Assessing Client Satisfaction with Maternal Health Delivery Services at Tamale West Hospital, Ghana: A Cross-Sectional Study

Ismail Yussif[1], Kamal Dawuda[2], Zeinab Abdul Mumin[3]

[1]Institute of Governance, Humanities and Social Sciences, Pan African University, Soa-Yaoundé, Cameroon

[2]Department of Secretaryship and Management Studies, Tamale Technical University, Ghana

[3]Department of Population and Reproductive Health, University for Development Studies, Ghana

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ABSTRACT

Client satisfaction is generally considered to be one of the main factors that reflect the quality of healthcare provision, as well as a main factor that determines the use of maternal healthcare services. Concerns over the quality and responsiveness of maternal health services continue to be raised in a large number of health facilities in Ghana despite efforts to improve maternal health outcomes in the country. Assessing client satisfaction not only shows how well service delivery is working but also points out areas where improvements are needed. This research work evaluates client satisfaction with maternal health services at Tamale West Hospital in the Northern Region of Ghana. A facility-based cross-sectional study was undertaken among 60 women who received maternal health services at Tamale West Hospital. The instruments for data collection included structured questionnaires and interview questionnaire items that were adapted from the maternal healthcare satisfaction instruments, which had been previously validated. Descriptive statistics were employed to cover demographic characteristics of respondents, and also to account for satisfaction levels at different service dimensions such as provider competence, communication, accessibility, and availability of medical resources. Pearson correlation analysis was used to test for the existence of any correlation between selected service delivery factors and observed maternal health outcomes. Overall, respondents reported that they are quite satisfied with the maternal health services. Very high average satisfaction scores have been recorded for both healthcare workers' competence and respectful treatment of clients. However, on the other hand, very low satisfaction levels have been reported with regard to the availability of medical equipment and waiting times for services. The statistical test showed a strong correlation between perceived service accessibility and maternal health outcomes. The findings suggest that although maternal health service delivery at Tamale West Hospital is generally viewed positively by the clients, improvements in healthcare infrastructure and resource availability are needed to further enhance client satisfaction and also to create a better quality of the maternal health services. However, the research is constrained to some extent by the small number of participants and the use of non-random sampling methods, which might render the findings less generalisable. Future studies using bigger and more representative samples are recommended.

Keywords: Maternal health services, client satisfaction, healthcare quality, Ghana, cross-sectional study

INTRODUCTION

The quality of health service delivery, particularly maternal healthcare, is a critical determinant of population health and socioeconomic development. Improvement in maternal health care services in low- and middle-

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income countries, where there is a shortage of health resources, is needed to reduce maternal and neonatal morbidity and mortality. According to the WHO, almost 287, 000 women in the world died from complications arising during pregnancy and in the postpartum period. Approximately 70% of these maternal deaths happen in sub-Saharan Africa (2020). Improvement in the availability and quality of maternal health care services is one of the great challenges in the world today. Healthcare client satisfaction is defined as a measurement of healthcare consumers' reaction to care they have received based on their experiences and expectations (patient satisfaction is widely accepted as one of the important health service outcomes and indicators of quality of health care services, Engdaw, 2019). It refers to the extent to which healthcare services provided meet or exceed patients' expectations about the service and experience of care delivery. This gives an idea of what needs to be improved.

Service quality in the setting of maternal health has implications for effective utilization of skilled pregnancy, delivery, and postnatal care. Research conducted in low- and middle-income countries showed that women's utilization of maternal health services is associated with experience of healthcare providers, availability of services at the point of need, waiting time, and availability of healthcare services (Tabong *et al.,* 2021; Wiles *et al.,* 2022). Poor quality of services is likely to affect clients' experience, leading to unhappiness and a deterrent to women attending facility-based care during pregnancy, childbirth, and for newborn babies. So, reduction of maternal and newborn mortalities is achievable through accessibility to good quality services of Basic and Complete Emergency Obstetric and Neonatal care. Emergency obstetric and neonatal care includes Basic (BEmONC) and Complete (CEmONC) Emergency obstetric and neonatal care. To ensure efficient performance of EmONC, there must be adequately equipped health care facilities, skilled Birth Attendants, and functional referral systems. In addition, previous studies have documented the inadequacies experienced in many Low- and Middle-Income Countries (LMICs), including shortages of various forms of medical equipment necessary for care, inadequate health staff, and a weak communication system and referral network, which culminates in a lack of effective care in providing maternal health services in LMICs (Srivastava *et al*. 2019).

Evidence from Service Provision Assessments in a few LMICs has also indicated a large gap in the quality and access to health services across facilities. For example, Mai Do *et al*. (2017) found evidence of service delivery differences between public and private healthcare facilities, reporting that clients of some private facilities experienced better accessibility and service responsiveness compared with clients of the public facilities. As such, service quality and client satisfaction in the public health service system need to be evaluated. Reducing the number of mothers dying during childbirth and enhancing the health of mothers after delivery are among the objectives of the United Nations Sustainable Development Goals (SDGs), with a particular focus on Goal 3. This goal aims at lowering the maternal mortality ratio worldwide to fewer than 70 deaths per 100, 000 live births and reducing the neonatal mortality rate to at least 12 deaths per 1, 000 live births by the year 2030. Despite some improvements in maternal mortality in Ghana, it remains a major public health issue.

