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ORIGINAL RESEARCH



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Caregivers' Voices: Experiences and Satisfaction with Paediatric Care in a Nigerian Tertiary Hospital

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Abstract

Background: Parental satisfaction is an important indicator of the quality of paediatric care and is influenced by both clinical and non-clinical factors.

Objective: To assess caregivers' satisfaction with paediatric services and the determinants at a Nigerian Teaching Hospital.

Methods: A hospital-based, cross-sectional study was conducted among caregivers of admitted children using a structured questionnaire over 5 months. Descriptive statistics were used to summarise responses, and weighted mean scores were calculated for each domain. Inferential statistics were used as necessary.

Results: High satisfaction was reported for healthcare providers, particularly doctors and nurses, with significant differences across staff categories ($p<0.001$). Lower satisfaction was observed in non-clinical domains, including registration, payment, laboratory, food, and discharge services, mainly due to delays and inefficiencies. Ward environment satisfaction was significantly influenced by admitting unit and education level, with better ratings in lower-acuity wards ($p<0.001$). Male and tertiary-educated caregivers reported higher satisfaction in selected service areas. Overall satisfaction was significantly associated with educational level and admitting unit.

Conclusion: Although clinical care remains a major strength, non-clinical service gaps significantly impair caregivers' experience. Strengthening support services, improving infrastructure, and enhancing system efficiency are critical to improving satisfaction, service utilisation, and paediatric health outcomes.

Keywords: Health Services Accessibility, Health System, Paediatric Care, Patient Satisfaction, Quality of Healthcare.

Introduction

Healthcare systems continue to evolve, making it essential to evaluate both system performance and patient satisfaction. Once an overlooked concept, patient satisfaction has increasingly become a central component of healthcare quality assessment, particularly in high-income countries and, more recently, in developing settings. Patient satisfaction refers to an individual's assessment of various aspects of their healthcare experience and serves as a critical indicator of the overall quality of care received.[1] Donabedian classified satisfaction as a key outcome of healthcare services, underscoring its importance in quality evaluation.[2] Evidence consistently shows that higher patient satisfaction is associated with better health outcomes, improved adherence, and enhanced utilisation of services.[3-6]

Systematic measurement of satisfaction allows healthcare organisations to identify strengths, address deficiencies, and allocate resources more efficiently.[7] By incorporating patient preferences into service planning, institutions can tailor care to better meet user needs.[8] Performance data derived from satisfaction surveys can guide strategic improvements and strengthen patient-centred care initiatives.[9] Although public hospitals may not have a profit-driven incentive to conduct such assessments, increasing competitiveness within the healthcare sector has made patient satisfaction a key priority for private institutions seeking to build loyalty and attract service users.[10]

Despite extensive research, the literature on patient satisfaction remains inconsistent, largely due to its subjective nature, which is shaped by patients' expectations, sociocultural background, and individual perceptions.[11] Nonetheless, it remains a valuable tool for evaluating inpatient care and guiding organisational management. [12]
Although numerous studies have examined patient satisfaction in Nigeria, most published studies originated from the southern regions, particularly the Southeast and the Southwest, with far fewer studies conducted in the North, and, to the best of the researchers' knowledge, there was none from the Northeastern region. [13]
This geographic imbalance limits understanding of patients' experiences in culturally distinct settings such as Bauchi. This study is among the first from Northeastern Nigeria to assess caregivers' satisfaction comprehensively across the entire continuum of hospital care - from admission to discharge - through the caregiver's perspective. This holistic approach provides a more complete understanding of patient experience and highlights critical touchpoints that shape satisfaction.
In this context, the present study aimed to evaluate caregivers' satisfaction with paediatric and neonatal care at a tertiary hospital in Bauchi, Northeastern Nigeria, identifying strengths and gaps across both clinical and supportive services to inform targeted quality-improvement interventions.

Methods

Study design

This study employed a hospital-based cross-sectional design.

Study area

Bauchi State has two tertiary and twenty secondary healthcare facilities. The two tertiary hospitals are located in Bauchi and Azare, while the twenty secondary health facilities are located in each of the twenty local governments. Bauchi State is in northeastern Nigeria, bounded by the states of Jigawa and Kano in the northwest, Kaduna in the west, Plateau, Taraba and Gombe in the south and Yobe in the east. Based on the 2006 census, the state has a population of 4,687,465 and occupies a total land mass of 45,837 km^2 (17,837square miles).[14]

This study was conducted in the Department of Paediatrics of Abubakar Tafawa Balewa University Teaching Hospital, Bauchi, comprising four sub-units: the Special Care Baby Unit (SCBU), Emergency Paediatric Unit (EPU), Paediatric Medical Ward (PMW), and Paediatric Outpatient Department (POPD). The combined bed capacity was 89, with an average of 300 admissions monthly. As the primary referral centre for the region, the department is staffed by 30 physicians, 50 nurses, three pharmacists, and 20 support staff.

