Exploring The Drivers Of Patient's Healthcare Preference Regarding Private And Public Hospitals In Bangladesh: A Logistic Regression Model

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Abstract

This study investigates the factors influencing patients' preferences between private and public hospitals in Rajshahi City Corporation, Bangladesh. Data were collected from 500 patients—250 from each hospital type—through structured questionnaires. A binary logistic regression model identifies key predictors of

hospital choice, supported by independent sample t-tests and Kendall's rank order test. The results reveal significant differences in service quality: private hospitals offer longer doctor interaction (12.2 vs. 7.4 minutes), shorter waiting times (26.1 vs. 39.1 minutes), and higher cleanliness ratings (4.1 vs. 3.1). Logistic regression shows that cleanliness (OR = 1.618), modern equipment (OR = 1.694), staff attitude (OR = 1.474), and post-treatment follow-up (OR = 2.061) significantly influence private hospital preference. Kendall's W (0.77) reflects strong agreement on ranking factors, with cleanliness and waiting time as top concerns. The findings emphasize the need for improving public healthcare quality and support policies for achieving Sustainable Development Goal 3 in Bangladesh.

Keywords: Healthcare preference, Public and private hospitals, Logistic regression, Patient satisfaction, Bangladesh health system.

1. Introduction

The global healthcare landscape has undergone significant transformations, emphasizing the importance of patient autonomy and informed choice in healthcare decisions (Vleminckx, S. et al., 2025; Mahlknecht, A. et al., & Abdi, F. et al., 2024; Yang, S. et al., 2023; Mulcahy, P. et al., 2021; Schaede, U. et al., 2017). The World Health Organization (WHO) underscores the necessity of patient-centered care, advocating for systems that prioritize individual preferences, needs, and values in clinical decisions (WHO, 2024 & Elahi, M. T. & Al Nuairi, A. et al., 2024). This paradigm shift recognizes that empowering patients in their healthcare choices can lead to improved health outcomes, increased patient satisfaction, and more efficient healthcare delivery systems (Lyu, Y. et al., & Jaboyedoff, M. et al., & Islam, M.T. et al., 2024; Li, Z. et al., 2022; Karamat, J. et al., 2019). In many countries, the coexistence of public and private healthcare sectors presents patients with choices that can significantly impact their health outcomes and financial well-being (Hasan, M.J. et al., & El Garem, R.A.A. et al., 2024; Gabrani, J. et al., 2021; Bamfo, B.A. et al., 2017). The decision-making process is influenced by various factors, including perceived quality of care, accessibility, cost, and cultural beliefs. Understanding these factors is crucial for policymakers and healthcare providers aiming to design systems that are both equitable and responsive to patient needs (Altarifi, D. et al., 2024; Gabrani, J. et al., & Korczak, V., 2024; Jiang, B. et al., &Jackson, N. et al., 2023; Wang, X. Y. et al., 2023; Li, J. et al., 2022; Anabila, P. et al., & Loban, E., 2019).

Bangladesh's healthcare system is characterized by a dual structure comprising public and private sectors. While public hospitals aim to provide affordable care to the masses, they often grapple with challenges such as overcrowding, limited resources, and infrastructural deficiencies (Aditya, M. T. et al., 2023; Begum, F. et al., 2022; Du, F. et al., 2021). Conversely, private hospitals, though more expensive, are perceived to offer better quality services, shorter waiting times, and more attentive care (Huque, R. et al., 2025; Wahab, A. et al., 2023; Angell, B., et al., & Imtiaz, A. et al., 2021). The financial implications of healthcare choices are profound in Bangladesh, where out-of-pocket expenditures constitute a significant portion of health financing. According to the Bangladesh National Health Accounts, out-of-pocket payments accounted for approximately 67% of total health expenditures in recent years (BBS,

2024). This heavy reliance on personal funds can lead to catastrophic health expenditures, pushing families into poverty. Therefore, understanding the drivers behind patients' preferences for private over public hospitals is essential for developing strategies that ensure equitable access to quality healthcare without imposing undue financial burdens (Talebpour, A. et al., 2024; Listorti, E. et al., 2023; Woo, M. et al., 2022; Rana, R.H. et al., 2020).