According to the Ghana Statistical Service, Ghana's maternal mortality ratio is significantly higher when compared with the global target set by the UN for countries. Ensuring that maternal health services are of a high standard is essential for achieving better maternal health outcomes as well as making the clients' experience in health facilities more pleasant. Health facilities must provide the required infrastructure, equipment, and providers to effectively provide good-quality maternal health services. Also, clients' perception and assessments of the quality of care received in health facilities may assist health service providers to identify the shortcomings in services and design strategies to address the identified shortfalls (Abuya *et al.,* 2018). Despite the critical role of maternal health services in preventing maternal mortality, there is a dearth of evidence on client satisfaction for maternal health service delivery in many Northern Ghana communities where health-related challenges are more pronounced. Assessment of client satisfaction in health facilities could provide useful insights into the strengths and weaknesses of the maternal health service delivery system as well as policy decisions towards health service improvement.

Against this background, this study assessed client satisfaction with maternal health services at Tamale West Hospital in Northern Ghana. Specifically, the study examined the factors influencing client satisfaction, evaluated the level of client satisfaction with maternal health delivery services, and explored the association between client satisfaction and maternal health outcomes.

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METHODS

This study was a facility-based cross-sectional study to assess clients' satisfaction with maternal health services in Tamale West Hospital, Northern Ghana. Cross-sectional studies are used in health services research to analyse the association between health services delivery and satisfaction at a specific point in time (Setia, 2016).

This study adopted a cross-sectional design because it was appropriate to collect and analyze data from Women who had recently used maternal health services in the facility under study. Participant section data were collected at Tamale West Hospital in the Tamale Metropolitan Area of the Northern Region of Ghana. Tamale West Hospital is one of the public health facilities governed by the Ghana Health Service that provides maternity services to a large number of people in the metropolis. Maternal health services offered in this facility were antenatal, delivery, postnatal, and emergency obstetric services.

Tamale West Hospital, because of its extensive clientele and service to the population within the metropolis and communities constitute good setting to determine client satisfaction with maternal health services provision.

The study population consisted of women who had ever used maternal health services at Tamale West Hospital, Northern Region of Ghana, during the period of the study. The study targeted Women who have used maternal health services, including antenatal, delivery services, and postnatal services at Tamale West Hospital, because these people can assess the quality of the care they received.

To get the study participants, 60 people were used. Purposive sampling techniques were used, which is common when used in health service research, and respondents were needed to have some experience relevant to research objectives (Etikan *et al.,* 2016). This facility was chosen because the health problems that the patients experienced may impact the level of satisfaction with health care services. The convenience sample selected from Tamale West Hospital was selected due to easy access. Although probability sampling techniques are typically more efficient for drawing a representative sample, the decision to use purposive and convenience sampling in this case was a practical way to identify individuals who are most likely to have direct insights into the facility and its maternal health services.

In this research, only women who had accessed maternal health services at Tamale West Hospital during the study timeframe were qualified to participate. Despite the sample size being relatively small, it was deemed sufficient for a facility-based study focused on evaluating client satisfaction within a defined healthcare environment. Comparable studies assessing maternal healthcare satisfaction in low-resource contexts have utilized similar sample sizes. For example, Ayanaw Amare *et al.* (2021) conducted a maternal health satisfaction study in Ethiopia using a facility-based sample of 120 mothers, while Mariam Afulani *et al.* (2019) examined women's experiences of maternal care in health facilities using a similar facility-focused sample design. Sample sizes of this nature are deemed acceptable in facility-based maternal health research, where the aim is to assess service quality and patient experience within a particular healthcare setting, rather than to generate estimates that are representative on a national scale.

Data collection was conducted through a structured questionnaire that included a limited number of interview questions aimed at gathering information regarding the demographic characteristics of respondents and their satisfaction levels with maternal health services. Items included in the questionnaires measured different aspects of service delivery, namely, skill of care providers, communication with clients, waiting time, availability of drugs and equipment, and quality of maternal health services.

Items used in the questionnaire were modified from previous instruments tested in studies on maternal healthcare satisfaction (Abuya *et al.,* 2018; Srivastava *et al.,* 2019). The study participants were asked to state their level of satisfaction using a Likert-type scale ranging from "strongly dissatisfied" to "strongly satisfied". Hence, this methodological approach to clients' satisfaction made it possible to quantify clients' perceived quality of services across the various dimensions of maternal health service delivery.

Data were collected within the hospital environment after maternal health service provision.

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Study purpose and voluntary participation were sought before data were collected through questionnaire and interview methods in English and Dagbani (local language) to ensure understanding.

Collected data were encoded and entered into Statistical Package for the Social Sciences (SPSS) version 27.0 for analysis. Descriptive statistics (frequencies, percentages, means, and standard deviations) were used to describe the socio-demographic characteristics of study participants and to assess their level of satisfaction with maternal health services.

