



# Client's Satisfaction with Child Health Care Delivery in Tamale Teaching Hospital

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## Authors' contributions

This work was carried out in collaboration among all authors. Author AP designed the study, performed the statistical analysis, wrote the protocol, and wrote the first draft of the manuscript. Author DC supervised the study. Author SN wrote the final draft of the manuscript and did formal analysis. Author FAW managed the literature searches. Author AKBB was involved in data curation. All authors read and approved the final manuscript.

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## ABSTRACT

**Background:** Studies conducted in public hospitals in Ghana have provided empirical evidence of an inadequate level of quality of health care services, both in terms of objective measures of client opinions and those of health care providers.

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**Aim:** The purpose of this study was to assess client satisfaction with the quality of healthcare delivery at the Child Health Department of the Tamale Teaching Hospital (TTH).

**Methods:** A mixed-methods cross-sectional study design using purposeful and convenience sampling techniques were used to obtain 385 parents or caregivers and 6 health professionals at the Tamale Teaching Hospital (TTH) from July, 2021 to April, 2022. Structured questionnaires were used to collect quantitative data, and a semi-structured interview guide was used to collect qualitative data.

**Results:** Most (90.9%) of the respondents are of the view that their children's health needs were catered for in the facility while only 0.2% of respondents strongly disagreed that their child's health needs were catered for in the facility. The study indicates that the 1st most ranked important satisfactory factor to the client's healthcare service quality is tangibility with an RII of 1.20 and the least ranked was priority and responsiveness of RII of 0.40 respectively.

**Conclusions:** Child healthcare service patronage in TTH is generally high. Although the needs of the people are met, we recommend that the management of the hospital should prioritize medical and surgical conditions in the hospital by providing equipment and logistics.

*Keywords: Client satisfaction; child healthcare; pediatric unit; hospital; healthcare delivery.*

## 1. INTRODUCTION

Clients' satisfaction and requirements have increased as a result of the increased competition in the healthcare environment, resulting in a situation where the majority of firms find it too challenging to keep up with the need of their clients. It has been argued that client satisfaction is linked to health outcomes and that measuring it could cause problems because service providers frequently fail to identify clients. [1]. Previously, hospitals evaluated clients' care services based on medical experts' opinions and managerial and technological personnel. In the first several years, this viewpoint was broadened to incorporate the perspectives of service beneficiaries. As a result, hospitals place a greater emphasis on client issues in order to increase patients' overall satisfaction [2]. Many accreditations and assessment programs for hospital services include standards for patient input and perceptions [3]. Hospitals are moving toward a business strategy and developing effective quality improvement initiatives by making client satisfaction the benchmark of organizational success. Client satisfaction is a critical indicator of medical service quality because it reveals whether or not the provider has met the client's standards and beliefs, which are topics over which the client has final authority [4].

Ghana's Ministry of Health (MOH) has always prioritized high-quality healthcare that is responsive to customer needs. However, the rate of quality improvement in facility-based healthcare delivery services has been slow and

falls far short of the Ghana Health Service's objectives. According to [5] this is due to a lack of emphasis on healthcare quality improvement. In light of this, there is a rising need for study on the quality of health service delivery in Ghana, particularly with regard to client satisfaction, which is a crucial indicator of and integration of quality assurance in the country's health care system and facilities.

This study is unique in that it assesses client satisfaction with the quality of child healthcare delivery at Tamale Teaching Hospital, which is new to Ghana's healthcare system. In this regard, the goal of this research is to determine how satisfied clients are with the child health care provided at Tamale Teaching Hospital. The study's findings are likely to assist service providers (healthcare) in identifying the service quality aspects that most predict client happiness so that they can focus on them based on their importance.

## 2. MATERIALS AND METHODS

### 2.1 Study Setting

The research was conducted in Tamale Teaching Hospital (TTH) from July, 2021 to April, 2022. Tamale Teaching Hospital (TTH) was founded in 1974 as a Regional Hospital to provide comprehensive health care to the people of Tamale and the surrounding areas. The Hospital, which has a land area of approximately 490,000 square meters, is located in the eastern portion of the Tamale Metropolis, on the major Hospital Road.