Ethical considerations

Ethical clearance for the study was obtained from the Health Research Ethics Committee of ATBUTH with the approval number HREC 0019/2024. Participation was voluntary, and confidentiality of responses was assured.

Study population

The study population consisted of caregivers of children receiving care in the paediatrics department of ATBUTH.

Inclusion criteria

Caregivers of children admitted in the EPU, SCBU, or PMW, those whose children had been admitted for at least three days before the survey and those who provided written informed consent.

Exclusion criteria

Caregivers who declined consent, who were too ill or distressed to participate and those whose wards were managed exclusively on an outpatient basis.

Sample size determination

The sample size was calculated using the Cochran's formula ($n_0 = z^2pq / e^2$), where z represents the standard normal deviate at the 95% confidence level (1.96), p is the estimated proportion of satisfied patients from a comparable study (0.83), q is 1 – p, and e is the precision level (0.05). The minimum sample size obtained was 360, which was increased by 10% to accommodate potential non-response, yielding a final sample size of 400.

Sampling method

A systematic sampling technique was used to recruit eligible caregivers from the Emergency Paediatric Unit (EPU), Special Care Baby Unit (SCBU), and Paediatric Medical Ward (PMW). Based on an average monthly admission of approximately 300 patients and a study duration of 5 months, the sampling frame was estimated at 1500. The sampling interval (k) was calculated as $1500/400 \approx 4$. Therefore, every 4th eligible caregiver was selected after an initial random start until the required sample size was achieved.

Duration of study

Data collection was conducted over a period of five months (June to November 2025).

Data collection tools and procedures

A structured questionnaire adapted from validated instruments used in similar studies was employed.[15] The instrument was translated into Hausa, the dominant local language, and backtranslated into English by two independent language experts to ensure semantic and conceptual accuracy. A pilot test demonstrated excellent internal consistency, with a Cronbach's alpha of 0.976.

The questionnaire consisted of six domains covering: 1) Socio-demographic information: age, gender, tribe, educational level, and occupation. 2) Hospital access and environment: to assess caregivers' perceptions of hospital entrance, internal navigation, reception/waiting areas, and associated challenges. 3) Registration and Administrative Processes: Evaluation of registration efficiency, performance, and related difficulties. 4) Inpatient Care: Assessment of ward environment, staff attitudes, behaviours, knowledge, skills, care, support, and availability; as well as associated challenges. 5) Support Services: Evaluation of payment area, pharmacy, laboratory, and canteen services, including environment, staff performance, accessibility, and challenges. 6) Discharge and Overall Satisfaction: Evaluation of the discharge process, overall satisfaction with the hospital and staff, and associated challenges. Responses were recorded using a 5-point Likert scale ranging from strongly agree to strongly disagree. The data were collected using an electronic data capture system (Epi Info). Trained research assistants administered interviewer-led questionnaires and conducted non-participant observations under close supervision by the investigators. Before participation, each caregiver received an individual explanation of the study objectives and provided written informed consent.

Data analysis and interpretation

Completed data were exported into Microsoft Excel for cleaning and validation and subsequently imported into Epi Info for analysis. Descriptive statistics and inferential statistics, such as independent samples t-test, one-way analysis of variance (ANOVA), and Chi-Square test, were deployed to assess associations between variables. The Friedman test was also used to compare satisfaction ratings across different staff categories, and the Wilcoxon signed-rank test was applied for pairwise comparisons to rank these groups. A p-value less than 0.05 was considered statistically significant.

Results

Sociodemographic characteristics

A total of 400 caregivers participated in the survey. The majority were female (267; 66.8%), and the mean age was 32.5±7.5 years. Most respondents identified as Hausa (171; 42.8%) or Fulani (74; 18.5%), while other ethnicities accounted for 132 (33.0%). Over half of the participants (213; 53.3%) had attained secondary education, and 285 (71.3%) were employed at the time of the survey. The largest proportion of caregivers were admitted into the Paediatric Medical Ward (172; 43.0%), followed by the Special Care Baby Unit 161 (40.3%) and then the Emergency Paediatric Unit (67; 16.8%) (Table I).