To investigate the relationship between specific service delivery factors and maternal health outcomes, Pearson correlation analysis was performed. The results were presented in tables and descriptive explanations to highlight the study's key findings.

Ethical issues were carefully observed throughout the entire research. Approval to conduct the research was sought and obtained from the management of Tamale West Hospital and other relevant authorities. The participants of the research were made aware of the purpose of the research and assured of the confidentiality and exclusive academic use of their information. The participants were allowed to participate voluntarily, thus allowing them to withdraw at any time they wished to, without being coerced in any way. There was no acquisition of personal identifying information from the subjects, thus ensuring their anonymity and confidentiality.

LITERATURE REVIEW

This section presents existing literature on problems with studies on client satisfaction with health delivery services. The section presents theoretical literature related to the topic of study and presents a theoretical framework for this study. It also presents empirical literature on client satisfaction with maternal health delivery services in Ghana. The empirical and theoretical literature reviews provide a detailed background to contextualise the phenomenon being studied, and therefore place this study in appropriate theoretical and analytical frameworks.

Theoretical Framework

Donabedian's Model of Healthcare Quality

Donabedian’s model of healthcare quality is a framework that was developed by Avedis Donabedian, a physician and pioneer in the field of healthcare quality. The model was created to allow for the evaluation of healthcare quality. The model consists of three dimensions: structure, process, and outcome. Each of these dimensions allows for a thorough evaluation of the quality of healthcare that is provided to patients in healthcare facilities. The structural dimension of Donabedian’s model includes the physical, human, and organizational aspects of the healthcare facility. For example, the physical aspect refers to the infrastructure of the hospital, such as the maternity ward and maternity delivery rooms, and the equipment that is required to deliver maternal health services (Rashid & Jusoff, 2017). The human resources aspect of the hospital includes the availability and qualifications of the healthcare professionals who work within the facility. Additionally, the organizational structure includes the policies and procedures of the hospital, such as Tamale West Hospital, that are established to provide maternal health services to patients (Issah Zorro & Yidana, 2022). The process aspect of Donabedian’s model includes the procedures and processes that are followed within the facility to provide the services that are offered to patients. For instance, within this study, the process dimension includes the clinical processes that take place in maternal healthcare facilities, such as antenatal care, delivery of babies, and postnatal care of the mothers (Amoah *et al*., 2022).

The Interpersonal Processes, thus, relate to the interactions between the healthcare providers and the patients, such as the communication between them, the relationship and respect between the two parties, the empathy between the healthcare provider and patient, and the healthcare provider’s responsiveness to the needs of the patient (Abuya *et al.*, 2018). The support processes for maternal health clinics can include the administrative processes and logistical processes that support the clinics in providing the services to the patients (Braimah *et al*., 2023). These processes will have a direct impact on the patients’ experience of the clinics and their satisfaction with the clinics.

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The outcome dimension of maternal health clinics can discuss the consequences of the services that are provided to the patients. These outcomes can include the health status of the patients, the satisfaction of the patients with the clinics, and the cost-effectiveness of the clinics. The health status of the patients may improve as a result of the clinics' offerings to the patients. Furthermore, patients may feel satisfied with the clinics due to the quality of the services provided, prompting them to recommend those clinics to others or return for additional services. Finally, another outcome of these clinics is cost-effectiveness; the clinics may have measured outcomes that indicate that they are cost-effective in relation to the improvements in the health of those patients (Andini, 2024). Thus, the outcome dimension describes the overall goal of the clinics and the healthcare services that they provide. Donabedian's model of quality assessment and improvement in healthcare services indicates that these three dimensions of care are interconnected, and, as such, are a suitable structure for the clinics to utilize in the goal of providing good processes to the patients, which will lead to positive outcomes (Rashid & Jusoff, 2017). Thus, this model helps recognize deficiencies in any of the three dimensions and implement improvements to address those deficiencies to ensure that the clinics provide the best possible care to their patients.

Empirical Studies on Client Satisfaction with Maternal Health Delivery Services

Client satisfaction is a crucial indicator of the quality of maternal health delivery services and plays a pivotal role in improving the maternal and child health outcomes of a population. Numerous studies have identified the factors that impact the satisfaction levels of clients receiving maternal health delivery services. Most studies show that the quality of care that a client perceives from the delivery services impacts their satisfaction with the services received. The quality of care can be measured in the competence of the health care providers who deliver the services, the effectiveness of the treatments provided, and the availability of necessary resources to provide such care to the clients (Afulani *et al*., 2020).

The factor that most commonly impacts satisfaction levels from clients receiving maternal health delivery services is the communication between the health care providers and the clients. Good communication in the health care industry requires providers to be respectful, to be empathetic, to actively listen to the clients, and to effectively provide explanations of the treatment plans to the clients. Clients often feel that their satisfaction increases when they interact with health care providers who take the time to understand their concerns and offer them the information and involvement in their care that they require. Other factors that impact satisfaction levels of clients who access maternal health delivery services include the cleanliness, comfort, and ambiance of the healthcare facility from which they receive the services. Clients who experience a better quality of facility experience higher levels of satisfaction with the maternal health delivery services provided by those facilities (Azizi, 2020).

