

Women's Satisfaction on Maternal Healthcare Services in Public Health Facilities: A Case of Meta Maternity Hospital

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Abstract**Background**

Satisfaction with healthcare services serves as a key measure of quality in healthcare systems. Although the Ministry of Health in Tanzania has introduced attentive and respectful health service, the satisfaction levels among pregnant women with delivery services at public hospitals remain inadequately addressed.

Study objective

To analyze women's satisfaction with maternal healthcare services at Meta Maternity Hospital in Tanzania and identifies factors influencing their satisfaction.

Methodology

A hospital-based cross-sectional study design was employed, targeting pregnant women attending Meta Maternity Hospital in the Mbeya region from September 2022 to March 2023. Data were collected through a pre-tested structured questionnaire to gather information about socio-demographic characteristics and their level of satisfaction with the cleanliness of the health facility. Bivariate and multivariate analyses were conducted using binary logistic regression to identify factors associated with a high level of satisfaction.

Results

All participants were satisfied with the healthcare facility's cleanliness, with 66.9% being delighted and others somewhat satisfied. Satisfaction varied significantly with the number of maternal visits, with those having 8-12 visits reporting the highest levels of satisfaction. Satisfaction with provider behavior was higher for the language used by healthcare providers (47.7%) compared to other behaviors. Women with 4–8 maternal visits were 0.4 times (95% CI = 0.203–0.692) and those with 8–12 visits were 0.3 times (95% CI = 0.194–0.586) as likely to be very satisfied with the cleanliness of the healthcare facility compared to those with 1–4 visits.

Conclusion and recommendation

Pregnant women at Meta Maternity Hospital in Tanzania are generally satisfied with the cleanliness of healthcare facilities and provider behavior, especially the language used. However, more maternal visits are associated with lower satisfaction with cleanliness, suggesting a complex relationship where increased visits do not necessarily lead to higher satisfaction. While maintaining the current standards of cleanliness and provider behavior, Meta Maternity Hospital should investigate and address specific factors contributing to lower satisfaction with cleanliness among women with frequent maternal visits to improve overall satisfaction.

Keywords: *Women's satisfaction, Maternal, Healthcare, Hospital, Tanzania.*

Introduction

Patient satisfaction is a standard indicator used to measure the quality of healthcare received from healthcare providers. Good healthcare services can encourage women to attend health facilities as patient satisfaction is personal judgment towards quality of service and care. Moreover, women's satisfaction with maternal health care is measured by what they received about what they were expected to receive(1). To increase the quality of maternal healthcare services, they should be planned and structured first by women's recommendations rather than by ordinary consumers who plan from the beginning regarding healthcare safety.

Being patient-focused is essential in developed countries because it plays a critical role in healthcare delivery and the standard of care reforms put in place. According to several studies, contented patients are more likely to remain loyal to their doctors and develop strong bonds with the healthcare system, ultimately resulting in better services and considering client feedback from healthcare facilities is essential because it helps to improve the quality of the care provided, the provider's efficacy and efficiency, and overall patient happiness (2).

Patients' satisfaction has been minimal in most developing nations despite numerous research documents on how high-quality treatment can be provided. To guarantee the sustainability of their services, healthcare facilities in Africa must put the patient's needs first and concentrate on service marketing. Patient happiness in healthcare in Africa depends heavily on maintaining high standards and enhancing service quality(3). Numerous studies in Africa have used customer happiness assessments, but it is largely unknown what exactly makes patients happy.