Rajshahi City, a prominent urban center in northwestern Bangladesh, presents a unique context for examining healthcare preferences. The city hosts a mix of public and private healthcare facilities, including the Rajshahi Medical College Hospital, several private clinics, and diagnostic centers (Akter, S. et al., 2024; Meleddu, M. et al., 2020). Despite the availability of public healthcare services, anecdotal evidence suggests a growing inclination among residents towards private healthcare providers. Factors such as perceived better service quality, shorter waiting times, and improved infrastructure in private facilities may influence this trend (Akthar, N. et al., 2023; Michael, T., et al., 2023; Meleddu, M. et al., 2020). Understanding the specific factors that drive healthcare preferences in Rajshahi is crucial, given the city's demographic diversity and its role as a regional hub. Insights from this study can inform targeted interventions to enhance public healthcare services, ensuring they meet the needs and expectations of the local population (Milcent, C. 2023; Anderson, R., et al., 2022).

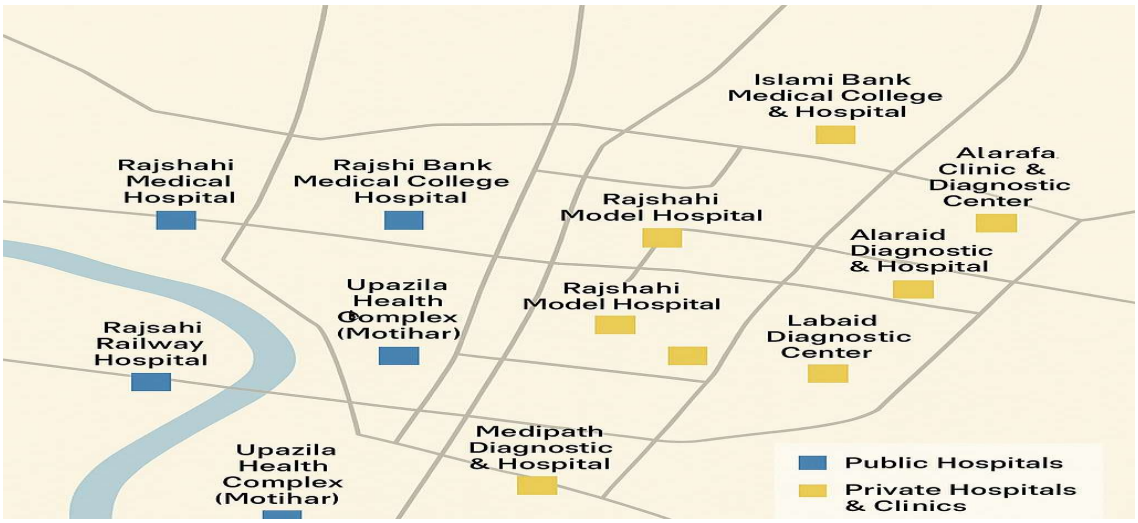
While several studies have explored healthcare utilization patterns in Bangladesh, there remains a paucity of research focusing on the determinants of patient preferences between public and private hospitals, particularly in urban settings like Rajshahi. Previous studies have often concentrated on service quality assessments or patient satisfaction levels without delving into the underlying factors influencing healthcare choices (Lilford, R. J. et al., 2025; Nath, N. J. et al., & Feng, W. et al., 2024). Moreover, there is a lack of quantitative analyses employing robust statistical models to identify and quantify these determinants. This gap in the literature hinders the development of evidence-based policies aimed at optimizing healthcare delivery and ensuring equitable access. By not fully understanding the motivations behind patients' choices, policymakers risk implementing interventions that fail to address the root causes of healthcare disparities.

This study seeks to bridge the identified research gaps by employing a logistic regression model to analyze the factors influencing patients' preferences for private versus public hospitals in Rajshahi City. By collecting and analyzing primary data from a representative sample of patients, the study aims to quantify the impact of various factors, including service quality, cost, accessibility, and patient perceptions, on healthcare choices. The findings are expected to provide actionable insights for policymakers and healthcare administrators. By identifying the key determinants of healthcare preferences, interventions can be designed to enhance the quality and appeal of public healthcare services, potentially reducing the financial burden on patients and promoting more equitable healthcare access. Furthermore, aligning healthcare services with patient preferences supports the broader objectives of the Sustainable Development Goals, particularly Goal 3, which focuses on ensuring healthy lives and promoting well-being for all at all ages.