Table I: Sociodemographic characteristics of respondents

Characteristics	Frequency (n)	Percentage (%)
Gender		
Female	267	66.8
Male	133	33.3
Ethnicity		
Hausa	171	42.8
Fulani	74	18.5
Igbo	14	3.5
Yoruba	9	2.3
Others	132	33.0
Educational status		
Primary	37	9.3
Secondary	213	53.3
Tertiary	83	20.8
Non-Formal	67	16.8
Employment Status		
Employed	285	71.3
Unemployed	115	28.7
Admitting Unit		
EPU	67	16.8
PMW	172	43
SCBU	161	40.3

EPU - Emergency Paediatric Unit; PMW - Paediatric Medical Ward; SCBU - Special Care Baby Unit

Hospital Access and Environment

Overall, caregivers reported a high level of satisfaction with hospital accessibility and security. More than 90% agreed that the hospital gate was visible, access was easy, and security personnel were helpful and respectful. Most respondents found it easy to locate desired destinations, though a lower perception (mean score 4.43±0.74) was recorded for adequacy of signage. Cleanliness, comfort, and staff courtesy at the reception area were rated highly, whereas entertainment was rated low (mean score 3.28±1.54), as shown in Table II.

Registration procedures received mixed feedback, with significantly higher satisfaction reported among males ($t = 7.7$ and caregivers with tertiary education ($F = 23.3$), despite overall concerns regarding organisation and efficiency ($p < 0.001$).

Inpatient care

Perception of the ward environment was generally unfavourable. While most caregivers rated ventilation and lighting as satisfactory, lower ratings were recorded for quietness (mean score 3.95±1.09), seating comfort (3.28±1.34), and linen availability (3.48±1.47). Additional concerns included insufficient electrical outlets, the presence of unpleasant odours, and inadequate privacy for patients. In contrast, sub-staff, nurses, and doctors were rated very highly across all domains.

Ward environment ratings were significantly better among caregivers with tertiary education (F=9.8) and those admitted in the PMW (F=644.0), p <0.001.

Table IIa: Caregivers' assessment of hospital access and environment

Items	SA (%)	*A (%)*	N (%)	D (%)	SD (%)	Mean/SD	Decision
Hospital entrance							
The hospital gate was clearly visible	379 (94.8)	21 (5.2)	0 (0.0)	0 (0.0)	0 (0.0)	4.95 ±0.22	High perception
It was easy to access the hospital premises	348 (87.0)	46 (11.5)	3 (0.8)	3 (0.8)	0 (0.0)	4.85 ±0.44	High perception
The security personnel were helpful	312 (78.0)	83 (20.8)	1 (0.3)	4 (1.0)	0 (0.0)	4.76 ±0.10	High perception
The security personnel were courteous and respectful	259 (64.8)	122 (30.5)	3 (0.8)	15 (3.8)	1 (0.3)	4.56 ±0.72	High perception
Finding your way							
Finding the desired location was easy	261 (65.3)	127 (31.8)	5 (1.3)	6 (1.5)	1 (0.3)	4.60 ±0.62	High perception
There were clear signs/direction to locate the desired destination	224 (56.0)	133 (33.3)	34 (8.5)	9 (2.3)	0 (0.0)	4.43 ±0.74	Low perception
I got assistance to locate the desired destination easily	259 (64.8)	118 (29.5)	5 (1.3)	16 (4.0)	2 (0.5)	4.54 ±0.76	High perception

SA - Strongly Agree; A - Agree; N - Neutral; D - Disagree; SD - Strongly Disagree; SD (mean/SD) - Standard Deviation.

Table IIb: Caregivers' assessment of hospital access and environment

Items	SA (%)	*A (%)*	N (%)	D (%)	SD (%)	Mean/SD	Decision
Reception/waiting area							
The ambience was excellent	328 (82.0)	72 (18.0)	0 (0.0)	0 (0.0)	0 (0.0)	4.82 ±0.39	High perception
The reception area was clean	321 (80.0)	77 (19.3)	1 (0.30	1 (0.3)	0 (0.0)	4.80 ±0.43	High perception
The seating arrangements comfortable	256 (64.0)	140 (35.0)	3 (0.8)	1 (0.3)	0 (0.0)	4.63 ±0.51	High perception
The entertainment was good	157 (39.3)	30 (7.5)	26 (6.5)	143 (35.8)	44 (11.0)	3.28 ±1.54	Low perception
The staff were courteous and respectful	280 (70.0)	119 (29.8)	0 (0.0)	1 (0.3)	0 (0.0)	4.70 ±0.48	High perception
The staff were helpful	282 (70.5)	117 (29.3)	0 (0.0)	0 (0.0)	1 (0.3)	4.70 ±0.49	High perception
Registration/obtaining a smart card							
The registration process was quick and efficient	189 (47.3)	154 (38.5)	48 (12.0)	1 (0.3)	0 (0.0)	4.31 ±0.77	Low perception
The registration process was well-organised.	172 (43.0)	176 (44.0)	48 (12.0)	4 (1.0)	0 (0.0)	4.29 ±0.71	Low perception
The registration staff were respectful and courteous	203 (30.7)	148 (37.0)	48 (12.0)	1 (0.3)	0 (0.0)	4.38 ±0.70	Low perception
The registration staff were helpful and informative	209 (52.3)	142 (35.5)	48 (12.0)	1 (0.3)	0 (0.0)	4.40 ±0.70	Low perception

SA - Strongly Agree; A - Agree; N - Neutral; D - Disagree; SD - Strongly Disagree; SD (mean/SD) - Standard Deviation.