The convenient access to maternal health services, such as geographical proximity, availability of transportation, and affordability of the costs associated with these services are important aspect of the satisfaction of the patients and clients who use these facilities. The lack of access to these services can have a detrimental impact on the satisfaction of those patients and clients. Providing clients with the care that is culturally appropriate to their community and beliefs has been shown to lead to higher satisfaction levels with the maternal health clinics and providers. Healthcare providers who can tailor their services to the individual needs of the clients that attend these clinics are likely to experience higher levels of satisfaction from those clients *(*Weyori *et al.*, 2022).

Several studies have examined the satisfaction levels of clients using maternal health services. These studies have indicated that higher satisfaction levels with the clinics and providers of these services are associated with better health outcomes for these clients. Some studies have also indicated disparities in satisfaction levels based on the socioeconomic and cultural backgrounds of the clients of these maternal health clinics. For example, clients of lower socioeconomic status have been shown to have lower satisfaction levels with the maternal health services that they receive (Fagbamigbe & Idemudia, 2017).

Maternal health delivery services are essential in the care of both mothers and newborns. One of the essential metrics to measure the effectiveness of these services is the satisfaction of the clients utilizing these services (Tabong *et al*., 2021). The satisfaction of the clients using maternal health delivery services has been studied empirically to determine the strengths and areas of improvement of these health care services (Tabong *et al*., 2021). Client satisfaction is generally understood to be the extent to which the maternal health delivery services provided to clients (mostly pregnant and new mothers) meet the expectations and needs of those clients. Client

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satisfaction can include a variety of different aspects of the health care services that are provided, such as the quality of the care, the staff, the facilities, and the affordability of the services (Tabong *et al*., 2021).

High levels of client satisfaction in maternal health clinics are essential for several reasons. Satisfied clients are more likely to experience better health outcomes for both the mother and child due to their adherence to treatment plans and positive attitude towards maternal health clinics (Ameyaw *et al*., 2022). Clients who are satisfied with the services that they receive from the maternal health clinics are more likely to trust the healthcare providers and the system, encouraging them to use these clinics for maternal health care. The opinions and satisfaction levels of the clients can inform the clinics on how to improve the services they offer. Client satisfaction is a principle of patient-centered care, wherein healthcare providers take into account the preferences and needs of the patients and involve them in the care decisions for their health. Satisfied clients are more likely to recommend the services to others and support the healthcare system, contributing to its long-term sustainability and success (Ameyaw *et al*., 2022).

Empirical studies on the topic of client satisfaction within the context of maternal health delivery services, such as Banke-Thomas, A., Wong, K. L. M., Collins, L., Bangura, A. H., Subah, M., & Akseer, N. (2020), conducted a study assessing the satisfaction of mothers with the childbirth services provided in Sierra Leone. The study utilized a cross-sectional survey of 1,025 women who had recently given birth in the country and utilized questionnaires to gather information regarding their satisfaction with various aspects of the maternal health delivery services that they received while in labor and giving birth (Argawu & Erana, 2023). The results of the study indicated both a moderate level of satisfaction with the services that were provided to them as mothers, as well as variations in satisfaction according to various factors of the participating women.

The concept of client satisfaction with maternal health delivery services is not only a decisive indicator of the quality of care that is being delivered to women during pregnancy and the postpartum period, but it also has significant implications for maternal and child health outcomes. Many empirical studies have investigated the relationship between client satisfaction with maternal health care delivery services and various outcomes from those maternal health delivery services (Azizi, 2020). An understanding of the relationship between these two variables is critical to those providing maternal health care and the policymakers who regulate such services and facilities. Some of the health outcomes that have been associated with higher levels of satisfaction from clients include increased adherence to treatment regimens for pregnant and postpartum women. For instance, one study, conducted in Bangladesh, investigated the association between client satisfaction with a mobile health intervention that was provided following childbirth and adherence to the recommendations that were provided in the mobile health intervention. The study found that higher levels of client satisfaction were significantly associated with better adherence to the intervention's recommendations, suggesting that satisfied clients were more likely to follow prescribed treatment regimens (Azizi, 2020).

The association between higher levels of client satisfaction with the use of prenatal services was also explored in the literature, with results showing that satisfied clients are more likely to continue receiving and using maternal health services. According to Nkoka *et al*. (2018), their article proposed that, in addition to the above-mentioned outcome variables, including maternal mortality, maternal morbidity, infant mortality, and infant morbidity, through their analysis of the data, the relationship between client satisfaction with one or more of these maternal and infant health outcomes could be studied.

A literature review on determinants of women's satisfaction with their prenatal care in developing countries was completed (Srivastava *et al.*, 2015) and published in the BMC Pregnancy and Childbirth. The objective of this systematic review of literature from developing countries, conducted by the authors, is to identify what determines women's satisfaction with maternal health care services (Tabong *et al.*, 2021). The results of the literature review indicate that the likelihood of achieving higher maternal/infant health outcomes, including reduced rates of maternal and infant mortality/morbidity, was greater among those who were satisfied with their client experience than those who were dissatisfied. Additionally, satisfied clients tend to adhere to their treatment plans, allowing them to receive and use health care, which increases the likelihood of improved health outcomes among women and their newborns.

