

A Comparative Analysis of Quality of Health Care between Public and Private Hospitals in Bangladesh

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ABSTRACT

Purpose: The main objective of the study is to investigate the differences in service quality between public and private sector healthcare systems in Bangladesh, more specifically in Tangail District. This study also tries to identify the efficiency and the rate of service utilization in both public and private sector healthcare systems.

Methodology: The comparison between public and private health care system is done based on certain criteria including availability of physicians, assurance and competence of physicians, empathy of doctors and nurses to patients, cost, public perception on cost, drug availability, emergency patient management and waiting time. We collected required data by interviewing 376 patients from different rural public and private hospitals.

Findings: The major findings of the analysis show that public hospitals are providing relatively better services than private hospitals in terms of availability of physicians, cost, perception, emergency patient management, and patients' waiting time. On the other hand, private hospitals are performing better compared to public hospitals in terms of assurance and competence of physicians, empathy of doctors and nurses, and drug availability. However, this study documents that both sectors are suffering to meet benchmark standards in terms of quality, which requires urgent improvements.

Limitations: This study is conducted based on only survey and two-sample mean test. Further test can be conducted via empirical analysis using secondary databases. Moreover, comparison of survey data with empirical data could be done to see the reliability.

Practical Implications: This study will be useful for authority and administration, especially Ministry of Health, and Family Welfare (MOHFW) to monitor the quality, and to ensure better services to patients in developing country like Bangladesh. In addition, this study also helps general people by documenting empirical evidence about current situation of medical services in both sectors.

Originality/Value: This research is conducted based on patients' responses to our questionnaire. We do believe our paper reflects real scenario of health care systems in Bangladesh.

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1. Introduction

The present study investigates the differences in service quality between public and private health care providers in an emerging country, Bangladesh. The present government established and opened 12248 community clinics across the country to provide services at rural level (MOHFW, 2018). In addition, govt. has subsidized BDT 80 crore for supplying medications in 2012 (MOHFW, 2018). In district level, government established a number of hospitals and extended some services and seat numbers for other existing hospitals. Besides, Govt. introduced the act of Private Medical Establishment and Rules Regulations (amended) 2011 to enhance the quality of services for private hospitals (MOHFW, 2018).

Having such tremendous development in infrastructure in health sectors, Bangladesh is, till date, carrying a high burden of disease that includes non-communicable diseases (NCDs), tuberculosis, respiratory infections, and neuropsychiatric conditions. It is now timely demand to improve the quality of services not only in private sector but also in public health sector. Present govt. is claiming that they have contributed significantly in both public and private sector to ensure better services. However, it is not clear whether private sector or public sector is providing better services that is explored in this study. More importantly, the present govt. is trying to improve healthcare facilities, in rural areas, as doctors prefer to work in major cities or medical colleges. This is because doctors get good environment and facilities for higher education. Whatever the reason is, the rural people of our country, (approximately 60 percent of our total population), are not getting proper healthcare facility, which is one of the basic needs of human life.

This study is conducted based on survey. We have interviewed 376 patients from different public and private hospitals of rural areas by using a structured questionnaire (Appendix A).

Our main analysis results show that there is minimal difference between the quality of health services between public and private health care providers. Next, we find that medical cost including diagnosis cost is one of the strongest determinants of choosing either public or public healthcare facilities. With respect to availability of doctors, emergency patients' management, and waiting time, government health care providers are much better than that of private health care providers. However, private health care providers are much better in competence, efficiency in service, and doctors-patients service time. In further individual component analysis, we find that the private hospitals' doctors give more time and attention to listen patients' problem and they are comparatively better in managing patients' problem than public hospital' doctors do.

This study has contribution in several aspects. First, this study will shed a light on the service quality difference in both public and private hospitals. This will also provide an

insight on the issues that need special attention. As government has been taking steps to improve the quality of healthcare, this study may be helpful to them, as it identifies the areas that need immediate improvement, and where government hospitals have lacking. Second, this study provides insights about the quality of private hospitals, and in which areas they are different from government hospitals. Finally, this study compares the efficiency and quality differences in emergency patients-management, which is very important department of any hospital.