2. Research Methodology Study Area and Survey Design

The study was conducted in Rajshahi City Corporation, one of the major urban centers in Bangladesh with a diverse range of public and private healthcare facilities. The city houses several public hospitals, including Rajshahi Medical College Hospital, alongside a growing number of private clinics and hospitals. A cross-sectional survey design was employed to collect primary data directly from patients receiving treatment at both public and private

hospitals. A total of 500 respondents were selected using a purposive stratified sampling technique, ensuring an equal representation of patients from public hospitals (n = 250) and private hospitals (n = 250). The survey used a structured questionnaire, covering demographic information and variables related to service quality, cost, and treatment outcomes



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Econometric Methodology

To investigate differences and determinants of patients' hospital preferences, three statistical techniques were applied: the Independent Two-Sample t-Test, Binary Logistic Regression, and Kendall's Rank Order Test.

Two-Sample t-Test

The two-sample t-test was used to examine whether the mean differences in service quality and treatment experiences between public and private hospital patients were statistically significant. The test compared the mean scores of key service-related variables (e.g., cleanliness, waiting time, equipment access) across the two groups.

The t-test equation is expressed as:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

Where:

$\bar{X}_1 - \bar{X}_2$= sample means for private and public hospital groups

s_1^2, s_2^2= sample variances

n_1, n_2 = sample sizes of each group

Degrees of Freedom (Welch's approximation)**:**

$$df = \frac{\left(\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}\right)^2}{\frac{\left(\frac{s_1^2}{n_1}\right)^2}{n_1 - 1} + \frac{\left(\frac{s_2^2}{n_2}\right)^2}{n_1 - 2}}$$

This test is used for variables like waiting time**,** treatment cost**, or** doctor interaction time to check if there are significant differences in means between public and private hospitals.

Binary Logistic Regression Model

To examine the factors influencing patients' preference for private versus public hospitals, a binary logistic regression model was applied. The dependent variable is binary, coded as 1 if the patient received treatment from a private hospital, and 0 for a public hospital. The model explores the probability of choosing a private hospital based on a set of explanatory variables.

The general model is: $$Y_i = f(X_i) \quad \dots (1)$$

Where, Y_i is the binary dependent variable (hospital type), X_i is the vector of explanatory variables that potentially influence hospital choice.

The analytical form of the logistic function used in logistic regression is defined by Equation (2) :

$$P_i = E\left(Y = \frac{1}{X_i}\right) = \beta_1 + \beta_2 X_i \quad \dots (2)$$

The equation (2) can be written as:

$$P_i = E\left(Y = \frac{1}{X_i}\right) = \frac{1}{1 + e^{-(\beta_1 + \beta_2 X_i)}} = \frac{1}{1 + e^{-Z_i}} \quad \dots (3)$$

Where, $Z_i = \beta_1 + \beta_2 X_i$ is known as a logistic distribution function. In this case, Z ranges from -∞ to +∞; and P_i is non-linearly related to Z_i. In this case, an estimation problem may be arisen due to non-linearity in X_i and β_i with P_i. For this reason, the OLS method cannot be applied to estimate the parameters. Taking a natural log, the logistic function (3) can be written as:

$$L_i = \ln\left[{}^{P_i}/_{1 - P_i}\right] = \beta_1 + \beta_2 X_i \quad \dots (4)$$

Where, $\frac{P_i}{1-P_i}$ represents the odds ratio of the dependent variable. The log of the odds ratio is not only linear in independent variables but also in parameters.

The logistic regression model (Equation 4) can be expressed as follows.

$$L_i = Ln\left[\frac{P_i}{1 - P_i}\right] = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + \beta_{11} X_{11} + \beta_{12} X_{12} + \beta_{13} X_{13} + \beta_{14} X_{14} + \beta_{15} X_{15} + u_i \dots (5)$$

Here L_i is the logit or log of the odds of choosing a private hospital over a public one, β_0 is intercept term, and $\beta_1, \beta_2, \beta_3, \dots, \beta_{15}$ are the coefficients of $X_1, X_2, \dots, X_{15}$ are the explanatory variables. This approach provides robust estimates of the odds ratios for interpreting the likelihood of selecting a private hospital over a public one based on each influencing factor.