Table IIIa: Caregivers' assessment of in-patient care

Items	SA (%)	*A (%)*	N (%)	D (%)	SD (%)	mean/SD	Decision
Ward environment (cleanliness, maintenance, amenities and comfort)							
The ward was adequately ventilated.	294 (73.5)	100 (25.0)	6 (1.5)	0 (0.0)	0 (0.0)	4.72 ±0.48	High perception
The ward was free from unpleasant odours.	196 (49.0)	164 (41.0)	28 (7.0)	10 (2.5)	2 (0.5)	4.36 ±0.76	Low perception
The ward was clean and tidy	282 (70.5)	97 (24.3)	13 (3.3)	7 (1.8)	1 (0.3)	4.63 ±0.66	High perception
The toilets were clean and well-maintained.	213 (53.3)	137 (34.3)	34 (8.5)	16 (4.0)	0 (0.0)	4.37 ±0.80	Low perception
The ward was quiet and conducive to rest.	152 (38.0)	146 (36.5)	39 (9.8)	56 (14.0)	7 (1.8)	3.95 ±1.09	Low perception
The ward had comfortable seating areas.	96 (24.0)	99 (24.8)	68 (17.0)	95 (23.8)	42 (10.5)	3.28 ±1.34	Low perception
The ward had adequate lighting.	297 (74.3)	83 (20.8)	12 (3.0)	8 (2.0)	0 (0.0)	4.67 ±0.63	High perception
The ward had sufficient electrical outlets.	169 (42.3)	32 (8.0)	54 (13.5)	93 (23.3)	52 (13.0)	3.43 ±1.50	Low perception
The ward had adequate privacy for patients.	124 (31.0)	235 (58.8)	30 (7.5)	11 (2.8)	0 (0.0)	4.18 ±0.68	Low perception
The beds were comfortable	169 (42.3)	143 (35.8)	74 (18.5)	13 (3.3)	1 (0.3)	4.17 ±0.86	Low perception
There are enough linens	165 (41.3)	50 (12.5)	27 (6.8)	128 (32.0)	30 (7.5)	3.48 ±1.47	Low perception
The linens were clean	163 (40.8)	127 (31.8)	95 (23.8)	14 (3.5)	1 (0.3)	4.09 ±0.90	Low perception
There was a constant water supply	260 (65.0)	115 (28.7)	14 (3.5)	11 (2.8)	0 (0.0)	4.56 ±0.7	High perception
The entertainment option was adequate	161 (40.3)	69 (17.3)	19 (4.8)	5.6 (14)	95 (23.8)	3.36 ±1.66	Low perception

SA - Strongly Agree; A - Agree; N - Neutral; D - Disagree; SD - Strongly Disagree; SD (mean/SD) - Standard Deviation

Table IIIb: Caregivers' assessment of in-patient care

Items	SA (%)	*A (%)*	N (%)	D (%)	SD (%)	mean/SD	Decision
Staff							
Sub-staff (work attitude/behaviour and ethics)							
The sub-staff were respectful and considerate.	255 (63.7)	144 (36.0)	0 (0.0)	0 (0.0)	1 (0.3)	4.63 ±0.51	High perception
The sub-staff were patient and helpful.	219 (54.8)	177 (44.3)	1 (0.3)	3 (0.8)	0 (0.0)	4.53 ±0.55	High perception
The sub-staff were responsive to my needs.	233 (58.3)	164 (41.0)	1 (0.3)	2 (0.5)	0 (0.0)	4.57 ±0.53	High perception
The sub-staff were diligent in their duties.	274 (68.5)	122 (30.5)	2 (0.5)	2 (0.5)	0 (0.0)	4.67 ±0.51	High perception
The sub-staff maintained a clean and orderly environment	270 (67.5)	128 (32.0)	1 (0.3)	1 (0.3)	0 (0.0)	4.67 ±0.49	High perception

SA - Strongly Agree; A - Agree; N - Neutral; D - Disagree; SD - Strongly Disagree; SD (mean/SD) - Standard Deviation