This paper is organized as follows. Section 2 discusses literature review, Section 3 discusses research methodology along with data collection and research design, Section 4 reports main data analysis and results, Section 5 covers discussion and recommendations, Section 6 concludes with policy implications.

2. Literature Review

Healthcare capacity has been in the focus of many arguments. Scholars from home and abroad have been trying to address the problems that occur in the private and public healthcare systems. They tried to analyze the real-world scenario of healthcare systems from their own perspectives. The structure of the hospitals has significant impact on the quality of the hospital services. Since private hospitals depend on income generated from patients, they are more willing to give better quality services to the patients (Andaleeb, 2000). Hamid et al. (2005) documented that the quality of services depends on demographic characteristics such as income, education, cost, occupation, availability of service providers, and easy access to the service providers. These are the main determinants of choosing a hospital in the rural areas of Bangladesh (Hamid et al, 2005).

Another study conducted by Siddiqui and Khandaker (2007) demonstrated that private hospitals are proving relatively better services than public hospitals in terms of nursing care, cleanliness, supply of utilities, and availability of required drugs. In their further analysis, they showed that costs in overseas hospitals are lower than native private hospitals' costs, though it is inconsistent with the perception of common people.

Similarly, Irfan and Ijaz (2011) found that private hospitals provide better quality services than that of public hospitals specifically with regard to empathy, visible services, assurance timeliness, and responsiveness.

Yousapronpaiboon and C. Johnson (2013) investigated the differences in service quality between public and private hospitals in Thailand to determine the readiness to compete in this expanding Asian healthcare marketplace. They documented that private hospitals are considered by patients as better than the public hospital especially because of better quality doctors, personality and experience, sense of trust, and politeness of hospitals' personnel.

Chari (2016) conducted similar kind of analysis taking 1000 patients in Cyprus. They mainly investigate the level of patients' satisfaction. Their study suggests that administrators of public hospitals need to update their strategic and operational planning so that they can respond to the needs of their patients. Later, they suggest authority should keep control to confirm that hospitals are using public properties efficiently and effectively.

Kyei (2016) tried to investigate patients' satisfaction with diagnostic radiology services in selected hospitals in Accra, Ghana. Using a cross-sectional and descriptive survey of two hundred people, the study reveals that 97% of patients expressed satisfaction with overall quality of diagnostic radiology care in the private hospital, and 66% of respondents from the public hospital expressed satisfaction with overall quality of care.

On the other hand, Helmig and Lapsley (2001) show that public hospitals are providing better services than private hospitals in Germany. In addition, they show that government is committed to increase efficiency in public sectors as they are using public resources. Similarly, Tatekeet al (2012) conducted a comparative analysis of public and private health care service quality in Central Ethiopia. Using a cross-sectional study of 10 hospitals (5 private and 5 public hospitals), they document that 18.0% of the patients are highly satisfied with the service quality of public hospitals.

Another study conducted by Basu et al. (2012) revealed that private hospitals' health care service providers frequently violate medical standards of practice, but had greater reported timeliness and cordiality to patients.

When we explored from the perspective of Bangladesh, we find only research relating to health care systems have been conducted so far (such as, Siddiqui and Khandaker, 2007; Parkhurst et al. 2004; Amin et al. 2010; Khan et al. 2011). For example, Parkhurst et al. (2004) conducted a comparative analysis based on extensive case studies of maternal health and health systems in four different countries including Bangladesh, Russia, South Africa, and Uganda with a view to addressing the importance of maternal healthcare in overall healthcare system. The study tested to see how a health system approach can benefit the understanding of maternal health services. A number of cross-cutting health system characteristics that affects maternal health were identified in the paper including human resource structures, the public-private mix of service provision, and the changes involved with health sector reforms. This study also concludes that country specific contexts can also determine many factors that might influence maternal health outcomes and service performances.

All the prior studies focus on private and public healthcare systems in different countries but none of the previous studies focus on comparative performance of both the

sectors. Although some international researchers have tried to compare private and public-sector healthcare services, but no one has done the research solely on Bangladesh and also none of the prior research attempted to see the actual situation of rural areas of Bangladesh. Current research will fill this void. Another methodological shortcoming of prior research is that they cover only Dhaka city and its health care quality. But, still more than 60% of our total population lives in rural areas. In this paper, we are trying to extend prior research by covering a remote district to compare health care facilities between public and private health care systems. In addition, we confirm that prior studies did not cover two significant indicators of healthcare service performance such as emergency patient management and waiting time to get the medical services, which are covered in our study.