In Kenya designed a facility-based assessment to assess satisfaction of maternal healthcare services under the output-based approach (OBA) services (4). The initiative targets mothers who are economically underprivileged and reside in the informal settlements of Korogocho and Viwandani in the county of Nairobi, as well as those who reside in Kisumu, Kitui, Kiambu, and Kilifi. The research only looked at the postnatal aspect of care; it made no mention of problems with quality. Study conducted in Ghana examines the satisfaction rates for the various outcomes specified and finds the significant demographic and health system-related factors linked to women's satisfaction(5). To evaluate the standard of maternal care and identify problematic areas that could be improved, it is crucial to comprehend the experiences and demands of women throughout the continuum of antenatal, perinatal, and postnatal care. Moreover, examine how women perceive the standard of maternal health treatment in Malawi (6). They conducted focus groups in six medical facilities across Malawi that were chosen for the study. They discovered that inconsistent access to medical resources and unethical behavior among health professionals had a negative impact on the delivery of quality maternal

healthcare services. They concluded that if women's health outcomes are to improve in Malawi, costly routine operational audits of medical resources and service delivery across health facilities are essential. A previous study has reported that the goal of measuring satisfaction is to comprehend how patients react to medical services, evaluate the standard of treatment they receive, and spot intervention-needed problem areas (7). Therefore, this study aimed to gauge women's satisfaction with maternal healthcare.

It was highlighted that the most significant factor influencing service utilization and service return behaviors is women's satisfaction with maternal health services (8). In a previous study on quality of antenatal and childbirth care in selected rural facilities in Africa explained the baseline assessment in their study (9). The goal was to evaluate the general standard of routine antenatal and postpartum treatment and pinpoint areas needing improvement. Additionally, they concentrated on essential healthcare-level detection, prevention, and management. Another study cited presence of disrespectful and abusive treatment during maternal facility visits (10). There are no accurate estimates of the frequency of disrespectful and abusive treatment in healthcare facilities; even though their research has brought attention to the degrading treatment of women during labor and delivery, they calculated the proportion of recorded violent incidents during maternal health services. According to the research, women who gave birth at home were less pleased with the process than those who did so in a medical facility. No matter where they gave birth, women awarded home deliveries a lower rating for medical skills than they did for the skills of doctors and nurses. It has been discovered that client happiness is a critical element in determining whether and how frequently family planning services are used.

In Tanzania, where there is a significant unmet need for family planning, their research examined the present state of and factors associated with client satisfaction with family planning services (11). The relationship between care experiences and satisfaction is inextricably linked because care experiences can directly or indirectly affect satisfaction and user expectations and ideals. To track and enhance quality, evaluating both satisfaction and experiences with care is critical. Women are mistreated during childbirth in institutions worldwide, but research on this topic and how satisfied women are with their care is scarce (12). Quality prenatal care is a crucial foundational element of reproductive health care and offers pregnant women a significant chance for various interventions. Maternal happiness with care must be evaluated to improve it and make it more culturally and linguistically appropriate, increasing its uptake and producing better results. Governments in developing countries must handle maternal satisfaction and its determinants at a time when efforts to decrease maternal mortality have been intensified on a global scale. In the majority of studies, women rate their

satisfaction as being high; this could be due to a lack of knowledge and exposure in developing country settings that tend to have low literacy rates. However, more investigation into maternal satisfaction scores is necessary.

Methodology

Study setting and design

This research used recently delivered mothers in a cross-sectional design with descriptive characteristics. One of the biggest maternity hospitals in the southern highlands regions, Mbeya zonal referral hospital (MZRH), which is a part of Mbeya Urban, is where the research was carried out. The study site has approximately 500 birth per month. The hospital has four labor rooms where women can stay for one to two hours following delivery before being moved to the postnatal room, which has eighty beds. If there are no complications after vaginal delivery, women are discharged within 24 hours; if a cesarean section is required, they are discharged within 2 to 3 days.

Women receive continuous midwifery support but are not always cared for by the same midwife throughout the entire labor. The midwives working in the labor ward provide one-to-one midwifery care from the active phase of labor until the conclusion of the third stage of labor. The women in our study who were in active labor got individual midwifery care throughout their labors. This midwife was unknown to them and could change as schedules changed. Additionally, they had assistance from one birth companion of their choosing, typically their spouse.