Table IIIc: Caregivers' assessment of in-patient care

Items	SA (%)	*A (%)*	N (%)	D (%)	SD (%)	mean/SD	Decision
Nurses (assess attitude and behaviour, knowledge/skills, care/support and availability)							
The nurses were respectful and considerate	326 (81.5)	74 (18.5)		0 (0.0)	0 (0.0)	4.82 ±0.39	High perception
The nurses were patient and understanding or helpful	302 (75.5)	96 (24.0)	2 (0.5)	0 (0.0)	0 (0.0)	4.75 ±0.47	High perception
The nurses demonstrated good knowledge of my child's condition.	327 (81.8)	71 (17.8)	2 (0.5)	0 (0.0)	0 (0.0)	4.81 ±0.40	High perception
The nurses provided clear explanations about my child's treatment.	314 (78.5)	86 (21.5)	0 (0.0)	0 (0.0)	0 (0.0)	4.79 ±0.41	High perception
The nurses provided clear explanations and answered our questions satisfactorily	278 (69.5)	120 (30.0)	2 (0.5)	0 (0.0)	0 (0.0)	4.69 ±0.47	High perception
The nurses provided timely and appropriate care for my child.	310 (77.5)	90 (22.5)	0 (0.0)	0 (0.0)	0 (0.0)	4.78 ±0.42	High perception
The nurses helped me to understand my role in my child's care.	294 (73.3)	106 (26.5)	0 (0.0)	0 (0.0)	0 (0.0)	4.74 ±0.44	High perception
The nurses involved me in decision-making about my child's care	282 (70.5)	111 (27.8)	4 (1.0)	3 (0.8)	0 (0.0)	4.68 ±0.53	High perception
Nurses were readily available when needed.	247 (61.8)	152 (38.0)	1 (0.3)	0 (0.0)	0 (0.0)	4.62 ±0.50	High perception
Doctors (communication, expertise, care and availability)							
The doctor was respectful and considerate.	331 (82.8)	68 (17.0)	0 (0.0)	1 (0.3)	0 (0.0)	4.82 ±0.40	High perception
The doctor explained my child's condition clearly.	337 (83.3)	67 (16.8)	0 (0.0)	0 (0.0)	0 (0.0)	4.83 ±0.37	High perception
The doctor answered my questions thoroughly.	296 (74.0)	104 (26)	0 (0.0)	0 (0.0)	0 (0.0)	4.74 ±0.44	High perception
The doctor listened carefully to my concerns.	301 (75.3)	98 (24.5)	0 (0.0)	1 (0.3)	0 (0.0)	4.75 ±0.45	High perception
The doctor demonstrated knowledge and expertise in my child's condition.	330 (82.5)	70 (17.5)	0 (0.0)	0 (0.0)	0 (0.0)	4.83 ±0.38	High perception
The doctor provided appropriate treatment for my child	331 (82.8)	69 (17.3)	0 (0.0)	0 (0.0)	0 (0.0)	4.83 ±0.38	High perception
The doctor was readily available when needed.	257 (64.3)	143 (35.8)	0 (0.0)	0 (0.0)	0 (0.0)	4.64 ±0.53	High perception
The doctor responded promptly to my calls or requests.	285 (71.3)	114 (28.5)	0 (0.0)	1 (0.3)	0 (0.0)	4.71 ±0.47	High perception

SA - Strongly Agree; A - Agree; N - Neutral; D - Disagree; SD - Strongly Disagree; SD (mean/SD) - Standard Deviation

Support Services

Support service ratings varied across departments. The payment area received high ratings for accessibility, efficiency, and staff courtesy (means 4.20–4.41), though adequacy of seating was noted as a challenge (mean score 3.61±1.10). The pharmacy was viewed as organised and clean (mean score 4.20±0.86), but medication availability was a key concern (mean score 3.19±1.02). Laboratory services were generally well-rated, with respondents reporting good staff interaction and efficient sample handling (mean score 4.13–4.34), though some delay in waiting space was a challenge. Canteen services received mixed reviews, with moderate satisfaction regarding ambience and food quality but lower ratings for pricing and accessibility, shown in Table IV below. Male caregivers ($t = 8.8$) and those with tertiary education ($F = 29.2$) reported significantly higher satisfaction with payment services, $p < 0.001$, while pharmacy service satisfaction showed no significant association with gender
($t = 0.26$) or educational level ($F = 1.6$), $p = 0.07$.

Discharge process and overall satisfaction

The discharge process was rated highly by most caregivers, with 99% describing it as easy and staff as helpful (mean score 4.77±0.44). Overall satisfaction showed mixed perceptions among caregivers. While the majority expressed willingness to recommend the hospital to others, the intention to return for future care was rated low, as shown in Table V below. Overall satisfaction, assessed using willingness to return to the hospital for future care, was significantly associated with caregiver educational level ($\chi^2 = 13.693$) and ward of admission ($\chi^2 = 22.4$), $p < 0.001$. Staff satisfaction ratings differed significantly across staff categories, with doctors rated highest and pharmacists lowest (Friedman $\chi^2 = 421.0$ and Wilcoxon tests between groups, $p < 0.001$.

Perceived challenges

The caregivers highlighted several challenges during their hospital experience (Table VI). The most frequently reported issues were internet failures and long queues at payment centres (23.8%), incomplete drug availability (22.3%), and long waiting times at reception (17.5%), amongst others.