3. Research Methodology

3.1 Sample and Research Design

This study is based on survey. A questionnaire is used to collect data from patients. To be a part of our sample, a patient needs to visit at least once in either in public or private hospital. We take interview of 400 people. There are eleven (11) Upazila in Tangaile district. We tried to collect data from 40 people from each Upazila. However, total 24 people denied providing information leaving us 376 for our final sample for this study. To remove outlier or biasness, we follow random sampling process in selecting a person to be in our sample. In designing our questionnaire, we follow mixed approach including dichotomous and open-ended questions. We use two-sample t-test for our analysis. To do so, we divided our whole sample into two sample as public and private health care providers respectively.

3.2 Definition of Variables

Quality of healthcare facility is an elusive and indistinct construct, and it is always difficult to measure. Perceptions of the quality of any service result from a comparison of the expectations of consumers with the performance of actual services. Evaluation of the quality of service is not made solely on the outcome of a service rather it also involves evaluation of the process of service-delivery (Siddiqui and Khandakar 2010). So, in this paper, to measure the services performance of different healthcare facility, we focus on some criteria such as, availability of physicians, assurance and competence of physicians, empathy of doctors and nurses, perceived cost, drug affordability and availability, emergency patient management and waiting time. A brief description of these factors is given below:

3.2.1 Availability of Physicians: The availability of physicians measures the presence of the doctor at the arrival of the patients. One of the common allegation against doctors in our country is they are not always present at the hospitals. But availability of a doctor at

arrival of the patient is one of the crucial factors of the treatment. Through this variable this study will measure the availability of doctors in both government and private hospitals.

3.2.2 Competence of Physicians: The competence of physician's variable defines the competence of physicians by measuring how easily they can diagnosis patient's disease and is there any difference in the level of competence of doctors in public and private hospitals.

3.2.3 Assurance of Physicians: This variable measures patients' safety and comfortability in doctor's hand. Patients often complain about the fact that they were not comfortable with their doctor even some do not feel safe in doctor's hand. How safe one feels in doctor's hand in one of the major indicators of patient satisfaction. This variable will try to measure this satisfaction rate both in public and private hospitals.

3.2.4 Empathy of Doctors and Nurses: The empathy of doctors and nurses measures the level of concern of doctors and nurses toward patients. Empathy of physicians in public and private hospitals is measured using three factors. Those factors are: if the doctors pay attention while patients are talking, if they give proper answer to patients' questions, if they are consistently caring.

3.2.5 Perceived Cost: This variable measures the price that patients have to pay for the healthcare service and patient's satisfaction level about the cost. Cost is one of the major determinants of choosing a healthcare facility.

3.2.6 Drug Availability: Drug availability measures the availability of drugs in rural areas and patient satisfaction regarding the issue. The common problem faced by rural people is lack of drug store in rural areas. With help of local pharmaceuticals, the situation has improved but still for some reason drug availability is a major issue in healthcare performance.

3.2.7 Emergency Patient Management Facility: This variable measures the number of hospitals that are providing emergency patients management facilities in rural areas.

3.2.8 Emergency Patient Management: This variable measures the availability or presence of a duty doctor in the emergency room. Hospitals often offer emergency service but some of them do not have a doctor who is 24 hours available at the facility. So this variable will measure how well emergency patients are management in public and private hospitals.

3.2.9 Waiting Time: Waiting time measures the amount of time that one has to wait to get the healthcare services from public and private hospitals.

4. Results

According to the results of the factor analysis and reliability check, the service-quality variables are finalized as availability of physicians, assurance/competence of physicians, empathy of physicians, responsiveness of nurses, empathy of nurses, availability of drugs, perceived cost of healthcare service, emergency patient management and waiting time. The service quality of different public and private was measured using two widely used methods: Mean analysis and Gap analysis using two sample t- test. In this section, we show the results of our data analysis based on all criteria we mentioned earlier to differentiate public health care providers from private health care provers. Two-sample mean test is conducted in all twelve areas. Statistical inferences and interpretations are mentioned in each case separately.

