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Health service quality and outpatient hypertension patient satisfaction: A cross-sectional study

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ABSTRACT

This study aimed to evaluate the impact of healthcare service quality on patient satisfaction among hypertensive outpatients at Muyang Kute Regional General Hospital. Employing a quantitative, cross-sectional design, data were collected from 79 patients using a questionnaire assessing five service quality dimensions (tangibles, reliability, responsiveness, empathy, and assurance) and overall patient satisfaction. Bivariate analysis, utilizing the chi-square test, was conducted to examine relationships between service quality dimensions and patient satisfaction. Results indicated generally positive perceptions of service quality dimensions, with tangibles, reliability, and assurance rated highly. However, empathy and responsiveness showed higher dissatisfaction rates. Notably, only assurance demonstrated a statistically significant association with patient satisfaction (p=0.002), where patients perceiving "Good" assurance were more likely to report satisfaction. Overall patient satisfaction was mixed, with 54.43% reporting satisfaction and 45.57% reporting dissatisfaction. The study highlights the critical role of staff competence and patient confidence (assurance) in driving satisfaction. Recommendations include targeted interventions to improve empathy and responsiveness, continuous monitoring of all service quality dimensions, and further investigation into potential underlying factors affecting overall satisfaction.

Keywords: hypertension, patient satisfaction, service quality, assurance, outpatient services

Introduction

The crucial role of healthcare service quality in enhancing treatment effectiveness, particularly in managing chronic conditions such as hypertension, cannot be overstated. The continuity and accuracy of services are pivotal determinants of successful disease management.[1,2] Furthermore, high-quality care significantly impacts public trust in healthcare facilities. This trust encourages individuals to proactively seek treatment when needed, ultimately improving overall health outcomes.[3,4] Patient satisfaction is widely recognised as a key metric for evaluating healthcare service quality. It reflects patients' direct experiences with the services they receive and influences their decisions to utilise those services again in the future.[5]

Outpatient services play a crucial role in the effective management of hypertension. Patients with hypertension require routine monitoring and ongoing education to optimally control their condition. The quality of services in outpatient facilities, including diagnostic accuracy, effective communication between

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healthcare professionals and patients, and the comfort of the facilities, significantly impacts patient adherence to treatment and long-term outcomes.[6] A major challenge in hypertension management is the high number of undiagnosed cases. This is largely due to a lack of public awareness regarding the disease and limited access to healthcare services. Data indicates that only about one-third of individuals with hypertension receive regular treatment. Additionally, unhealthy lifestyles, such as the consumption of diets high in salt, sugar, and fat, coupled with a lack of physical activity, contribute to the high prevalence of hypertension within the community.[7,8]

Research consistently identifies five key dimensions of healthcare service quality (reliability, responsiveness, assurance, empathy, and tangibles) that significantly impact patient satisfaction. For instance, a study on HIV testing services indicated a strong positive correlation between these dimensions and patient satisfaction, with a correlation coefficient of 0.632, demonstrating a robust relationship.[9] In a study conducted at a primary healthcare center in Yogyakarta, it was found that all dimensions of service quality (reliability, empathy, assurance, responsiveness, and tangibles) were positively correlated with patient satisfaction.[10] A study focusing on faith-based hospitals revealed that service quality positively affects patient satisfaction and the intention to recommend the services. Reliability emerged as a critical factor in determining service quality, further supporting the link between high-quality healthcare services and increased patient satisfaction.[11] Another analysis involving hospital services reported significant positive effects of service excellence on both service quality and patient satisfaction. The research utilized structural equation modeling to validate these relationships, confirming that higher service quality leads to greater patient satisfaction.[12]

A preliminary survey at Muyang Kute Regional General Hospital revealed that hypertension ranks as the second most frequent outpatient diagnosis. To evaluate the quality of care received by patients, researchers conducted interviews with five outpatients diagnosed with hypertension. The interviews indicated that two patients were satisfied with the healthcare services, specifically praising the staff's friendliness and responsiveness. Conversely, three patients expressed dissatisfaction, primarily citing lengthy wait times at the registration desk and a perceived lack of staff courtesy. These initial findings suggest variability in patient perceptions of service quality at Muyang Kute Regional General Hospital. The study aims to identify the factors influencing patient satisfaction with service quality and to provide recommendations for enhancing hospital care.