## **2.2 Study Design**

A mixed-methods design was used in designing this study. The employment of both quantitative and qualitative methodologies, rather than just one, was more acceptable in light of the study's objectives

## **2.3 Study Population and Sample Size**

Parents/caregivers whose children were admitted to Tamale Teaching Hospital's child health department were recruited for the quantitative method. Health professionals who lead the department's various units. A total of 385 respondents comprised of 49 respondents from the children emergency ward, 148 from the paediatrics ward and 188 from the neonatal intensive care unit were used for this study.

## **2.4 Sampling Procedure**

The study relied on convenience sampling to select clients who were admitted to the department at the time of the survey. Based on their availability, the questionnaires were administered to the clients until the needed sample size was reached. Purposive sampling was used to collect data for the qualitative investigation. As key informants, a medical doctor, the department's administrator, the deputy director of nursing services, and the heads of the department's various units were chosen.

## **2.5 Data Collection Tools**

Structured questionnaires were utilized in the quantitative approach. This tool was used to access the extent of client satisfaction, identify factors that influence child health care delivery and explore innovations to improve child health delivery. Also, semi-structured interview guide was used as the major data-gathering instrument in this study.

## **2.6 Data Analysis**

The Statistical Package for Social Sciences (SPSS) version 22.2 was used to generate population-based conclusions and generalizations. Because of their convenience, consistency, validity, and reliability, tables and bar graphs, as well as the Relative Important Index (RII) was used for further analysis.

## **2.7 Limitations of the Study**

Intervening or confounding variables, such as respondent honesty and personal biases, that were beyond the researcher's control. Extraneous variables such as remarks from other respondents, anxiety, stress, and motivation on the part of the respondents throughout the process of responding to the questionnaires were designated as uncontrolled variables in the research contexts

## **3. RESULTS AND DISCUSSION**

### **3.1 Results**

From Table 1, out of 385 respondents, 165 of them representing 42.9 % are males and 220 representing 57.1% of respondents are females constituting the majority. The results indicate that 81% representing most of the respondents' wards are between the ages of 0-4, 17.1% are between the ages of 5-9 whereas 1.8% are between 10-14 years. No child is between the ages of 15-19. The results further revealed that 7.1 percent of respondents had no education, 7 percent had primary level of education and 10.9 percent had secondary education whereas 64.9 percent representing the majority has tertiary level of education. The fact that 75 percent of the respondents can read and write gives an indication that they are capable of giving an independent assessment of the service delivery at the hospital.

Also from Table 2 it can be seen that, 33% of key informants are males while 67% are females. Also, 67% of respondents are nurses and 16.5% are Medical Doctors and Administrators respectively. Table 2 also shows that, 16.5% of respondents were between the ages of 25-35 years and 67% are between the ages of 36-45 years while 16.5% are 46 years and above.

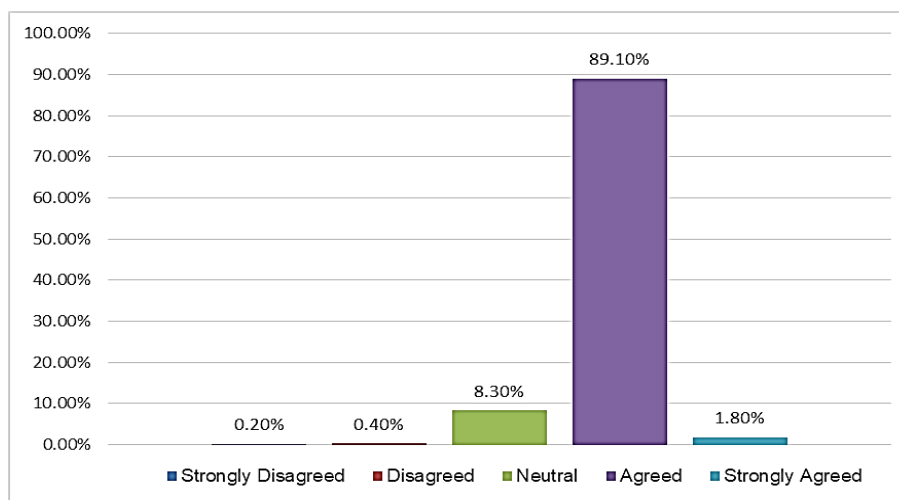
The results revealed that, 0.2% of respondents strongly disagreed that their child's health needs were catered for in the facility, 0.4% disagreed and 8.3% said they neither agree nor disagree whereas 89.1% and 1.8% agreed and strongly agreed respectively that their child's health needs were catered for in the facility. It is clear the majority (90.9%) of the respondents are of the view that their children's health needs were catered for in the facility as shown in Fig. 1.