4.1 Availability of Doctor

(Table 1) shows that 77 percent patients from public sector find doctors were available during their visit. On the other hand, only 59 percent patients of private hospitals confirmed the doctors’ availability during their visit.

Table1. Availability of Doctors (Two- Sample t test with equal Variance)

Variable	Observation	Mean	Standard Error	Standard Deviation	[95% Confidence Interval]	
Public	188	0.7713	0.0307	0.4211	0.7107	0.8319
Private	188	0.5851	0.0360	0.4940	0.5140	0.6562
Combined	376	0.6782	0.2413	0.4677	0.6308	0.7257
Diff		0.1862	0.0474		0.0931	0.2793
Diff= mean(Public) – mean(Private)				T = 3.932		
H₀ : diff= 0				Degree of Freedom = 374		
H_a : diff< 0 Pr (T<t)=0.9999		H_a : diff! = 0 (Pr (T > t) = 0.0001		H_a : diff> 0 Pr (T > t) = 0.0001		

Source: Authors' Calculation

4.2 Competence of Physicians

This criterion measures the level of doctors’ competence in their services to patients. More specifically, this variable investigates the efficiency of doctors’ in disease diagnosis. Based on the analysis (Table 2), we find that 95% patients from private health care agreed that doctors are efficient, while, 85% patients of public health care said that doctors were efficient in disease diagnosis. The plausible reason may be due to lack of laboratory facilities in public health care services.

Table 2. Competence of Physicians (two- Sample t-test with equal Variance)

Variable	Observation	Mean	Standard Error	Standard Deviation	[95% Confidence Interval]	
Public	188	0.8936	0.0225	0.3092	0.8491	0.9381
Private	188	0.9468	0.0164	0.2250	0.9144	0.9792
Combined	376	0.9202	0.1399	0.2713	0.8927	0.9477
Diff		-0.0532	0.0279		-0.1080	0.0016
Diff= mean(Public) – mean(Private)				T= -1.9074		
H₀ : diff= 0				Degree of Freedom= 374		
H_a : diff< 0 Pr (T<t)=0.0286		H_a : diff!= 0 (Pr (T > t) = 0.057		H_a : diff> 0 Pr (T > t) = 0.9714		

Source: Authors' Calculation

4.3 Assurance of Physicians

(Table 3) presents the data regarding assurance of physicians' measures how safe and comfortable patients feel in the doctors' hand. Analysis shows that 80 percent patients are more comfortable with the doctors of private hospitals, where 75 percent patients feel safe in public hospitals. However, the results are not statistically significant.

Table 3. Assurance of Physicians (Two- Sample t-test with equal Variance)

Variable	Observation	Mean	Standard Error	Standard Deviation	[95% Confidence Interval]	
Public	188	0.75	0.0317	0.4341	0.6875	0.8125
Private	188	0.8031	0.0291	0.3987	0.7458	0.8605
Combined	376	0.7766	0.0251	0.4171	0.7343	0.8189
Diff		-0.0532	0.0429		-0.1377	0.0313
Diff= mean(Public) – mean(Private)				t=1.2373		
H₀ : diff= 0				Degree of Freedom= 374		
H_a : diff< 0 Pr (T<t)=0.1084		H_a : diff != 0 (Pr (T > t) = 0.2167		H_a : diff> 0 Pr(T > t) = 0.8916		

Source: Authors' Calculation

4.4 Empathy of Physicians

Empathy of physicians in public and private hospitals is measured using three factors including doctor’s attention while patients are talking, appropriateness of doctor’s response to patients’ questions and consistency in patients’ caring.

According to this analysis, doctors are more willing to listen to patient’s problems attentively when they visit private hospitals. (Table 4) shows that, 94 percent of the respondents think that doctors were more willing to listen to their problem when they visited them in private hospitals where this rate is 89 percent in public hospitals.

This analysis also shows that, doctors are more willing to answer patient’s problems properly when they visit private hospitals, which are consistent with prior analysis. (Table 5) shows that 93 percent of the respondents think that doctors were more willing to answer them inquires when they visited them in private hospitals where this rate is 89 percent in public hospitals. (Table 6) shows that doctor’s act is almost same in public and private hospitals when it comes to consistent caring. 71 percent of the respondents think that doctors were more caring when they visited them in private hospitals where this rate is 70 percent in public hospitals.