Involving local communities, fostering health education, and addressing cultural beliefs and practices can

enhance client satisfaction and promote the use of maternal health services (Afulani *et al.*, 2020). Educating communities and clients can empower them to enhance adherence, engagement, and health outcomes. Ensuring client satisfaction and providing quality maternal health services will require the right policy environment and adequate allocation of resources. Such investments could consist of healthcare infrastructure, training of healthcare providers, and development of targeted policy and guidelines (Nkoka *et al.*, 2018).

Alhassan *et al.* (2016) undertook a study to examine factors affecting antenatal care attendance and satisfaction with services rendered to pregnant women in the Tamale Metropolis, located in the Northern Region of Ghana. The study appears to be predominantly qualitative in terms of design and methodology, but does have some quantitative features in its analysis. The study found that distance, waiting time, and attitude had a significant effect on antenatal care attendance and client satisfaction. In a study, the researchers stressed the importance of strengthening accessibility to antenatal care services and client satisfaction to upgrade adequacy and effectiveness (Mohammed *et al.*, 2019).

RESULTS

Socio-Demographic Characteristics of Respondents

Participants comprised 60 women who utilized maternal health services at Tamale West Hospital.

Since the study involved female users of maternal health services, all the respondents were women.

According to the age breakdown, most of those surveyed were at the peak reproductive ages. The group aged 26 to 33 years made up the biggest share (36.7%), and the next biggest was the young adults aged 18 to 25 years (33.3%). Those who were 34 or 40 years old made up 25.0%, while only 5.0% were 41 or 50 years old.

65% of respondents were living in the city, and only 35% were coming from the villages. This suggests that the hospital caters to the needs of both urban and nearby rural populations.

Respondents were at different educational levels. The biggest percentage of those who went to school up to the tertiary level was 43.3%, those with basic education making 23.3%, and those with no formal education 20.0%, while secondary or vocational level was 13.3%.

What people do for a living is defined through occupational categories. Most of the respondents were traders (41.7%), the next group was the public sector workers (25%), the housewives (13.3%), farmers (10%), and private sector workers (10%).

Table 1. Socio-Demographic Characteristics of Respondents

Variable	Category	Frequency	Percentage
Sex	Female	60	100
Age	18–25	20	33.3
	26–33	22	36.7
	34–40	15	25.0
	41–50	3	5.0
Residence	Urban	39	65
	Rural	21	35
Educational Level	No formal education	12	20
	Basic education	14	23.3
	Secondary/Vocational	8	13.3
	Tertiary	26	43.3
Occupation	Housewife	8	13.3
	Trader	25	41.7

	Farmer	6	10
	Private worker	6	10
	Public worker	15	25

Source: Field Survey (2025)

Availability and Quality of Maternal Health Services

Respondents were asked to rate their satisfaction with key aspects of maternal health service availability and quality at Tamale West Hospital.

The results indicated that, on average, people were very satisfied with all aspects measured. The satisfaction with the availability of trained healthcare providers was at the top, with the mean score of 4.42 (SD = 0.787), reflecting a robust belief among the respondents in the capabilities and presence of skilled healthcare professionals at the clinic.

Similarly, the respondents showed great contentment with the availability of key maternal health services with a mean score of 4.15 (SD = 1.022). Thus, the hospital appears to be effectively providing essential maternal health services like antenatal visits, labour interventions, and postpartum services.

On the other hand, the contentment with the availability of medical equipment and supplies was a little below other service components, with the mean score of 3.87 (SD = 1.171). The higher standard deviation in this instance indicates a wider dispersion of answers, pointing to some clients finding equipment or supplies to be problematic.

Table 2. Availability and Quality of Maternal Health Services

Service Dimension	N	Sum	Mean	Std. Deviation
Availability of essential maternal health services	60	249	4.15	1.022
Availability of trained healthcare providers	60	265	4.42	0.787
Availability of necessary medical equipment and supplies	60	232	3.87	1.171

Source: Field Survey (2025)

Interactions with Healthcare Providers

Client satisfaction with healthcare provider interactions was assessed through two dimensions: communication and interpersonal skills and technical competence.

The results indicate a high level of satisfaction with provider communication and interpersonal skills, with a mean score of 4.17 (SD = 0.905). This suggests that most respondents perceived healthcare providers as respectful, approachable, and effective in communicating health information.

Satisfaction with the technical competence of healthcare providers was even higher, with a mean score of 4.35 (SD = 0.799). This finding indicates strong client confidence in the professional abilities and clinical expertise of healthcare providers delivering maternal health services at the facility.