Kendall's Rank Order Test

To determine the relative importance of each factor in patients' decision-making process, **Kendall's W test** was applied. Respondents ranked the importance of each service

factor, and the test was used to measure the degree of agreement among respondents in the ranking.
Kendall's coefficient of concordance W is given by:

$$W = \frac{12\,S}{m^2(n^3 - n)}$$

Where:
S = sum of squared deviations from mean ranks
m = number of respondents
n= number of items (factors)
A high value of WW (closer to 1) indicated strong agreement in the ranks provided by respondents. The chi-square approximation was used to test for statistical significance.

Table 2.1: Major Variables with Measurements Scale

	Measurement	Scale
Dependent Variable -Binary **1= a patient received treatment from a private hospitals** **0 = a patient received treatment from a public hospital**		
Independent Variables		
Doctor Interaction Time(X_1)	Ratio	Open-ended (in minutes)
Waiting Time Before Treatment (X_2)	Ratio	Open-ended (in minutes)
Cleanliness of Treatment Room (X_3)	Likert Scale	1 = Very dirty → 5 = Very clean
Availability of Medicines (X_4)	Likert Scale	1 = Not at all → 5 = Fully available
Cost of Treatment (X_5)	Ratio	Open-ended (in BDT)
Access to Modern Equipment (X_6)	Likert Scale	1 = Not at all → 5 = Always
Nurse Availability (X_7)	Likert Scale	1 = Never → 5 = Always
Staff Attitude Toward Patients (X_8)	Likert Scale	1 = Very rude → 5 = Very polite
Privacy During Treatment (X_9)	Likert Scale	1 = No privacy → 5 = Full privacy
Clarity of Diagnosis (X_{10})	Likert Scale	1 = Not clear at all → 5 = Very clear
Post-treatment Follow-up (X_{11})	Binary	0 = No, 1 = Yes
Specialist Doctor Availability (X_{12})	Likert Scale	1 = Never → 5 = Always
Emergency Response Speed (X_{13})	Ratio	Open-ended (in minutes)
Patient's Overall Satisfaction (X_{14})	Likert Scale	1 = Very dissatisfied → 5 = Very satisfied
Treatment Effectiveness (X_{15})	Binary	0 = No, 1 = Yes

Table 2.1 presents a comprehensive summary of the major variables used in the study, along with their respective measurement types and scales. The dependent variable is binary, indicating whether a patient received treatment from a private hospital (coded as 1) or a public hospital (coded as 0). This binary classification allows the study to explore the factors influencing patients' choices between public and private healthcare facilities.

The independent variables encompass a mix of ratio, ordinal, and binary types. Ratio-scale variables such as "Doctor Interaction Time," "Waiting Time before Treatment," "Cost of Treatment," and "Emergency Response Speed" are measured in open-ended minutes or Bangladeshi Taka (BDT), allowing precise quantitative analysis. Ordinal variables, which use a 5-point Likert scale, assess patient perceptions and experiences, including cleanliness of the treatment room, availability of medicines, access to modern equipment, nurse availability, staff attitude, privacy, clarity of diagnosis, specialist availability, and overall satisfaction. These variables reflect the quality and accessibility of healthcare services from the patient's viewpoint.

Two variables—"Post-treatment Follow-up Advice" and "Treatment Effectiveness (Outcome)"—are binary, capturing yes/no responses to assess the continuity of care and perceived effectiveness of treatment. The inclusion of these diverse variable types enables a multidimensional analysis of healthcare service quality and patient decision-making behavior. Overall, the variable framework supports a detailed examination of the structural, procedural, and outcome-related aspects influencing patient preferences for private versus public healthcare providers in the study context.

3. Discussion of the Results

Table 3.1: Summary Statistics of Key Variables of the Study

Variable	Type	Mean	Std. Dev.	Min	Max
Doctor Interaction Time (mins)	Ratio	9.8	5.3	2	30
Waiting Time Before Treatment	Ratio	32.6	14.7	5	90
Cleanliness of Treatment Room	Ordinal	3.6	1.0	1	5
Availability of Medicines	Ordinal	3.4	1.1	1	5
Cost of Treatment (BDT)	Ratio	3750	2850	100	15000
Access to Modern Equipment	Ordinal	3.7	1.1	1	5
Nurse Availability	Ordinal	3.5	1.2	1	5
Staff Attitude Toward Patients	Ordinal	3.6	1.1	1	5
Privacy During Treatment	Ordinal	3.3	1.2	1	5
Clarity of Diagnosis	Ordinal	3.4	1.1	1	5
Post-treatment Follow-up Advice	Binary	0.56	0.50	0	1
Specialist Doctor Availability	Ordinal	3.4	1.2	1	5
Emergency Response Speed (mins)	Ratio	12.7	6.5	2	45
Overall Satisfaction	Ordinal	3.5	1.0	1	5
Treatment Effectiveness	Binary	0.63	0.48	0	1
Hospital Type (DV: Private = 1)	Binary	0.50	0.50	0	1

