
19. Geller S, Koch A. A global view of severe maternal morbidity: moving beyond maternal mortality. *Reprod ...* 2018.
20. Stanton MEM, Kwast BEB, Shaver T, McCallon B, Koblinsky M. Beyond the safe motherhood initiative: Accelerated action urgently needed to end preventable maternal mortality. *GhspjournalOrg* 2018;6:408–12. <https://doi.org/10.9745/GHSP-D-18-00100>.
21. UNICEF. Despite accelerated recent progress, millions of births occur annually without any assistance from a skilled attendant at birth. *Unicef Data* 2018. <https://data.unicef.org/topic/maternal-health/delivery-care/> (accessed July 8, 2019).
22. UN G Assembly. sustainable Development goals. *IgbpNet* 2015.
23. Robert KW, Parris TM, Leiserowitz AA. What is Sustainable Development? Goals, Indicators, Values, and Practice. *Environ Sci Policy Sustain Dev* 2005;47:8–21. <https://doi.org/10.1080/00139157.2005.10524444>.
24. Le Blanc D. Towards Integration at Last? The Sustainable Development Goals as a Network of Targets. *Sustain Dev* 2015;23:176–87. <https://doi.org/10.1002/sd.1582>.

25. Stanton M, Kwast B, Shaver T. Beyond the safe motherhood initiative: Accelerated action urgently needed to end preventable maternal mortality. *GhspjournalOrg* 2018.
26. Onchonga D, Várnagy Á, Keraka M, Wainaina P. Midwife-led integrated pre-birth training and its impact on the fear of childbirth. A qualitative interview study. *Sex Reprod Healthc* 2020;25:100512. <https://doi.org/10.1016/j.srhc.2020.100512>.
27. Onchonga D. Prenatal fear of childbirth among pregnant women and their spouses in Kenya. *Sex Reprod Healthc* 2021:100593. <https://doi.org/10.1016/j.srhc.2020.100593>.
28. Redshaw M. Women as consumers of maternity care: Measuring “satisfaction” or “dissatisfaction”? *Birth* 2008;35:73–6. <https://doi.org/10.1111/j.1523-536X.2007.00215.x>.
29. Hulton LA, Matthews Z, Stones W. A framework for the evaluation of quality of care in maternity services. 2000.
30. Wijma K, Wijma B, Zar M. Psychometric aspects of the W-DEQ; a new questionnaire for the measurement of fear of childbirth 1998;19:84–97. <https://doi.org/10.3109/01674829809048501>.
31. Srivastava P, Hopwood N. A Practical Iterative Framework for Qualitative Data Analysis. *Int J Qual Methods* 2009;8:76–84. <https://doi.org/10.1177/160940690900800107>.
32. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006;3:77–101. <https://doi.org/10.1191/1478088706qp063oa>.
33. Diamond-Smith N, Sudhinaraset M, Montagu D. Clinical and perceived quality of care for maternal, neonatal and antenatal care in Kenya and Namibia: The service provision assessment. *Reprod Health* 2016;13. <https://doi.org/10.1186/s12978-016-0208-y>.
34. De Geyndt W. *Managing the Quality of Health Care in Developing Countries*. The World Bank; 1995. <https://doi.org/10.1596/0-8213-3092-6>.
35. Salami B, Dada FO, Adalakun FE. Human Resources for Health Challenges in Nigeria and Nurse Migration. *Policy, Polit Nurs Pract* 2016;17:76–84. <https://doi.org/10.1177/1527154416656942>.
36. Mathauer I, Imhoff I. Health worker motivation in Africa: The role of non-financial incentives and human resource management tools. *Hum Resour Health* 2006;4. <https://doi.org/10.1186/1478-4491-4-24>.
37. Pagano A, Tajima B, Guydish J. Barriers and facilitators to tobacco cessation in a nationwide sample of addiction treatment programs. *J Subst Abuse Treat* 2016;67:22–9. <https://doi.org/10.1016/j.jsat.2016.04.004>.
38. Essendi H, Johnson FA, Madise N, Matthews Z, Falkingham J, Bahaj AS, et al. Infrastructural challenges to better health in maternity facilities in rural Kenya: Community and healthworker perceptions. *Reprod Health* 2015;12. <https://doi.org/10.1186/s12978-015-0078-8>.
39. Bhattacharyya S, Issac A, Rajbangshi P, Srivastava A, Avan BI. “Neither we are satisfied nor they”- users and provider’s perspective: A qualitative study of maternity care in secondary level public health facilities, Uttar Pradesh, India. *BMC Health Serv Res* 2015;15. <https://doi.org/10.1186/s12913-015-1077-8>.