Table 3. Interactions with Healthcare Providers

Service Dimension	N	Sum	Mean	Std. Deviation
Communication and interpersonal skills	60	250	4.17	0.905
Technical competence of healthcare providers	60	261	4.35	0.799

Source: Field Survey (2025)

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Overall Satisfaction and Maternal Health Outcomes

A relationship between maternal satisfaction with maternal health services and maternal health complications was investigated using the Pearson Correlation Test. Statistically significant relationships ($p < 0.01$) existed in several instances. Maternal health complications were found to have a strong positive correlation with a satisfaction rating regarding accessibility of services ($r = 0.784$). The positive association indicated that there were higher rates of utilization of services by women experiencing complications; thus, they viewed the availability of services as more accessible.

Maternal health complications also had a positive correlation with the satisfaction of waiting times ($r = 0.677$), information received ($r = 0.818$), and follow-up and aftercare services ($r = 0.722$). Conversely, maternal health complications were found to have a negative correlation with perceived adequacy of the facility ($r = −0.629$), availability of card development staff ($r = −0.712$), and availability of doctors ($r = −0.741$). This indicates that women who had complications experienced inadequate infrastructure and staff shortages when receiving care.

Table 4. Correlation Between Maternal Health Outcomes and Service Satisfaction

Code	**Variable**	1	2	3	4	5	6	7	8
1	Maternal health complications since giving birth	1							
2	Accessibility of services	.784**	1						
3	Waiting time	.677**	.872**	1					
4	Facility adequacy	-.629**	-.882**	-.899**	1				
5	Workers in card development	-.712**	-.877**	-.859**	.811**	1			
6	Availability of doctors	-.741**	-.919**	-.852**	.907**	.832**	1		
7	Information provided	.818**	.958**	.839**	-.873**	-.858**	-.959**	1	
8	Follow-up and aftercare	.722**	.925**	.965**	-.898**	-.904**	-.880**	.902**	1

Note: N=60, *p< .05; **p< .01 (** Correlation is significant at the 0.01 level (2-tailed).

Source: Field Survey (2025)

DISCUSSION

Socio-Demographic Characteristics and Maternal Health Service Utilisation

The finding showed that most of the respondents fall in the 18–33-year age range, which is also the peak reproductive age of women. This pattern aligns with the trends of maternal health care use throughout sub-Saharan Africa, which shows that women who use these services are younger (Afulani *et al.* 2022). Women in this age group often need antenatal, delivery, and postnatal services, which is why they are often found in healthcare facilities.

The high level of satisfaction of respondents (around 73%) perhaps can be attributed to the relatively high level of tertiary education (43.3%). According to Dickson *et al.* (2021), education has been broadly identified as a major determinant of maternal healthcare utilisation and satisfaction because educated women are more likely to be aware of pregnancy-related risks as well as the importance of skilled attendance at birth. When women achieve higher education, they are also able to engage more with doctors. They will understand the medical information given to them during maternal care.

It is also found that 65% of respondents lived in urban areas, while 35% of them were from rural areas. This shows the importance of district hospitals like Tamale West Hospital for urban communities and those living in surrounding rural areas. In Ghana, rural-urban inequality in access to maternal health care is a major challenge. Upon research, it was found that women in rural areas experience barriers such as long travel, transport issues, and a dearth of proficient healthcare providers (Adde *et al.,* 2022).

In terms of policy, these findings show the need for further investments in maternal health community services and rural healthcare infrastructure for equitable maternal health access in Ghana's vastly different geographical areas.

Availability and Quality of Maternal Health Services

The study found high levels of satisfaction with the trained health providers and essential maternal health services, with a mean of 4.42 and 4.15, respectively. The above findings imply that overall, the respondents believe that the maternal healthcare service at Tamale West Hospital is accessible and good.

The Donabedian Model conceptualizes quality of health care as structure-process-outcome (Donabedian, 1988). These results can be interpreted within this model. As per the proposed model, the structural dimensions of health systems that include the availability of trained personnel and equipment, as well as infrastructure, affect the processes and ultimately the outcomes of care.

The high satisfaction of trained health care providers noticed in this study reflects a strong structural component of maternal health care delivery at the facility. According to WHO (2023), the availability of qualified health workers is a crucial determinant of maternal health, and the global strategy on maternal health strongly emphasizes it.

Yet again, the fact that the majority are satisfied with the availability of essential maternal health services suggests the hospital is largely successful in delivering essential components of maternal health care delivery, including antenatal services, delivery care, and postnatal follow-up. The core set of services that may be expected from the maternal healthcare system to reduce maternal morbidity and mortality.

However, satisfaction levels regarding the availability of medical equipment and supplies were relatively low at M = 3.87. This suggests that structural challenges may still be present. Similar challenges have been reported in other healthcare facilities within sub-Saharan Africa regarding the quality and efficiency of maternal healthcare services, where there have been reported issues regarding the availability of essential medical equipment and supply chain issues (Tessema *et al.,* 2021).

From a policy point of view, it is evident that infrastructure within the health system is crucial for the efficient supply of essential maternal healthcare resources.

Interactions with Healthcare Providers

Satisfaction with the communication and interpersonal skills of healthcare providers was high (M = 4.17), and their technical competence was high (M = 4.35). According to the Donabedian model of quality, these elements denote the process component. Process factors involve the method of how healthcare service is delivered through the interaction of healthcare.