Discussion

Adopting a caregiver-centred approach, this study assessed the entire patient journey from hospital entry to discharge, allowing a comprehensive evaluation of caregiver experiences across service points. The study population was largely young, female, and educated to the secondary level, consistent with caregiving patterns in Northern Nigeria. The dominance of Hausa–Fulani caregivers underscores the importance of cultural influences on healthcare interaction, while higher employment rates may reflect relatively stable socioeconomic conditions. Satisfaction varied significantly by sociodemographic factors and admitting unit, with male caregivers reporting better experiences in reception, registration, and ward environment.

This may be attributed to differences in exposure and expectations, as female caregivers often remain at the bedside longer. Caregivers with tertiary education also reported greater satisfaction with ward environment and support services, likely reflecting improved understanding of care processes and more effective engagement with healthcare providers.

Table IVa: Caregivers' responses to questions on support services

Items	SA (%)	*A (%)*	N (%)	D (%)	SD (%)	Mean/SD	Decision
Payment Area (environment, payment process, staff performance)							
It was easy to locate the payment area	217 (54.3)	128 (32.0)	53 (13.3)	2 (0.5)		4.40 ±0.73	High perception
The ambience was good	195 (48.8)	144 (36.0)	57 (14.2)	3 (0.8)	1 (0.3)	4.32 ±0.76	High perception
The payment area had sufficient seating	94 (23.5)	146 (36.5)	77 (19.3)	76 (19)	7 (1.8)	3.61 ±1.10	low perception
The payment process was easy and efficient	165 (41.3)	167 (41.8)	63 (15.8)	5 (1.3)		4.23 ±0.75	High perception
The payment options were convenient.	155 (38.8)	175 (43.8)	64 (16.0)	5 (1.3)	1 (0.3)	4.20 ±0.76	High perception
The staff were courteous and respectful	212 (53.0)	133 (33.3)	54 (13.5)	1 (0.3)		4.39 ±0.72	High perception
The staff were helpful and informative	219 (54.8)	127 (31.8)	54 (13.5)			4.41 ±0.72	High perception
Pharmacy (accessibility, environment, staff performance, medication availability)							
The pharmacy was easy to locate.	138 (39.5)	143 (35.8)	92 (23.0)	6 (1.5)	1 (0.3)	4.13 ±0.83	High perception
The pharmacy was clean and organised.	173 (43.3)	134 (33.5)	92 (23.0)	1 (0.3)		4.20 ±0.86	High perception
The pharmacy had adequate waiting space	95 (23,8)	184 (46.0)	98 (24.5)	21 (5.3)		3.87 ±0.85	low perception
The pharmacy staff provided clear explanations about medications.	211 (52.8)	94 (23.5)	93 (23.3)	2 (0.5)		4.29 ±0.84	High perception
The prescribed medication was readily available	42 (10.5)	116 (29.0)	130 (32.5)	100 (25.0)	12 (3.0)	3.19 ±1.02	low perception
The medication was dispensed accurately.	189 (47.3)	102 (25.5)	104 (26.0)	5 (1.3)		4.19 ±0.87	High perception
The medication information provided was clear and understandable.	204 (51.0)	93 (23.3)	97 (24.3)	6 (1.5)		4.24 ±0.87	High perception

The present study found high satisfaction with hospital access and security, with caregivers reporting easy entry and positive staff interactions, similar to findings from Ondo,[16] Rivers,[17] Osun,[18] and Niger[19] but contrasting with Kano.[20] This likely reflects efficient access control and culturally appropriate communication in ATBUTH. Despite this, signage was poorly rated, echoing findings from other Nigerian studies[13,20,23,24] and likely reflecting inadequate updates in a growing hospital environment. Poor signage can delay care and increase caregiver stress, highlighting the need for simple, cost-effective navigation improvements.

Reception services were well rated for cleanliness, ambience, seating, and staff courtesy, but entertainment facilities were poorly rated. This reflects trends seen in other Nigerian studies,[13, 21,] where waiting-area comfort is often overlooked.