Table 4. Empathy of Physicians: Doctor’s Attention to Patients Details
(Two- Sample t test with equal Variance)

Variable	Observation	Mean	Standard Error	Standard Deviation	[95% Confidence Interval]	
Public	188	0.8936	0.0225	0.3091	0.8491	0.938
Private	188	0.9415	0.0171	0.2353	0.9076	0.975
Combined	376	0.9176	0.0142	0.2754	0.8896	0.945
Diff		-0.0479	0.0283		-0.1036	0.008
Diff= mean(Public) – mean(Private)				T= -1.689		
H₀ : diff= 0				Degree of Freedom= 374		
H_a : diff< 0 Pr (T<t)=0.0460		H_a : diff != 0 (Pr(T > t) = 0.0920		H_a : diff> 0 Pr(T > t) = 0.9540		

Source: Authors' Calculation

**Table 5. Empathy of Physicians: Doctor's Response to Patients Questions
(Two- Sample t test with equal Variance)**

Variable	Observation	Mean	Standard Error	Standard Deviation	[95% Confidence Interval]	
Public	188	0.8936	0.0226	0.3092	0.8491	0.9381
Private	188	0.9362	0.0179	0.2451	0.9009	0.9714
Combined	376	0.9149	0.0144	0.2794	0.8866	0.9432
Diff		-0.0426	0.0288		-0.0991	0.0140
Diff= mean(Public) – mean(Private)				T= -1.4789		
H_0 : diff= 0				Degree of Freedom= 374		
H_a : diff< 0 Pr (T<t)=0.0700		H_a : diff != 0 (Pr(T > t) = 0.1400		H_a : diff> 0 Pr(T > t) = 0.9300		

Source: Authors' Calculation

Table 6. Empathy of Physicians: Caring (Two- Sample t test with equal Variance)

Variable	Observation	Mean	Standard Error	Standard Deviation	[95% Confidence Interval]	
Public	188	0.7021	0.0334	0.4585	0.6362	0.7681
Private	188	0.7074	0.0333	0.4561	0.6418	0.7731
Combined	376	0.7048	0.0236	0.4567	0.6585	0.7511
Diff		-0.0053	0.0472		-0.0981	0.0874
Diff= mean(Public) – mean(Private)				t= -0.1128		
H_0 : diff= 0				Degree of Freedom= 374		
H_a : diff< 0 Pr (T<t)=0.4551		H_a : diff != 0 (Pr(T > t) = 0.9103		H_a : diff> 0 Pr(T > t) = 0.5449		

Source: Authors' Calculation

Although according to the t value which is -0.1128 and mean difference (-0.0532) the service gap between these slightly differs, some patients believe that public hospitals has a long way to go for insuring consistent caring facility. Every variable that insures empathy show that private hospitals are better than public hospitals. This dissatisfaction

among public hospital patients may arise from the heavy patient rush and limited available time in public hospitals.

4.5 Cost

(Table 7) presents the data analysis for cost of services in both private and public health care providers. Analysis shows that cost of taking service in private hospitals is 30 times higher than public hospitals. The average cost of getting medical services in public hospitals is 10.58 taka where the average cost for private medical service facilities is 332.18 taka.

Table 7. Cost (Two- Sample t test with equal Variance)

Variable	Observation	Mean	Standard Error	Standard Deviation	[95% Confidence Interval]	
Public	188	332.1809	6.4615	88.5959	319.434	344.9277
Private	188	10.5851	5.3035	72.7278	0.1227	21.0475
Combined	376	171.383	9.2937	180.2108	153.1088	189.6572
Diff		321.5957	8.3593		305.1586	338.0329
Diff= mean(Public) – mean(Private)				t=38.4715		
H₀ : diff= 0				Degree of Freedom= 374		
H_a : diff< 0 Pr (T<t)=1.0000		H_a : diff != 0 (Pr(T > t) = 0.0000		H_a : diff> 0 Pr(T > t) = 0.0000		

Source: Authors' Calculation

Here, the value of t is 38.4715 and mean difference is 321.5957 which suggests that public hospitals are in strong position in terms of cost related with getting medical services than private hospitals. Public hospitals cost 5-10 taka for medical services and for poor people sometimes it is free of cost. But private hospitals take 300-800 taka for their services which is burden for some rural area dwellers.