**Table 1. Demographic characteristics of respondents**

Variables	Categories	Frequency N=385	Percentage (%)
Sex patients	Male	165	42.9
	Female	220	57.1
Age of patients	0-4	312	81
	5-9	66	17.1
	10-14	7	1.8
	15-19	0	0
Level of education of caregivers/parent	No formal education	66	17.1
	Primary	27	7
	Secondary	42	10.9
	Tertiary	250	64.9
Employment status of caregivers/ parents	Unemployed	13	3.4
	Trader/businessman	82	21.3
	Farmer	49	12.7
	Government employee	179	46.5
	Private sector employee	58	15.1
	Student	4	1
Religion of caregivers/ parents	Christianity	135	35.1
	Islam	249	64.7
	Traditionalism	1	0.3

**Table 2. Demographic characteristics of key informants**

	Frequency	Percentage %
<b>Gender</b>		
Male	2	33.0
Female	4	67.0
<b>Total</b>	<b>6</b>	<b>100.0</b>
<b>Position</b>		
Nurses	4	67.0
Medical Doctor	1	16.5
Administrator	1	16.5
<b>Total</b>	<b>6</b>	<b>100.0</b>
<b>Age group</b>		
25-35	1	16.5
36-45	4	67.0
46 and above	1	16.5
<b>Total</b>	<b>6</b>	<b>100.0</b>



**Fig. 1. Clients' satisfaction with services for their children**

As shown in Table 3 the study indicates that the 1st most ranked important satisfactory factor to the client’s healthcare service quality is tangibility with an RII of 1.20 and the least ranked is The factor comprised issues of parking space for vehicles, clean and adequate washrooms, adequate sitting space, playing materials for children as well as the facility has a resting place for caregivers. The second most ranked important satisfactory factor of healthcare service quality to clients was empathy and communication with RII of 1.00 respectively. The factors for empathy comprised issues of support for the child’s emotional well-being, fairness and respect, showing care to children and staff interest in children’s wellbeing. The factors for communication included receipt of helpful, regular feedback about the progress of children’s condition, receipt of reliable and clear details about the child's condition, and ease in giving a

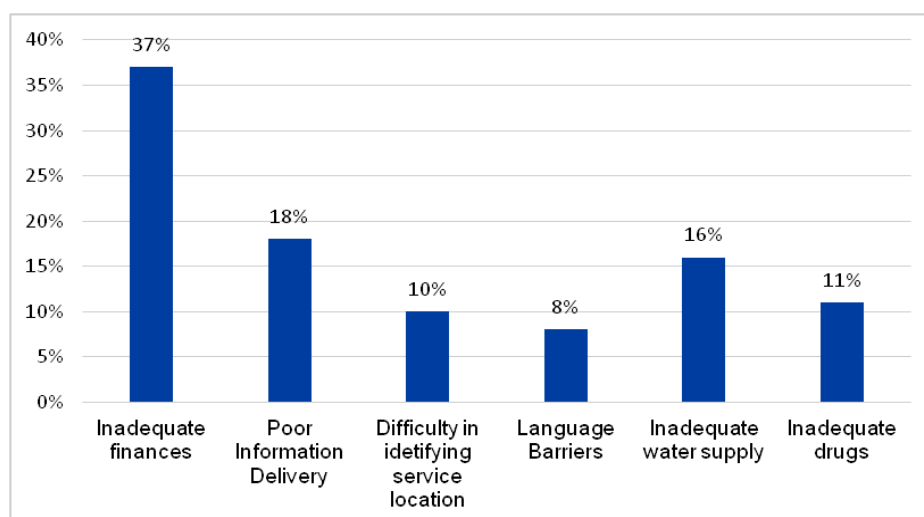
concern, a suggestion, or a query. The least ranked were priority and responsiveness.

It is therefore clear that, the type of child health care services provided at TTH are medical and surgical emergencies which includes: dehydration, respiratory distress, trauma, convulsions, burns, Severe Acute Malnutrition (SAM), anaphylaxis and birth asphyxia.