On the after-childbirth ward, the nurses look after the neonates who stay with their mothers or in the nursery, while the midwives care for the postnatal women. Until release, the midwives evaluate the woman's overall physical health, mood, postpartum uterine involution, vaginal blood loss/lochia, perineum, and breast changes. The midwives will advise and assist the mother if she has any nursing problems.

Study population

A hospital-based cross-sectional study design was employed, targeting pregnant women attending Meta Maternity Hospital in the Mbeya region from September 2022 to March 2023. The pregnant women aged 18 years and above who were willing to participate were included in the study. Women unable to communicate due to serious illness or impaired cognition during the data collection period were excluded from the study.

Sample size

The sample size was calculated using the formula for estimation of a single proportion:

$$n = \frac{Z^2 P(100-P)}{\varepsilon^2}$$

Where, n = Minimum sample size, Z = Standard normal deviation of 1.96 for confidence level of 95%, p = Expected proportion of 50% and ε = Margin of error (the precision) of 5%. Calculated sample size was 384 pregnant women. Assuming a 5% non-response, the resulted sample size was 405 pregnant women.

Sampling

The sampling was conducted using a consecutive sampling method. In this approach, every pregnant woman attending the clinic during the study period was selected to participate until the desired sample size was achieved. This method ensured that all eligible women had an equal opportunity to be included in the study.

Study Variables

Satisfaction with the cleanliness of the healthcare facility was the dependent variable, measured using a 5-item, 5-point Likert scale ranging from very satisfied to very dissatisfied. For each participant, a median satisfaction score was calculated to determine the overall satisfaction level, categorized as follows: 1 (very satisfied), 2 (somewhat satisfied), 3 (neither satisfied nor dissatisfied), 4 (somewhat dissatisfied), and 5 (very dissatisfied). The Independent variables included sociodemographic factors (education level, age range, household income and number of maternal visits).

Data Collection and Analysis

Data were collected through a structured questionnaire consisting of two parts. The first part gathered socio-demographic information about the respondents, while the second part focused on their satisfaction levels. Before distributing the questionnaires, only a small number of the respondents were tested; this pre-testing was carried out to guarantee the reliability and accuracy of the data gathered. It was also used to estimate the length of the conversation. After pre-testing, the required corrections were made.

The researcher, along with an obstetrician as the co-researcher, informed pregnant women about the study, invited them to participate, and obtained their signed consent before enrolling them in the research. At the end of each day, structured questionnaires were checked for

completeness and accuracy. The data was then coded, entered into SPSS (version 22.0), and cleaned for inconsistencies.

Socio-demographic characteristics and satisfaction levels were summarized as frequencies and proportions, and presented in tables and charts. Pearson's chi-square tests compared proportions between groups. Crude odds ratios (cOR) were estimated using bivariate logistic regression to identify factors associated with high satisfaction. Factors with a P-value < 0.2 and biologically plausible factors were included in the multivariate logistic regression model. Adjusted odds ratios (aOR) were calculated using the enter method to determine independent associations, with significance set at $P < 0.05$.

Ethical permission

The Mbeya Medical Research and Ethics Review Committee gave the research its ethical seal of approval with reference number: Ref No: SZEC-2439/R.A/V.1/145a. Before taking part in the research, each interviewee signed a written informed consent form, and they were free to stop at any point if they felt it was necessary. Throughout the research, confidentiality was maintained.

Results

Socio-demographic characteristics of the study participants

The majority of the participants were aged 18 - 45 years (79%), with primary or secondary education level (54.1%), with household income ranging from Tanzania shillings 250,000-400,000, and with 8-12 maternal visits (Table 1).