Method

This study employs a quantitative approach with a cross-sectional design. This design was chosen to simultaneously analyze the relationship between the independent variable, service quality, and the dependent variable, patient satisfaction. The study was conducted at Muyang Kute Regional General Hospital. A preliminary survey was carried out in May, and the main data collection took place from September 2024 until completion.

The study population consisted of all outpatients with hypertension recorded at Muyang Kute Regional General Hospital in August 2024, totaling 79 patients. The research sample was obtained using a total sampling technique, thus including the entire population (79 patients). The inclusion criteria for the sample were: patients willing to be respondents, diagnosed with hypertension with systolic blood pressure > 140 mmHg and diastolic blood pressure > 90 mmHg, and aged between 34-75 years. The exclusion criteria included patients with disease complications such as stroke or diabetes mellitus, patients who consume alcohol, patients who declined to participate, and patients experiencing stress.

In this study, data were collected using a questionnaire designed to measure both independent and dependent variables. Following data collection, a series of data processing stages were conducted using computer software. These stages included editing to ensure data completeness and accuracy, coding to transform qualitative data into quantitative data, data entry into the software, and tabulation to present the data in a structured format. This study identified five independent variables, measured using a Guttman scale: tangibles, reliability, responsiveness, empathy, and assurance. Each variable was assessed using five questions, where a “yes” response was scored as 1 and a “no” response as 0. Respondents were categorised as having a “positive” perception if they scored 3-5, and a “negative” perception if they scored 0-2 for each independent variable. The dependent variable in this study was patient satisfaction, measured using ten questions on a Guttman scale. Each “yes” response was scored as 1 and each “no” response as 0. Respondents were categorised as “satisfied” if they scored 6-10, and “dissatisfied” if they scored 0-5.

This study employed two types of data analysis: univariate and bivariate. Univariate analysis was used to describe the characteristics of each research variable individually, including the frequency distribution and percentage of each variable. This analysis aimed to provide a descriptive overview of the outpatient service quality, as measured by the dimensions of tangibles, reliability, responsiveness, empathy, assurance, and patient satisfaction. Subsequently, bivariate analysis was conducted to examine the relationships between the independent and dependent variables. The chi-square test was used to analyse these relationships, with a significance level (α) of 0.05 or a confidence level of 95%, using SPSS version 16.0 software. The decision-making criteria were as follows: if the p-value is less than 0.05, a significant influence exists between the independent and dependent variables; if the p-value is greater than 0.05, no significant influence exists between the independent and dependent variables.

Results

The majority of respondents were older than 45 years, representing 74.68% of the sample (59 individuals). Conversely, younger respondents (under 45 years) accounted for 25.32% (20 individuals). This indicates a significant skew towards an older population within the study group. The gender distribution showed a slight majority of male respondents. Specifically, 56.96% (45 individuals) were male, while 43.04% (34 individuals) were female. This suggests a relatively balanced, though slightly male-dominant, gender representation. The educational background of the respondents varied considerably. The largest segment held a senior high school education, accounting for 37.97% of the sample (30 individuals). Following this, 26.58% (21 individuals) had completed junior high school, and 18.99% (15 individuals) had completed elementary school. A smaller portion, 11.39% (9 individuals), held a bachelor's degree or diploma. This distribution highlights a range of educational levels, with a concentration in secondary education.