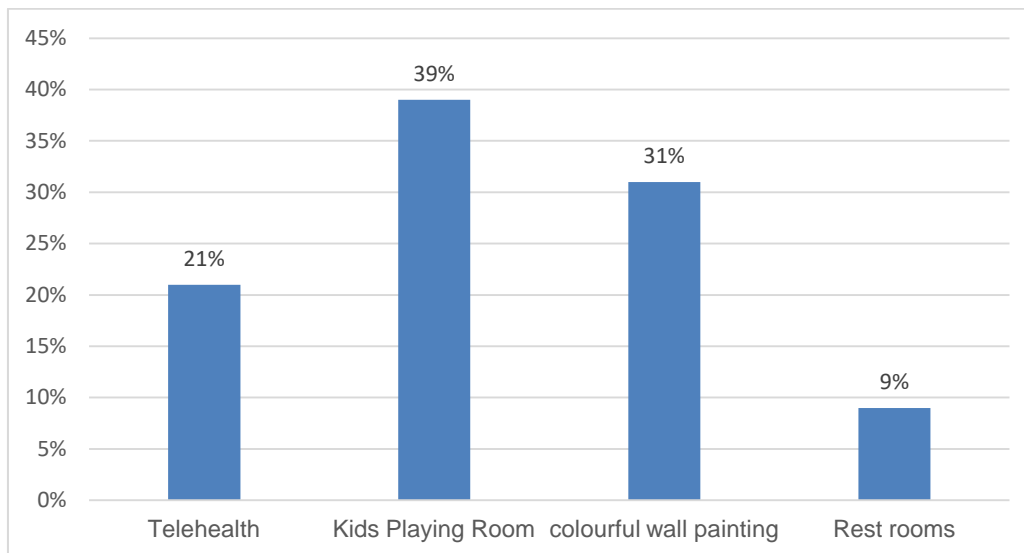
From Fig. 2, 37% of respondents said inadequate finances was a factor influencing child healthcare delivery and 18% said poor information delivery. Ten per cent said they find it difficult to identify service location and 8% of respondents said language barrier while only 16% and 11% said inadequate water supply and drugs respectively. Clearly, inadequate finance was the major factor influencing child healthcare delivery in TTH as indicated by majority (37%) of respondents.

**Table 3. Relative importance index of satisfactory factors**

Satisfaction Factors	Ranks					ΣW	Mean	RII	Rank
	(1)	(2)	(3)	(4)	(5)				
Tangibility	70	1086	321	824	8	2309	6.00	1.20	1 <sup>st</sup>
Empathy	1	8	115	1784	17	1925	5.00	1.00	2 <sup>th</sup>
Communication	2	122	204	1575	23	1925	5.00	1.00	2 <sup>nd</sup>
Accessibility and affordability	6	593	186	739	17	1541	4.01	0.81	3 <sup>rd</sup>
Assurance	1	11	110	1406	12	1540	4.00	0.80	4 <sup>th</sup>
Reliability	3	23	380	1120	9	1540	4.00	0.80	4 <sup>th</sup>
Culture	4	6	6	728	26	770	2.00	0.40	5 <sup>th</sup>
Priority	2	36	109	620	3	770	2.00	0.40	5 <sup>th</sup>
Responsiveness	1	28	304	433	4	770	2.00	0.40	5 <sup>th</sup>



**Fig. 2. Factors that influence quality of child Healthcare Delivery at TTH**



**Fig. 3. Innovation for improvement in the quality of child healthcare services**

It is indicated in Fig. 3 that, 21% of respondent said telehealth, 39% said kids playing room and 31% said colourful wall painting whereas 9% said rest rooms. It is clear majority (39%) of respondents are of the view that, kids playing room should be considered in the hospital as an innovation to improve the quality of child healthcare.

### 3.2 Discussion

The demographic findings indicate that females largely utilized the hospitals in accessing healthcare services in diverse ways. Again, the result reveals that patients with higher levels of education thus those from the senior secondary school level upwards also utilized child emergency services of the Tamale Teaching hospital extensively. This corroborates the findings of [6] which suggest that there is a significant relationship between education level and healthcare utilization, with people of higher levels of education sharing higher levels of healthcare utilization. Thus, highly educated persons in societies are conscious of their health and therefore make higher investments in their health. An approximated figure of 81% of patients were between 0-4 years, this result is a clear indication that age is a significant determinant in the utilization of child healthcare as observed in previous studies [7].