4.6 Perception on Cost

As public hospitals costs less than private hospitals patients are more satisfied with the public hospitals than private hospitals in terms of cost. The rate of dissatisfaction on cost issue is 0.5% in public hospitals, where 98% of patients of private hospitals felt that they are paying more than what they are getting (Table 8).

Table 8. Perception on Cost (Two- Sample t test with equal Variance)

Variable	Observation	Mean	Standard Error	Standard Deviation	[95% Confidence Interval]	
Public	188	0.989	0.0075	0.1029	0.974	1.0042
Private	188	0.005	0.0053	0.0729	-0.005	0.0158
Combined	376	0.497	0.0258	0.5007	0.446	0.5481
Diff		0.984	0.0092		0.966	1.0021
Diff= mean(Public) – mean(Private)				t= 107.0007		
H_0 : diff= 0				Degree of Freedom= 374		
H_a : diff< 0 Pr (T<t)=1.000		H_a : diff != 0 (Pr(T > t) = 0.0000		H_a : diff> 0 Pr(T > t) = 0.0000		

Source: Authors' Calculation

A (Table 8) show that the value of t is 107.007 and mean difference is 0.9840426 which suggests that public hospitals are in a very strong position in terms of perception on cost. Almost every patient was satisfied with costs in public hospitals and almost every patient felt that they were paying more than what they are getting from private hospitals.

4.7 Drug Availability

Availability of drugs is higher when patients visit private hospitals. This analysis shows (Table 9) that 98% of the patients find it easier to buy the prescribed medicine when they visit private hospitals but only 88 percent of the patients from public hospitals found prescribed medicine available in their nearest pharmacy. According to some patients, sometimes they have to go to nearest city to buy the medicine as medicine prescribed by public hospitals doctors are not available in rural areas.

Table 9. Drug Availability (Two- Sample t test with equal Variance)

Variable	Observation	Mean	Standard Error	Standard Deviation	[95% Confidence Interval]	
Public	188	0.8829	0.2350	0.3223	0.8366	.9293
Private	188	0.9893	0.0075	0.1028	0.9745	1.0041
Combined	376	0.9361	0.0126	0.2447	0.9113	0.9609
Diff		-0.1063	0.0246		-0.1549	--0.0578
Diff= mean(Public) – mean(Private)				t= -4.3114		
H_0 : diff= 0				Degree of Freedom= 374		
H_a : diff< 0 Pr (T<t)=1.0000		H_a : diff != 0 (Pr(T > t) = 0.0000		H_a : diff> 0 Pr(T > t) = 0.0000		

Source: Authors' Calculation

4.8 Emergency Patient Management Facility

Every government hospital at Upazila level has facilities to manage emergency patient but our results (Table 10) show that none of the private hospitals, in our sample, has such facilities. As a result, they do not appoint any doctor for 24 hours.

Table 10. Emergency Patient Management Facility (Two- Sample t test with equal Variance)

Variable	Observation	Mean	Standard Error	Standard Deviation	[95% Confidence Interval]	
Public	188	1	0	0	1	1
Private	188	0	0	0	0	0
Combined	376	.5	0.0258	0.5006	0.449	0.550
Diff		1	0		1	1
Diff= mean(Public) – mean(Private)				T = 0.00		
H_0 : diff= 0				Degree of Freedom = 374		
H_a : diff< 0 Pr (T<t)=0.		H_a : diff != 0 (Pr(T > t) =		H_a : diff> 0 Pr(T > t) =		

Source: Authors' Calculation

As no private has emergency patient management facility there is no calculated t value for this variable, so this can be said that public hospitals are only choice of village people when any emergency arises.

4.9 Emergency Patient Management

As private hospitals do not provide any emergency medical facilities, the availability of emergency room doctor is higher in public hospitals. But 95 percent of the responded got emergency medical services from public hospitals the rest of the 5 percent of the responded did not find any doctor in the emergency room (Table 11).