Table 1. Respondent characteristics based on age, gender, education, and occupation (n=79)

Variable	n	%
Age		
< 45 years	20	25.32
> 45 years	59	74.68
Gender		
Male	45	56,96
Female	34	43,04
Education		
Elementary School	15	18,99
Junior High School	21	26,58
Senior High School	30	37,97
Bachelor's Degree/Diploma	9	11,39
Occupation		
Unemployed	5	6,33
Self-Employed	42	53,16
Farmer	30	37,97
Civil Servant/Military/Police	2	2,53

The occupational profile of the respondents also displayed variety. The largest group was self-employed, comprising 53.16% of the sample (42 individuals). Farmers represented the second-largest group, accounting for 37.97% (30 individuals). A small percentage (6.33%, 5 individuals) were unemployed, and an even smaller fraction (2.53%, 2 individuals) were civil servants, military personnel, or police officers. This occupational breakdown indicates a prevalence of self-employment and agricultural work within the respondent group.

The analysis of 79 outpatient responses revealed a predominantly positive perception of service quality across five dimensions (see Table 2). Specifically, tangible aspects, encompassing facility cleanliness and staff appearance, were rated “Good” by 87.34% (n=69) of respondents, with only 12.66% (n=10) expressing dissatisfaction. Service reliability, denoting consistency and dependability, was perceived favorably by 82.28% (n=65), while 17.72% (n=14) reported negative experiences. Responsiveness, reflecting staff willingness to assist and provide timely service, was rated “Good” by 79.75% (n=63), with 20.25% (n=16) expressing dissatisfaction.

Empathy, assessing caring and individualized attention, demonstrated the highest proportion of negative responses, with 22.78% (n=18) rating it “Not good,” although 77.22% (n=61) still reported positive

experiences. Finally, assurance, measuring staff competence and patient confidence, was rated "Good" by 81.01% (n=64), with 18.99% (n=15) reporting "Not good" assurance.

Table 2. Outpatient satisfaction factors (n=79)

Variable	n	%
Tangibles		
Good	69	87,34
Not good	10	12,66
Reliability		
Good	65	82,28
Not good	14	17,72
Responsiveness		
Good	63	79,75
Not good	16	20,25
Empathy		
Good	61	77,22
Not good	18	22,78
Assurance		
Good	64	81,01
Not good	15	18,99
Patient satisfaction		
Satisfied	43	54,43
Unsatisfied	36	45,57

When considering overall patient satisfaction, the results were more mixed. While 54.43% (43 patients) reported being "Satisfied," a substantial 45.57% (36 patients) indicated they were "Unsatisfied." This suggests that even though the individual components of service quality were generally rated positively, there were underlying issues or cumulative effects that impacted overall satisfaction.

In summary, the majority of outpatients reported positive experiences across all five dimensions of service quality. However, the dimensions of Empathy and Responsiveness showed the highest levels of dissatisfaction, suggesting areas where improvements could be made. While the Tangibles dimension showed the highest satisfaction, all dimensions should be monitored to maintain high levels of patient satisfaction.

Table 3 presents the results of a bivariate analysis examining the relationship between five dimensions of service quality (tangibles, reliability, responsiveness, empathy, and assurance) and patient satisfaction. For each dimension, the table displays the number and percentage of patients reporting satisfaction or dissatisfaction, categorized by "Good" and "Not good" service quality ratings, along with the associated p-value.

Table 3. Bivariate analysis results

Variable	Patient satisfaction						p
	Satisfied		Unsatisfied		Total		
	n	%	n	%	n	%	
Tangibles							
Good	39	56	30	44	69	100	0,260
Not good	4	40	6	60	10	100	
Reliability							
Good	38	58	27	42	65	100	0,105
Not good	5	35	9	65	14	100	
Responsiveness							
Good	32	50	31	50	63	100	0,157
Not good	11	69	5	31	16	100	
Empathy							
Good	35	55	29	45	64	100	0,574
Not good	8	53	7	47	15	100	
Assurance							
Good	39	64	22	36	61	100	0,002
Not good	4	22	14	78	18	100	

The analysis revealed that patient satisfaction was significantly associated only with perceived assurance (p=0.002). Specifically, 64% of patients who rated assurance as “Good” reported satisfaction, compared to only 22% of those who rated it as “Not good.”