Table 3.1 presents the summary statistics of key variables used in the study, providing insights into the central tendencies and dispersion of patient experiences and healthcare service characteristics. The dataset includes a mix of ratio, ordinal, and binary variables that help assess both the quality and efficiency of healthcare services across public and private hospitals.

For the ratio variables, the average doctor interaction time was 9.8 minutes, with a standard deviation of 5.3 minutes, and ranged from 2 to 30 minutes. Waiting time before treatment averaged 32.6 minutes, indicating moderate congestion, with a wide range from 5 to 90 minutes. The cost of treatment averaged BDT 3,750, showing substantial variability (SD = 2,850), suggesting economic differences in treatment facilities. The emergency response speed averaged 12.7 minutes, indicating varying degrees of urgency management. Ordinal variables based on a 5-point Likert scale (1 to 5) such as cleanliness, equipment access, nurse availability, staff attitude, and overall satisfaction all hover around the mean value of 3.3 to 3.7, reflecting moderate to good service perceptions. These variables show moderate variability, suggesting differing service quality across hospitals. Binary variables reveal that 56% of patients received post-treatment follow-up advice, while 63% reported effective treatment outcomes. The sample was evenly split between patients from private and public hospitals (mean of 0.50), allowing balanced comparison across facility types. Overall, the statistics offer a detailed profile of patient experiences and hospital characteristics, forming the basis for further econometric and comparative analysis.

Table 3.2: Mean Difference of Private and Public Treatment Services

Variable	Mean (Public)	Mean (Private)	Mean Diff.	t-value	p-value	Sign.

Doctor Interaction Time	7.4	12.2	4.8	-9.15	0.000	***
Waiting Time	39.1	26.1	-13.0	8.75	0.000	***
Cleanliness of Treatment	3.1	4.1	1.0	-9.20	0.000	***
Availability of Medicines	3.0	3.8	0.8	-7.80	0.000	***
Cost of Treatment (BDT)	1950	5550	3600	-13.60	0.000	***
Modern Equipment	3.1	4.3	1.2	-11.25	0.000	***
Nurse Availability	3.0	4.1	1.1	-10.00	0.000	***
Staff Attitude	3.1	4.1	1.0	-9.60	0.000	***
Privacy	2.8	3.8	1.0	-8.95	0.000	***
Clarity of Diagnosis	3.0	3.8	0.8	-8.10	0.000	***
Emergency Response	14.4	11.0	-3.4	6.75	0.000	***
Overall Satisfaction	3.0	4.1	1.1	-10.80	0.000	***

Table 3.2 compares the mean values of key healthcare service variables between public and private hospitals and evaluates whether the differences are statistically significant using t-tests. The results reveal substantial differences in service quality, patient experience, and cost between the two types of healthcare facilities. The doctor interaction time is significantly higher in private hospitals (mean = 12.2 minutes) compared to public hospitals (mean = 7.4 minutes), with a mean difference of 4.8 minutes ($t = -9.15$, $p < 0.001$). Conversely, waiting time before treatment is notably longer in public facilities (39.1 minutes) than in private ones (26.1 minutes), indicating more delays in public healthcare (mean difference = -13.0 minutes, $t = 8.75$, $p < 0.001$). Service quality indicators consistently favor private hospitals. For instance, the cleanliness of treatment rooms, availability of medicines, access to modern equipment, nurse availability, and staff attitude all show significantly higher mean scores in private hospitals, with mean differences ranging from 0.8 to 1.2 points on a 5-point Likert scale. All these differences are highly significant ($p < 0.001$). Similarly, privacy during treatment and clarity of diagnosis/communication are rated higher in private facilities, reflecting better patient-centered care. Emergency response speed is faster in private hospitals, with a lower mean response time of 11.0 minutes compared to 14.4 minutes in public hospitals. However, these benefits come at a cost: treatment costs in private hospitals are significantly higher (mean = BDT 5,550) compared to public ones (mean = BDT 1,950), with a mean difference of BDT 3,600 ($t = -13.60$, $p < 0.001$). Overall, patient satisfaction is significantly greater in private hospitals (mean = 4.1) than in public ones (mean = 3.0), confirming the superior perceived service quality in the private sector. All observed differences are statistically significant at the 1% level, indicating robust evidence of disparity between public and private healthcare services.