Table 1: Socio-demographic characteristics (n=405)

| Variable | Category | n (%) |
|---------------------------|---------------------|------------|
| Education level | University | 186 (45.9) |
| | Primary / Secondary | 219 (54.1) |
| Age range | 18-45 | 320 (79.0) |
| | 46-55 | 85 (21.0) |
| Household income | 50,000 - 250,000 | 74 (18.3) |
| | 250,000 - 400,000 | 208 (51.4) |
| | Above 400,000 | 123 (30.4) |
| Number of maternal visits | 1 – 4 | 71 (17.5) |
| | 4 – 8 | 116 (28.6) |
| | 8 – 12 | 218 (53.8) |

Satisfaction status stratified by socio-demographic characteristics

Participants were delighted with the cleanliness of the healthcare facility (median=1), with the level of satisfaction varying from delighted 271 (66.9%) to somewhat satisfied. The proportion of delighted women varied significantly by the number of visits ($P < 0.001$), with 8 - 12 maternal visits being very satisfied with the cleanliness, as shown in Table 2.

Table 2: Proportion of delighted women across socio-demographic variables (n=405)

| Variable | Category | N (%) | P-value* |
|---------------------------|---------------------|------------|----------|
| Education level | University | 122 (65.6) | 0.602 |
| | Primary / Secondary | 149 (68.0) | |
| Age range | 18-45 | 214 (66.9) | 0.974 |
| | 46-55 | 57 (67.1) | |
| Household income | 50,000-250,000 | 51 (68.9) | 0.476 |
| | 250,00-400,000 | 143 (68.8) | |
| | Above 400,000 | 77 (62.6) | |
| Number of maternal visits | 1 – 4 | 33 (46.5) | 0.000 |
| | 4 – 8 | 81 (69.8) | |
| | 8 – 12 | 157 (72.0) | |

*P-value of Pearson Chi-square (χ^2) test

Satisfaction with the behavior of the healthcare provider

Most women were satisfied with the language used by healthcare providers (47.7%), and only a few (4.7%) were satisfied with the availability of healthcare providers in the office, as indicated in Figure 1.

Factors associated with a high level of satisfaction

In bivariate logistic regression analysis, the number of maternal visits was significantly associated with a high level of satisfaction with the cleanliness of the healthcare facility. In multivariate logistic regression analysis, the number of maternal visits remained associated with high satisfaction. Indeed, compared to those with 1 - 4 maternal visits, women with 4 – 8 and 8 – 12 maternal visits had 0.4 times (95% CI = 0.203 - 0.692) and 0.3 times (95% CI = 0.194 - 0.586) less likely to be very satisfied with the cleanliness of healthcare facility respectively (Table 3).