Conversely, no statistically significant associations were found between patient satisfaction and tangibles (p=0.260), reliability (p=0.105), responsiveness (p=0.157), or empathy (p=0.574). While the percentage of satisfied patients was numerically higher for “Good” ratings in tangibles and reliability, and lower for “Good” responsiveness, these differences did not reach statistical significance. In the case of empathy, the satisfaction rates were similar across “Good” and “Not good” ratings.

Discussion

The study revealed a generally positive perception of service quality across the five dimensions (tangibles, reliability, responsiveness, empathy, and assurance), yet overall patient satisfaction indicated persistent areas for improvement. Notably, empathy and responsiveness received a disproportionately high percentage of negative ratings, suggesting deficiencies in perceived caring, individualized attention, and timely service provision. Conversely, tangibles, assurance, and reliability were positively appraised, highlighting strengths in the physical environment, staff competence, and service consistency. A significant discrepancy between dimension-specific ratings and overall satisfaction raised concerns, potentially reflecting the influence of unmeasured factors such as waiting times, cost, or administrative procedures.

Bivariate analysis demonstrated a statistically significant association solely between perceived assurance and patient satisfaction, underscoring the critical role of staff competence and patient confidence in driving overall satisfaction. While other dimensions exhibited numerically higher satisfaction for "Good" ratings, these associations lacked statistical significance, suggesting that assurance may be a more potent determinant of overall satisfaction in this context. It is crucial to acknowledge that the absence of statistical significance does not negate the potential importance of these dimensions; rather, it indicates an inability to establish a statistically robust relationship within this specific sample. Furthermore, the low P-values observed for reliability and responsiveness warrant further investigation.

Prior research consistently identifies healthcare provider behaviors as crucial determinants of patient satisfaction. For example, studies from Wuhan[13] and South Africa[14] underscored the impact of service attitude and clear condition explanations, respectively. The current study's focus on assurance—a construct encompassing both technical competence and interpersonal skills—directly addresses and reinforces this observed dual emphasis on clinical expertise and communication quality. The non-significant findings for reliability and responsiveness are consistent with observations in Ethiopia[15,16], where facility amenities, despite their theoretical relevance, exhibited varied impacts. This observation underscores the important methodological distinction between statistical non-significance and practical irrelevance, a factor crucial to the interpretation of satisfaction survey data.

These findings necessitate a focused approach to enhancing patient satisfaction. First, targeted interventions should prioritize improving staff empathy and responsiveness through communication training and the implementation of service-oriented protocols. Second, investments in staff training and development are essential to fortify staff competence and cultivate patient trust, thereby bolstering perceived assurance. Third, a thorough investigation into potential underlying factors, such as waiting times, cost, and administrative processes, is warranted to address the observed discrepancy between dimension-specific ratings and overall satisfaction. Fourth, the consideration of demographic factors, such as age, gender, and education level, is crucial for tailoring services and communication strategies. Fifth, qualitative research should be conducted to gain deeper insights into patient experiences and identify specific areas for improvement. Finally, while assurance demonstrated statistical significance, continuous monitoring of all service quality dimensions is essential to maintain high levels of patient satisfaction and ensure comprehensive quality of care.

Conclusion

A study of 79 outpatients, predominantly older, self-employed males with secondary education, showed positive perceptions of service quality dimensions, but mixed overall satisfaction. Perceived assurance strongly correlated with satisfaction, while empathy and responsiveness showed the highest dissatisfaction. This discrepancy suggests unmeasured factors impacting overall satisfaction. Targeted interventions to improve staff empathy, responsiveness, and assurance, coupled with further research into

underlying factors, are needed to enhance patient satisfaction. Continuous monitoring and qualitative research are recommended.

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