Table 3.3: Logistic Regression Results of Factors Affecting Treatment Services- Private vs Public Hospitals

Dependent Variable: Type of Hospital (1 = Private, 0 = Public)
Model: Binary Logistic Regression
Sample Size: 500 respondents (250 public, 250 private)

Predictor Variable	Coefficient	Std. Error	p-value	Odds
Doctor Interaction Time	0.025	0.008	0.002	1.025
Waiting Time Before Treatment	-0.018	0.007	0.010	0.982
Cleanliness of Treatment Room	0.481	0.121	0.000	1.618
Availability of Medicines	0.412	0.134	0.002	1.510
Cost of Treatment	0.001	0.0002	0.000	1.001
Access to Modern Equipment	0.527	0.143	0.000	1.694
Nurse Availability	0.349	0.116	0.003	1.418
Staff Attitude Toward Patients	0.388	0.137	0.005	1.474
Privacy During Treatment	0.330	0.128	0.010	1.391

Clarity of Diagnosis/Communication	0.364	0.144	0.012	1.439
Post-treatment Follow-up Advice	0.723	0.215	0.001	2.061
Specialist Doctor Availability	0.441	0.130	0.001	1.555
Emergency Response Speed	-0.013	0.006	0.030	0.987
Patient's Overall Satisfaction	0.576	0.148	0.000	1.779
Treatment Effectiveness (Outcome)	0.395	0.172	0.022	1.484
Constant	-5.762	0.745	0.000	—

Table 3.3 presents the results of a binary logistic regression analysis conducted to identify the factors influencing a patient's likelihood of receiving treatment from a private hospital (coded as 1) versus a public hospital (coded as 0). The model includes 500 observations (250 from each hospital type) and examines a range of service quality, cost, and outcome-related variables. The regression results reveal several statistically significant predictors of private hospital use. Doctor interaction time has a positive and significant coefficient (0.025, p = 0.002), with an odds ratio (OR) of 1.025, indicating that longer interaction times increase the likelihood of choosing a private hospital. Conversely, waiting time before treatment negatively affects the probability (coefficient = -0.018, p = 0.010; OR = 0.982), suggesting that shorter waiting times are associated with private hospitals. Quality indicators such as cleanliness of treatment room (OR = 1.618), availability of medicines (OR = 1.510), access to modern equipment (OR = 1.694), and nurse availability (OR = 1.418) are all significant positive predictors of private hospital usage, reflecting patient preferences for better-equipped and better-staffed environments.

Staff attitude, privacy during treatment, clarity of diagnosis, and specialist doctor availability also show positive and significant effects, with odds ratios ranging from 1.391 to 1.555, emphasizing the importance of interpersonal and diagnostic factors. Post-treatment follow-up advice has one of the strongest effects (OR = 2.061), doubling the odds of private hospital use when such services are provided. Cost of treatment (OR = 1.001) is also a significant predictor, albeit with a small effect, suggesting that patients may accept higher costs for better quality. Overall satisfaction and treatment effectiveness significantly increase the odds of choosing private hospitals. In contrast, emergency response speed negatively affects the likelihood (OR = 0.987), indicating quicker emergency care is more common in private settings. The negative and significant constant confirms that, in the absence of other factors, the base likelihood favors public hospitals.