Table IVb: Caregivers' responses to questions on support services

Items	SA (%)	*A (%)*	N (%)	D (%)	SD (%)	Mean/SD	Decision
Laboratory							
The laboratory was easy to locate	173 (43.3)	139 (34.8)	59 (14.8)	26 (6.5)	3 (0.8)	4.13 ±0.95	High perception
The laboratory had sufficient waiting space	93 (23.3)	208 (52.0)	76 (19.0)	23 (5.8)	0 (0.0)	3.93 ±0.81	low perception
The laboratory was clean and organised	176 (44.0)	156 (39.0)	64 (16.0)	4 (1.0)	0 (0.0)	4.26 ±0.76	High perception
The staff were courteous and respectful	193 (48.3)	146 (36.5)	58 (14.5)	2 (0.5)	1 (0.3)	4.32 ±0.75	High perception
The staff were helpful and informative	197 (49.3)	142 (35.5)	60 (15.0)	1 (0.3)	0 (0.0)	4.34 ±0.74	High perception
The sample submission process was smooth	191 (47.8)	138 (34.5)	62 (15.5)	8 (1.0)	1 (0.3)	4.28 ±0.81	High perception
The collection of results was seamless	186 (46.5)	135 (33.8)	64 (16.0)	15 (3.8)	0 (0.0)	4.23 ±0.85	High perception
Canteen/Food vendor							
Locating the canteen/vendor was easy	200 (50.0)	46 (11.5)	127 (31.8)	24 (6.0)	3 (0.8)	4.04 ±1.1	low perception
The ambience is good	140 (35.0)	121 (30.3)	135 (33.8)	4 (1.0)	0 (0.0)	3.99 ±0.85	low perception
The food quality was good	188 (47.0)	107 (26.8)	103 (25.8)	2 (0.5)	0 (0.0)	4.20 ±0.84	High perception
The price of the food was reasonable	129 (32.3)	97 (24.3)	155 (38.8)	14 (3.5)	5 (1.3)	3.83 ±0.97	low perception

Table Va: Responses of caregivers to questions on discharge process and overall satisfaction

Items	SA (%)	*A (%)*	N (%)	D (%)	SD (%)	Mean/SD	Decision
Discharge process							
The discharge process was easy	312 (78.0)	86 (21.5)	1 (0.3)	1 (0.3)	0 (0.0)	4.77 ±0.44	High perception
The discharge staff was helpful	310 (77.5)	86 (21.5)	3 (0.8)	1 (0.3)	0 (0.0)	4.76 ±0.48	High perception
Overall Satisfaction							
I will recommend this hospital to others	317 (79.3)	66 (16.5)	17 (4.3)		0 (0.0)	4.75 ±0.52	High perception
I will return to this hospital when the need arises	314 (78.5)	64 (16.0)	20 (5.0)	1 (0.3)	1 (0.3)	4.72 ±0.59	Low perception

Table Vb: Caregivers' ratings of different categories of hospital care personnel

Category	Mean rating
Reception staff	8.81 ±0.91
Payment staff	8.12 ±1.33
Sub-staff	8.49 ±0.95
Nurses	9.45 ±0.76
Doctors	9.60 ±0.62
Pharmacist	7.33 ±2.40
Laboratory scientist	8.63 ±1.24

Table VI: Caregivers' perceived challenges during admission

Challenge	Frequency (n)	Percentage (%)
Unfriendly attitude of personnel at the hospital entrance (ward)	31	7.8
Difficulty navigating the hospital premises due to a large or complex layout	25	6.3
Long queues at the reception area	70	17.5
Delays at registration points caused by poor network connectivity	15	3.8
Poor staff attitude, particularly among frontline personnel	30	7.5
Network failures and long queues at payment centres	95	23.8
Unavailability or incomplete supply of prescribed medications	89	22.3
Delays in obtaining results and issues related to insufficient samples	61	15.3
Delays and multiple steps are involved in processing discharge fees	41	10.3

Enhancing these amenities could improve the caregiver experience in high-flow paediatric settings. In contrast, registration services emerged as a key area of dissatisfaction, with caregivers citing poor organisation and inefficiency citing poor organisation and inefficiency. Similar bottlenecks have been reported from other Nigerian centres, [16, 20 - 22] where internet network failures, limited staff capacity, and inadequate staffing during peak periods may contribute to delays. Given caregivers' expectations for prompt care for ill children, these delays strongly influence overall satisfaction. Improving internet reliability, introducing triage-based prioritisation, and strengthening staffing and queuing systems could enhance registration efficiency and satisfaction.

In terms of in-patient care, caregivers were satisfied with ventilation, lighting, and cleanliness but reported dissatisfaction with noise, seating, linen availability, electrical outlets, privacy, and odour control. These findings align with reports from several studies in the country [13, 22 - 24] reflecting persistent environmental challenges in paediatric wards largely driven by overcrowding, high patient turnover, cultural patterns of large visitor presence, and limited resources. Furthermore, satisfaction varied significantly by admitting unit, with caregivers in the paediatric units reporting better experiences than those in the emergency units, likely due to lower patient acuity and reduced congestion. Addressing these disparities would enhance satisfaction. Notwithstanding these challenges, caregivers reported high satisfaction with healthcare staff, consistent with findings from studies in Rivers,[17] Kano,[20] Abuja,[22] Nsukka,[23] and Ebonyi.[24] Several factors may explain this consistently high level of satisfaction: strong provider-caregiver communication in teaching hospitals, cultural expectations of politeness in maternal and child-health settings, increasing adoption of family-centred care practices, and the fact that tertiary hospitals offer more skilled professionals compared with many primary or secondary facilities. Being the largest tertiary hospital in the state, ATBUTH, may therefore be perceived as providing superior clinical expertise. These results underscore the importance of sustaining training in communication, empathy, and patient

engagement, as positive staff interactions often buffer caregivers against dissatisfaction in other areas, such as long waits or environmental discomfort.