The majority (48.10%) of clients were in the Neonatal Intensive Care Unit. This could be due to the fact that other health facilities in the Northern Region do not have enough specialized

Doctors and Nurses in care for Neonates as well as the availability of Neonatal intensive care units. The study further revealed that, the majority (90.9%) of the respondents were satisfied with child healthcare services and that, their children's health needs were catered for in the facility.

Also, the researchers sought to identify among the health service quality dimensions which dimension is most important to the clients and a Relative Important Index (RII) was used to rate these dimensions and the results indicated that, the three most ranked important satisfactory factor to the client's tangibility, empathy, communication, accessibility and affordability (Table 3). This objective was designed to examine the most rated important satisfactory factor to the patients. The patients revealed that physical facilities in relation to equipment and logistics ensure patients' welfare hence relatively important quality healthcare in the hospital. This finding is noted earlier in studies by [8] that tangibility in terms of the physical environment, cleanliness, seating and modern clinical equipment has a larger effect on the perception of quality healthcare of hospital in Jordan and Turkey. Patients rated empathy as an important satisfactory factor, thus patients are sensitive to how staff treat them and care for their ill health at TTH. Communication is a key determinant of quality healthcare, since patients are able to engage with staff and effectively discuss personal health matters that affect their health. Through this approach medical staff are able to educate patients on how to make good choices

affecting their health. The study indicated that, patients rated accessibility and affordability as the third most ranked satisfactory factor. Accessibility and affordability to patients in the Tamale Teaching Hospital had to do with their ability to easily locate health care services such (pharmacy and laboratory) services and also the cost involved to cover health care of their patients.

In determining the patronage of child health care services at Tamale Teaching Hospital, it was indicated that, there was high patronage by the clients and the following where the reasons:

*“Parents bring their critically ill children to our facility that contributes to the numbers and then, we are also a referral centre for the peripheral hospitals within tamale and northern region and thirdly, we receive patients from upper east and west and the newly created regions in the north, all refer patients to TTH and also, we see patient coming from home”.* (Male caregiver, Medical officer, June 2021).

The results are confirmed by [9] who indicated that, healthcare services that are referral centre will have high patronage because they have the specialist. Measuring client's satisfaction has various purposes. Some of the most prominent reasons include evaluation of health care services from patient's point of view, the identification of problem areas and the generation of ideas towards resolving these problems.

The study indicated that, inadequate finance was the major factor influencing child healthcare delivery in TTH as indicated by the majority (37%) of clients. Also, responses from healthcare providers confirmed the clients' assertion of factors influencing service satisfaction as one said;

*“We attend to all kinds of people from different social classes, there are those how to find it less difficult to pay, others who take a lot of time to raise money and others no matter what you do, cannot find money but some of our services are covered by NHIS and we also have a social welfare in the hospital who normally come to the aid of such individuals”.* (Male caregiver, medical officer).

The study also indicated that, creating a playing room for kids will be a major innovative strategy

to improve the quality of child health services in TTH as indicated by majority (39%) of clients. Other researches shows that, new services, new ways of working, and new technologies are common in health-care companies [10]. The desired benefits from the client's perspective are either better health or less suffering due to illness. Another study by [11] showed that, the use of telehealth can improve quality healthcare delivery in health facilities as it will reduce long queues and waiting time of clients in health services.

#### **4. CONCLUSION**

Most clients are satisfied with the quality of child healthcare they receive from the child health department of the Tamale Teaching Hospital. Inadequate finance is the major factor influencing child healthcare delivery in TTH. Child healthcare service patronage in TTH is generally high due to the fact that the hospital is the main referral hospital in the northern sector of Ghana with specialized Doctors and Nurses trained in child health and the most equipped in the Northern parts of Ghana. The researchers recommend that the management of the hospital should prioritize medical and surgical conditions in the hospital by providing equipment and logistics as well as encouraging health professionals to take up post-graduate training in paediatrics in the management of medical and surgical conditions.

#### **CONSENT**

As per international standard or university standard, parents(s) written consent has been collected and preserved by the author(s).

#### **ETHICAL APPROVAL**

Ethical clearance was obtained from the Committee on Human Research, Publication and Ethics at the Kwame University of Science and Technology with reference number CHRPE/AP/293/ 21. Also, copy of the research proposal, a cover letter, instruments and an introductory letter from my department was sent to TTH. A certificate of authorization to conduct the study was secured with reference number TTH/R&D/SR/034.

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### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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