Table 3.4: Rank Order of Factors Affecting Treatment from Private of Public Hospitals

Variable	**Mean Rank**	**Rank**
Cleanliness	2.1	1
Waiting Time	3.2	2
Doctor Interaction Time	3.5	3
Access to Modern Equipment	4.1	4
Availability of Medicines	4.3	5
Staff Attitude	5.6	6
Privacy During Treatment	6.7	7
Clarity of Diagnosis	7.1	8
Post-treatment Follow-up	8.4	9
Cost of Treatment	9.0	10

Kendall's W = 0.77, Chi-Square (χ^2) = 301.5, df = 9, p-value < 0.001

Table 3.4 displays the rank order of factors influencing patients' choice between private and public hospitals, based on respondents' perceptions. The mean ranks indicate the relative importance of each factor, with a lower mean rank representing higher importance. The

analysis was supported by Kendall's coefficient of concordance (W = 0.77), which reflects a strong level of agreement among respondents. The chi-square value ($\chi^2 = 301.5$, df = 9, $p < 0.001$) confirms that the ranking differences are statistically significant. Cleanliness of the treatment environment emerged as the most critical factor (mean rank = 2.1), indicating that hygienic conditions are a top priority for patients when selecting healthcare services. Waiting time before treatment ranked second (mean rank = 3.2), highlighting the significance of timely service. Doctor interaction time followed closely in third place (3.5), suggesting that personal engagement with medical professionals is highly valued. Other important factors included access to modern equipment (rank 4) and availability of medicines (rank 5), both essential indicators of service quality and healthcare infrastructure. Staff attitude, privacy during treatment, and clarity of diagnosis ranked in the middle, reflecting the importance of respectful, private, and clear communication in patient care.

Post-treatment follow-up and cost of treatment were ranked lowest (8th and 10th, respectively), implying they are considered less decisive in treatment facility choice. However, their relevance should not be dismissed, especially for lower-income groups. Overall, the results reveal that patients prioritize cleanliness, prompt service, and meaningful doctor interaction over financial cost, highlighting a demand for quality-driven rather than cost-driven healthcare decisions.

4. Conclusions and Policy Recommendation

The study aimed to explore the driving factors influencing patients' healthcare preferences between private and public hospitals in Rajshahi City Corporation, Bangladesh. By analyzing responses from 500 patients—250 from public and 250 from private hospitals—the study employed statistical tools such as independent sample t-tests, logistic regression analysis, and Kendall's rank-order test. The findings clearly reveal that patients place higher importance on service quality indicators than on treatment cost when choosing healthcare facilities. Although public hospitals offer treatment at significantly lower costs, private hospitals are preferred by many patients due to superior performance in areas such as cleanliness, reduced waiting time, better doctor-patient interaction, modern equipment access, respectful staff behavior, and availability of essential medicines. These differences were not only statistically significant but also practically impactful, as highlighted by both the mean difference analysis and the logistic regression model. Patients who experienced longer doctor interaction time, better cleanliness, availability of modern equipment, and proper follow-up care were more likely to seek treatment from private hospitals. Additionally, the rank-order results confirmed cleanliness, short waiting time, and quality interaction with doctors as the most influential factors.

These insights point to a major quality gap between public and private health services, suggesting that many patients opt for private hospitals not out of luxury or preference but out of necessity, due to dissatisfaction with public healthcare experiences. This trend poses a risk to equitable healthcare access, especially for low-income and vulnerable populations who cannot afford private healthcare. The growing preference for private hospitals, if left unaddressed, may increase healthcare inequality and strain the private sector with patient overload. To counter this, it is imperative that public hospitals improve their service quality to better meet patient expectations and ensure equitable healthcare. Cleanliness should be prioritized through increased staffing for maintenance, stricter hygiene protocols, and regular monitoring. Waiting times must be reduced through improved patient management systems, digitized record-keeping, and better allocation of resources, including medical personnel. Enhancing doctor-patient interaction time will require reducing the overwhelming workload on physicians and training them to engage more empathetically with patients.

Modern equipment should be made available and functional in public hospitals through increased investment, proper budgeting, and maintenance strategies. Medicines must be reliably supplied within hospitals, reducing patients' dependency on external pharmacies and out-of-pocket expenditure. Hospital staff behavior must be improved through periodic training focused on communication skills, patient rights, and professional ethics, alongside the introduction of feedback systems and performance assessments. Introducing structured post-treatment follow-up systems would enhance continuity of care and raise patient confidence in public services. These improvements not only have the potential to boost the utilization of public hospitals but also ensure that access to quality healthcare does not remain a privilege for those who can afford private services. By addressing these quality-related issues in public healthcare, policymakers can ensure a more balanced and inclusive healthcare system where patients can access reliable, respectful, and effective treatment regardless of their financial means. Ultimately, improving the public health system is essential for upholding the right to health for all citizens and for building a resilient, equitable healthcare infrastructure in Bangladesh.

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