Respectful communication and positive interpersonal interactions are key components of quality maternal healthcare. Studies from low- and middle-income countries on maternal health have shown that when women receive respectful maternity care, they are more likely to report positive health care experiences and greater satisfaction with maternal health services (Afulani *et al.,* 2022).

Also, the high satisfaction with technical competence that characterises this study reflects strong trust in the clinical skills of the healthcare providers at Tamale West Hospital. Technical competence in maternal healthcare is important because complications in pregnancy and childbirth will require timely medical intervention. Previous studies in Ghana indicated that healthcare provider competence, professionalism, and respectful communication are significant determinants of patient satisfaction with maternal healthcare services (Dickson *et al.,* 2021). The findings highlight the need for ongoing training and professional development of healthcare providers to ensure the delivery of quality maternal healthcare.

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Maternal Health Outcomes, Service Satisfaction, and Client Experiences

The correlation analysis identified several significant correlations between maternal health complications and different dimensions of maternal health service satisfaction. These results help explain how women's experiences with health services impact how they view the quality of maternity care they receive.

There was a positive correlation ($r = 0.784$, $p < 0.01$) between maternal health complications and service satisfaction in relation to access. Although this might appear to be a surprising finding, access may actually be more highly correlated with more contact between the patient and her health care provider during complicated pregnancies. Complicated pregnancies may require patients to have medical visits more frequently and allow for increased monitoring of the patient, thus providing women with additional exposure to, and therefore greater perceived availability of, maternal health services. Similar findings have been found in previous studies on maternal healthcare in Sub-Saharan Africa. In these studies, women with complications reported greater utilization of health facilities and consequently greater familiarity with available maternity health services (Afulani *et al.*, 2022).

Qualitative responses from participants support this interpretation. One respondent explained:

> "*When I had some complications during my pregnancy, the nurses told me to come back regularly for checks. Because of that, I was always able to access the doctors when I needed them."* (Participant 1)

Similarly, another participant noted:

> "*The hospital was easy for me to reach whenever I had problems during my pregnancy*." (Participant 4)

The study found a significant positive relationship between maternal health complications and satisfaction with waiting time for maternal health services ($r = 0.677$, $p < 0.01$). Healthcare facilities may prioritize emergency cases or those requiring hospitalization in their functioning. Women who have complications are prioritized before routine maternity clients. According to earlier studies, complicated cases of obstetrics in high-risk women receive prioritization by the healthcare systems (Tessema *et al*., 2021). While this prioritization can enhance the perception of service responsiveness among women with complications, it can adversely impact those with uncomplicated pregnancies.

For example, one respondent reported:

> "*When I told them about my problem, they did not make me wait long before attending to me*." (Participant 6)

Another respondent indicated:

> "*Because my condition was serious, they attended to me quickly.*" (Participant 7)

A very strong positive correlation was also found between maternal health complications and satisfaction with information provided about maternal healthcare ($r = 0.818$, $p < 0.01$). This suggests that women who experienced complications may have received more detailed counselling and health education from healthcare providers. Effective communication is a key component of maternal healthcare because patients require clear explanations regarding treatment procedures, pregnancy risks, and recommended health practices. Studies conducted in Ghana have shown that women who receive adequate health information from healthcare providers are more likely to report higher satisfaction with maternal healthcare services (Dickson *et al*., 2021).

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This finding was supported by participant feedback. One respondent stated:

"*The nurses explained everything to me about my pregnancy and what*

I needed to do so to stay safe." (Participant 9)

Another participant commented:

"*They told me about the risks and how to take care of myself*

after delivery." (Participant 3)

The results also showed a strong positive correlation between health complications faced by mothers and their levels of satisfaction with follow-up and aftercare services ($r = 0.722$, $p < 0.01$). Women who face health complications during pregnancy or after giving birth often have to be monitored more closely after giving birth. This increased interaction may lead to higher levels of satisfaction with postnatal care. Previous studies have suggested that follow-up care can have a positive impact on the overall healthcare experience for mothers, leading to better outcomes for them (Tessema *et al.*, 2021).

A participant explained:

"*After I delivered, they asked me to come back for follow-up visits to*

check my health." (Participant 5)

On the other hand, maternal health complications revealed a strong negative association with the perception of the facility's adequacy ($r = -0.629$, $p < 0.01$), availability of card development staff ($r = -0.712$, $p < 0.01$), and availability of doctors ($r = -0.741$, $p < 0.01$). According to these findings, women with complications may perceive limitations in the health care infrastructure and staffing of the facility. The need for further health or medical resources when complications arise can reveal the limitations of the health system.

This concern was reflected in some respondents' comments. For instance, one participant noted:

"*Sometimes there are many patients and not enough staff to attend to*

everyone quickly." (Participant 8)

Another respondent stated:

"*The hospital staff try their best, but sometimes there are too many*

patients for the doctors." (Participant 2)

Based on the Donabedian Model, the findings illustrate how structural factors (observations on the workforce and infrastructure), process factors (observations on the communication and provider-responsiveness), as well as health outcomes, interact. Positive provider-patient interactions may enhance satisfaction with maternal healthcare services. However, limitations in the healthcare infrastructure and staffing may affect patient perceptions of service quality. These findings demonstrate the necessity of strengthening clinical care processes and structural health system capacity to improve maternal healthcare experience and outcomes.