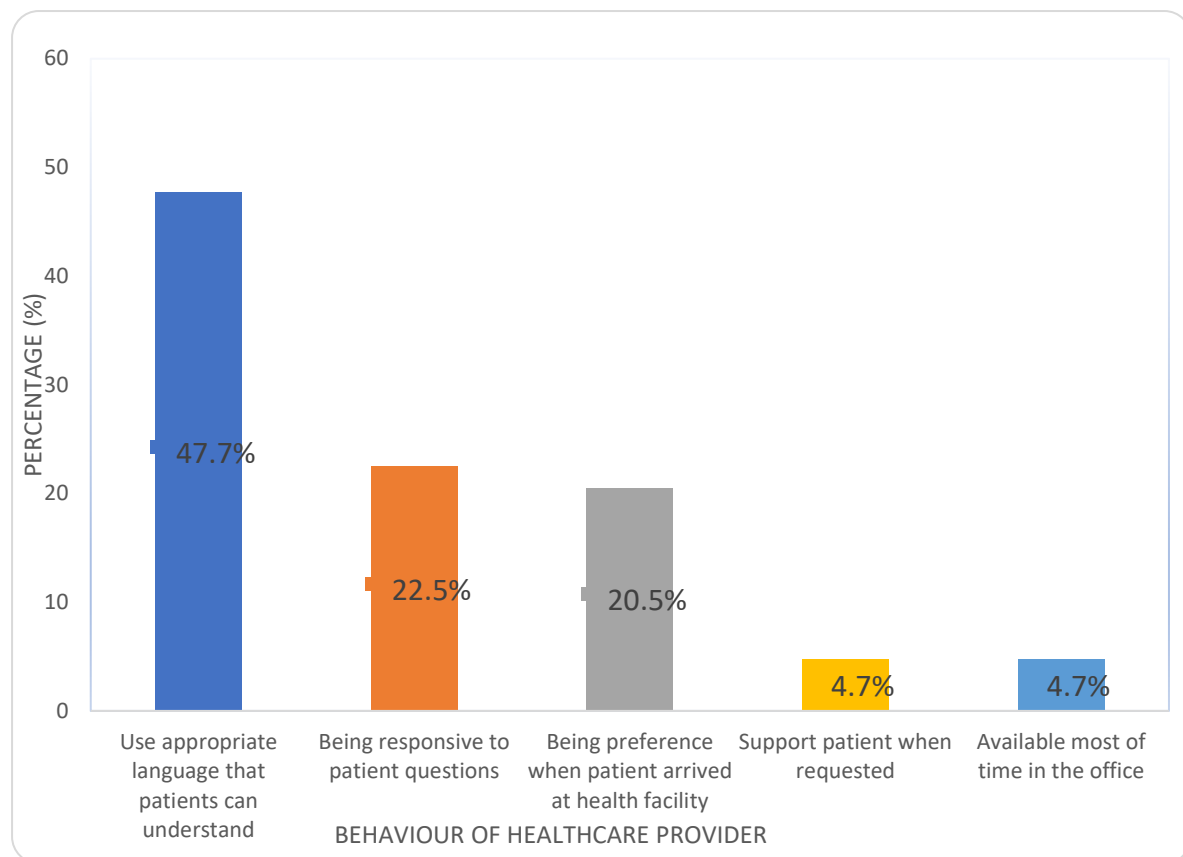


Figure 1. Satisfaction with the behavior of healthcare provider

Table 3: Logistic regression analysis of satisfaction status and associated factors (n=405)

| Variable | Category | cOR (95% CI) | P-value | aOR (95% CI) | P-value |
|---------------------------|---------------------|-----------------------|---------|----------------------|---------|
| Education level | University | 1.117 (0.737 - 1.691) | 0.602 | 1 | |
| | Primary / Secondary | 1 | | | |
| Age range | 18-45 | 1.008 (0.606 - 1.677) | 0.974 | 1.297 (0.750-2.241) | 0.352 |
| | 46-55 | 1 | | | |
| Household income | 50,000-250,000 | 0.755 (0.409 - 1.393) | 0.369 | 1 | |
| | 250,00-400,000 | 0.761 (0.476 - 1.215) | | | |
| | Above 400,000 | 1 | | | |
| Number of maternal visits | 1 – 4 | 1 | 0.002 | 0.345(0.182 - 0.654) | 0.001* |
| | 4 – 8 | 0.375 (0.203 - 0.692) | | | |
| | 8 – 12 | 0.337 (0.194 - 0.586) | | | |

*Significant factors with p-value < 0.05, aOR = Adjusted Odds Ratio, cOR = Crude Odds Ratio.

Discussion

The present study analyzed women's satisfaction with maternal healthcare services at Meta Maternity Hospital in Tanzania and identified the factors influencing their satisfaction. The findings shed light on various aspects of women's satisfaction, including cleanliness and other dimensions of care.

Most of the participants in this study were women aged 18-45 years, which aligns with the reproductive age group(13) . It also indicates that the study included a representative sample of women who would use maternal healthcare services. Furthermore, the study included participants with diverse educational backgrounds, with roughly equal proportions having either primary/secondary education or university education. It demonstrates a comprehensive sample of educational backgrounds, which is essential for understanding how education may influence satisfaction with healthcare services. Regarding household income, the study revealed that most participants fell within the middle-income range of 250,000-400,000 Tanzanian shillings. Therefore, the sample includes diverse socioeconomic origins, which is critical for capturing the numerous elements influencing women's satisfaction. By including women from different income levels, the study can provide insights into potential disparities in satisfaction and identify areas where improvements are needed. Besides, similar to previous findings, there was no significant association between social demographic factors (education level, age range, and household income) and maternal healthcare services satisfaction (14). It indicates that these criteria may be insignificant predictors of satisfaction with the cleanliness of Tanzanian maternity healthcare facilities. It is worth noting that most women expressed satisfaction with the cleanliness of the healthcare facility, with a significant proportion (66.9%) reporting being very satisfied. This finding aligns with previous research emphasizing the importance of cleanliness in healthcare settings to ensure patient satisfaction (15). It suggests that maintaining clean and hygienic environments within a facility is positively perceived by people and may contribute to overall satisfaction with maternal healthcare services in public health facilities (16,17).