Supportive services play a central role in caregiver satisfaction because they directly influence treatment efficiency, waiting time, cost, and overall comfort during admission. In the present study, non-clinical services received mixed to low ratings, with notable dissatisfaction in payment, laboratory, food, and discharge processes, consistent with patterns reported in several Nigerian studies. Dissatisfaction with payment services - driven by long queues, limited seating, and network disruptions - mirrors findings from National surveys,[13] and studies in Rivers,[17] Umuahia,[21] Abuja,[22] and Ebonyi.[24] This pattern indicates widespread inefficiencies in payment systems across Nigerian hospitals, while higher satisfaction reported in Ondo may highlight the benefits of improved infrastructure and workflow organisation.

Although caregivers rated laboratory staff favourably, delays in result turnaround, repeat sampling, and poor waiting conditions reduced overall satisfaction, consistent with findings from other studies.[17,18,21,24.] These inefficiencies likely arise from high patient load and limited resources, and may disrupt care and increase caregiver anxiety. Strengthening laboratory systems and infrastructure is critical to improving service quality. Similarly, caregivers reported dissatisfaction with canteen and food services, particularly regarding affordability, accessibility, and ambience. Similar findings from other studies [17, 18, 23, 24] indicate that hospital food services are often neglected despite their importance for caregiver well-being. Although a study[21] reported better ratings, this appears to be an exception. Improving meal affordability and access could significantly enhance the caregiver experience.

Caregivers reported delays and poor organisation during discharge, consistent with findings from Rivers,[17] Umuahia,[21] Abuja,[22] and Enugu.[23] These challenges are largely due to fragmented workflows, multiple clearance steps, and manual documentation. The findings indicate that structural inefficiencies, rather than interpersonal factors, underpin dissatisfaction and can be addressed through digital systems and better process coordination. Despite structural challenges, caregivers expressed high satisfaction with healthcare staff, especially doctors and nurses, consistent with existing reports. [17,20, 22 - 24] Analysis further showed that doctors were rated significantly higher than nurses and pharmacists, and nurses were rated higher than pharmacists. The findings suggest that while strong clinical communication enhances satisfaction, operational challenges within pharmacy services may reduce caregiver experience, highlighting the need for system-level improvements.

Lastly, in the present study, willingness to return (a proxy for overall satisfaction) was significantly associated with caregivers' education and admitting ward, but not with gender or employment. This suggests the quality of the services received (and the hospital environment) has greater influence on future healthcare-seeking than do socio-demographics per se. High overall satisfaction is encouraging and comparable to other Nigerian studies. [17,20,22,24,26] However, a study[23] found poor overall satisfaction, indicating variability across settings. The findings imply that to maintain or improve satisfaction, hospitals should prioritise the modifiable factors identified here – especially facility improvements, staff training, and efficient processes – rather than focusing solely on patient characteristics.

Limitations

This study is limited by the single-centre design, the cross-sectional approach, which prevents

assessment of changes over time, and the interviewer-administered questionnaires, which may introduce social desirability bias. The study findings reflect only caregivers' perspectives, excluding the older paediatric patients and the staff. Including only caregivers on admissions for three days or more also excluded the experiences of short-stay patients.

Conclusion

This study found high satisfaction with clinical care, especially among doctors and nurses, but identified important deficiencies in non-clinical services such as ward environment, registration, payment, laboratory, pharmacy, food, and discharge processes. These findings align with existing Nigerian evidence showing that administrative and support services strongly influence caregiver satisfaction. Variations by caregiver characteristics and admitting unit further highlight contextual influences. Addressing these system-level gaps through improved infrastructure and workflow efficiency is key to enhancing caregiver experience and healthcare utilisation.

It is important to improve supportive services by expanding seating, enhancing ward comfort, and upgrading signage to aid navigation; strengthening administrative processes by fixing internet network disruptions, increasing the number of staff at duty points during peak hours, and adopting automated queuing and integrated digital systems. It is also important to enhance laboratory and pharmacy services by improving turnaround time, ensuring reliable equipment and reagents, and maintaining consistent drug availability. Upgrading canteen services to provide more accessible and affordable meals for caregivers, improving ward ambience through better linen supply, privacy screens, reduced noise, and visitor control and establishing routine patient feedback mechanisms to support continuous quality improvement are essential.

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