CONCLUSION

This study examined client satisfaction with respect to the delivery of maternal health care services at Tamale West Hospital in Northern Ghana. It was based on service accessibility, waiting time, provision of information, follow-up care, and capacity of facilities. The findings indicated that maternal health complications had a significant association with various aspects of client satisfaction with respect to maternal health care services.

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There was a positive association between maternal health complications and client satisfaction with respect to service accessibility, waiting time, information offered by healthcare providers, and follow-up care.

The findings indicated that there was a significant association between maternal health care satisfaction and maternal health complications. Women who experienced health complications during pregnancy or at the time of delivery often interacted more with healthcare providers. These interactions may have enhanced their experiences within the healthcare system.

However, there was a negative association between maternal health complications and client satisfaction with respect to adequacy of facilities, availability of healthcare personnel, and capacity of healthcare personnel.

The findings indicated that client satisfaction with respect to maternal health care services was influenced by service processes and structural aspects of the healthcare system. These findings supported the principles of the Donabedian Model, which emphasizes the importance of interactions between healthcare structure, service processes, and health outcomes.

It was evident that maternal health care satisfaction was influenced by service processes and structural aspects of healthcare systems. Improving client satisfaction with respect to maternal health care involves not only service processes but also structural aspects of healthcare systems.

STUDY LIMITATIONS

This research provides rich information about maternal health; however, some limitations need to be acknowledged.

To begin with, this research used a single hospital (Tamale West Hospital) to collect information, which may limit the generalisability of the findings to other hospitals or regions in Ghana. Maternal healthcare delivery systems may vary across settings, and therefore the results should be interpreted within the context of the study area.

In addition, the sample size of 60 respondents, although appropriate for a facility-based exploratory study, is relatively small and may limit the statistical power of the analysis. Future studies could employ larger sample sizes to enhance representativeness and robustness of findings.

Moreover, the use of purposive and convenience sampling techniques may introduce selection bias, as participants were selected according to accessibility and the prior utilisation of maternal health services. While this approach helps identify people with relevant experiences, it could limit the range of perspectives from potential service users.

Nonetheless, the research gathered most of its data through self-reports from respondents. There may have been bias in the responses from those surveyed, as they may have answered in a socially acceptable way or had trouble remembering certain things related to their maternal healthcare experience.

Even with qualitative information being used to back up the quantitative data, in general, this research was mostly quantitative in nature. Future studies could utilise fully integrated mixed-methods designs, including interviews and focus groups, to get a more comprehensive picture of maternal healthcare experiences.

Finally, this study's cross-sectional design limits the ability to tell whether a better quality of service leads to improved maternal health or not (causal relationships). The findings therefore reflect associations rather than causation.

Despite these limitations, the study provides valuable baseline information in respect to core aspects of maternal healthcare service satisfaction and highlights essential areas of improvement to maternal healthcare service delivery in Northern Ghana.

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POLICY IMPLICATIONS AND RECOMMENDATIONS

The study's findings have relevant implications for maternal healthcare policy and service delivery in Ghana, particularly about reducing maternal mortality and improving the quality of maternal healthcare.

Firstly, strengthening health workforce capacity in maternal health facilities should be the priority of healthcare administrators. The negative perceptions of the availability of doctors and health personnel indicated a need to recruit more healthcare professionals and distribute them equitably. To guarantee the provision of maternal healthcare on time, staffing levels must be reviewed, especially in high-volume facilities.

Furthermore, this research study emphasizes the vital role of communication and education in maternal healthcare services. Counselling and sharing information with pregnant mothers regarding the risks during pregnancy, preparation for delivery, and postnatal care must be prioritised. Improving patient–provider communication has been shown to enhance the utilization of maternal health care services and ultimately, patient satisfaction.

In addition, strengthen postnatal follow-up services and continuity of care. They found that maternal complications were positively associated with satisfaction with follow-up care. This means monitoring mothers following delivery can improve the maternal healthcare experience and health outcomes. For smoother coordination and better health outcomes, maternal healthcare services should be integrated.

More importantly, addressing the structural constraints affecting the quality of maternal healthcare requires investment in healthcare institutions and facilities. Expanding the capacity of the facility, improving diagnostic resources, and ensuring adequate logistics can help improve maternal healthcare services.

Additionally, policymakers should strengthen client satisfaction monitoring systems within maternal healthcare facilities. Periodic feedback from patients can provide healthcare managers with insight into various service delivery gaps, thus improving maternal healthcare services.

Nonetheless, future studies should make use of mixed-methods approaches that combine quantitative surveys along with qualitative interviews in order to provide deeper insights into women's experiences. Also, longitudinal research designs are the most efficient way for establishing causal relationships between service quality and maternal health outcomes.

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