40. Ayanore MA, Pavlova M, Biesma R, Groot W. Stakeholders' views on maternity care shortcomings in rural Ghana: An ethnographic study among women, providers, public, and quasiprivate policy sector actors. *Int J Health Plann Manage* 2018;33:e105–18. <https://doi.org/10.1002/hpm.2411>.
41. Trotter C, Wolman W-L, Hofmeyr J, Nikodem C, Turton R. The Effect of Social Support during Labour on Postpartum Depression. *South African J Psychol* 1992;22:134–9. <https://doi.org/10.1177/008124639202200304>.
42. Sorensen BL, Elsass P, Nielsen BB, Massawe S, Nyakina J, Rasch V. Substandard emergency obstetric care - a confidential enquiry into maternal deaths at a regional hospital in Tanzania. *Trop Med Int Heal* 2010;15:894–900. <https://doi.org/10.1111/j.1365-3156.2010.02554.x>.
43. Srivastava A, Avan BI, Rajbangshi P, Bhattacharyya S. Determinants of women's satisfaction with maternal health care: A review of literature from developing countries. *BMC Pregnancy Childbirth* 2015;15:1–12. <https://doi.org/10.1186/s12884-015-0525-0>.
44. ChoobMasjedi S., Hasani J, Khorsandi M, Ghobadzadeh M. Cognitive factors related to childbirth and their effect on women's delivery preference: a comparison between a private and public hospital in Tehran. *East Mediterr Heal Journal*, 2012;18:1127–33. [https://doi.org/http://applications.emro.who.int/emhj/v18/11/EMHJ\\_2012\\_18\\_11\\_1127\\_1133.pdf](https://doi.org/http://applications.emro.who.int/emhj/v18/11/EMHJ_2012_18_11_1127_1133.pdf).
45. Bowser D, Project K. Exploring evidence for disrespect and abuse in facility-based childbirth. *GhdonlineOrg* 2010.
46. Warren CE, Njue R, Ndwiga C, Abuya T. Manifestations and drivers of mistreatment of women during childbirth in Kenya: Implications for measurement and developing interventions. *BMC Pregnancy Childbirth* 2017;17:1–14. <https://doi.org/10.1186/s12884-017-1288-6>.
47. Betron ML, McClair TL, Currie S, Banerjee J. Expanding the agenda for addressing mistreatment in maternity care: a mapping review and gender analysis. *Reprod Health* 2018;15:143. <https://doi.org/10.1186/s12978-018-0584-6>.
48. Bohren MA, Vogel JP, Hunter EC, Lutsiv O, Makh SK, Souza JP, et al. The Mistreatment of Women during Childbirth in Health Facilities Globally: A Mixed-Methods Systematic Review. *PLOS Med* 2015;12:e1001847. <https://doi.org/10.1371/journal.pmed.1001847>.
49. Alexander A, Mustafa A, Emil SAV, Amekah E, Engmann C, Adanu R, et al. Social support during delivery in Rural Central Ghana: A mixed methods study of women's preferences for and against inclusion of a lay companion in the delivery room. *J Biosoc Sci* 2014;46:669–85. <https://doi.org/10.1017/S0021932013000412>.
50. Kennell J, Klaus M, Mcgrath S, Robertson S, Hinkley C. Continuous Emotional Support During Labor in a US Hospital: A Randomized Controlled Trial. *JAMA J Am Med Assoc* 1991;265:2197–201. <https://doi.org/10.1001/jama.1991.03460170051032>.

## Figures



**Figure 1**

The Framework for the Evaluation of Quality of Care (FEQC) in maternity services. Developed by the University of Southampton.