One notable finding is the significant association between the number of maternal visits and women's satisfaction with the cleanliness of the healthcare facility. Women who had 8-12 maternal visits were likelier to report being very satisfied with the cleanliness than those with fewer visits. This finding suggests that increased exposure to the healthcare facility allows patients to become more familiar with the healthcare services, including cleanliness standards, which, in turn, positively influences their satisfaction levels (18). It highlights the importance of continuity of care and the need for regular interactions with the healthcare system to develop a sense of trust and comfort.

Additionally, the findings of this study show that less than 50% of women were satisfied with the language used by healthcare providers during their maternal healthcare visits. Previous studies associated dissatisfaction with the language used by healthcare providers and poor utilization of maternal healthcare services in public hospitals (19). Our findings indicate that ineffective communication between healthcare providers and women contributes to their satisfaction with the services received. Studies emphasize the significance of clear and respectful communication in enhancing women's satisfaction with maternal healthcare services (19,20). Effective communication helps women understand the information provided by healthcare providers and contributes to a more positive healthcare experience overall.

However, despite the high satisfaction with cleanliness, there were areas of dissatisfaction in other aspects of care, such as provider availability, responsiveness, and patient preferences, which are other strong drivers of overall patient satisfaction (21). For instance, only a tiny percentage of women reported satisfaction with the availability of healthcare providers in the office and receiving support when requested. It further indicates that while cleanliness and language use increase women's satisfaction with maternity healthcare services, areas still need improvement to improve overall satisfaction. The current finding highlights potential gaps in the accessibility and responsiveness of healthcare providers. Similarly, a relatively low proportion of women expressed satisfaction with health workers being responsive to patient questions and preferences upon arrival at the health facility. Similar studies have underscored the importance of effective communication, accessibility, and patient-centered care in influencing women's satisfaction with maternal healthcare services(14,19)

Conclusion and recommendations

In conclusion, the study indicates that overall satisfaction with the healthcare facility's cleanliness is high, with 66.9% of participants being delighted while others were somewhat satisfied. Participants who made 8-12 visits reported the highest levels of satisfaction, while those with fewer visits (1-4) were less satisfied. Additionally, satisfaction with provider behavior was notably higher when the language used by healthcare providers was considered. However, women with 4–8 maternal visits were 0.4 times, and those with 8–12 visits were 0.3 times, as likely to be very satisfied with the cleanliness compared to those with only 1–4 visits. This suggests that increased interaction with the facility do not necessarily lead to higher satisfaction with cleanliness.

Findings of this study are based on a single case from Meta Maternity Hospital, which limits their generalizability due to the lack of participant diversity. Additionally, the research focuses on cleanliness and provider behavior but neglects other factors such as wait times, service

accessibility, and the quality of medical care. Future studies should include larger, more diverse samples and examine a broader range of factors to gain a better understanding of satisfaction.

Declarations**Authors' contributions**

GK conceived the study, participated in its design, collected data, and drafted the manuscript. AM participated in the design, served as the overall supervisor of the research, and assisted in drafting the manuscript. DM, BR, and RM contributed to the study design and data analysis and supported writing of the manuscript. All authors read and approved the final manuscript.

Competing interests

The authors have declared that no competing interests exist.

Funding

This study was funded by Mbeya University of Science and Technology.

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