Table 11. Emergency Patient Management (Two- Sample t test with equal Variance)

Variable	Observation	Mean	Standard Error	Standard Deviation	[95% Confidence Interval]	
Public	188	.9468	0.0164	0.2250	0.9144	.9791
Private	188	0	0	0	0	0
Combined	376	.4734	0.0257	0.4999	0.422	0.524
Diff		.9468	0.0164		0.9145	0.979
Diff= mean(Public) – mean(Private)				t=57.694		
H_0 : diff= 0				Degree of Freedom= 374		
H_a : diff< 0 Pr (T<t)=1.0000		H_a : diff != 0 (Pr(T > t) =		H_a : diff> 0 Pr(T > t) =		

Source: Authors' Calculation

4.10 Waiting Time

The waiting time measures the amount of time that patient waits to get his/her healthcare services from public and private hospitals. Waiting time to get service is higher in private hospitals than public hospitals. Although the differences are not very high but the analysis shows that, average time to get service from public hospitals is 12.58 minutes but a patient has to wait 14.05 minutes to get any service in private hospitals (Table 12).

Table 12. Waiting Time (Two- Sample t test with equal Variance)

Variable	Observation	Mean	Standard Error	Standard Deviation	[95% Confidence Interval]	
Public	188	14.053	1.380	18.923	11.330	16.775
Private	188	12.579	2.761	37.862	7.132	18.027
Combined	376	13.316	1.541	29.899	10.284	16.348
Diff		1.473	3.087		-4.596	7.543
Diff= mean(Public) – mean(Private)				t=0.4773		
H_0 : diff= 0				Degree of Freedom= 374		
H_a : diff< 0 Pr (T<t)=0. 6833		H_a : diff != 0 (Pr(T > t) = 0.6334		H_a : diff> 0 Pr(T > t) = 0.3167		

Source: Authors' Calculation

4.11 Other Findings

Apart from these empirical findings, we like to mention some issues that need to be taken into consideration to ensure better service quality in both private and public hospitals. Such as, most of the rural people believe that the primary medical service providers are the quakes, pharmacy owners and sub assistant community medical officers (SACMO) who are even more famous than doctors. Government should take initiatives to increase awareness among the people via different channels including television, radio, and social media. Second, people only go to the public or private hospitals if they do not get medicine from those pharmacies. Third, common complaint against private hospitals is that they perform unnecessary test, thereby results in higher cost. Fourth, although government supplies medicines to the remotest areas of Bangladesh, but our suggestion is that government should make it free for poor people. Fifth, we find that in some public and private hospitals, sub-assistant community medical officer that is quite dangerous is treating patients. Finally, we find that main determinates for rural people to choose medical services are distance between their resident and the hospitals, cost, time distance, infrastructure etc.

5. Discussion and Policy Recommendations

This study primarily focuses on the differences in the performance of public and private hospitals of rural areas of Tangail district, Bangladesh. The purpose was achieved by evaluating both sectors based on factors like: availability of physicians, assurance and competence of physicians, empathy of doctors and nurses, perceived cost, drug affordability and availability, emergency patient management and waiting time. A descriptive mean and gap analysis was conducted on the data that was collected by interviewing 376 patients from different public and private hospitals of Tangail district. Analysis suggests that none of the sectors are flawless. Each of them has some merits and demerits. Public hospitals are performing better in some aspects where private hospitals are doing well in some aspects. Both sectors need improvements as none of them are perfect.

Form the above results and discussion, the empirical findings are evident that private hospitals are providing better services in terms of assurance and competence of physicians, empathy of doctors and nurses and drug availability and public hospitals are providing better services in terms of availability of physicians, cost, emergency patient management and waiting time. Cost of medical services is the main strength of public hospitals and one of the main determinants of choosing public healthcare facilities. On the other hand, the main strength of private hospitals is drug availability. The service gap between other variables like empathy of physicians, assurance and competence of physicians have little gaps between them which can be easily eliminated and service quality can be improved if some measures are taken by government and other related organizations.

As most of the doctors are not willing to stay in rural government can introduce strict rules and regulation or make it mandatory for doctors to serve in rural areas. Government policy makers also should focus on better work environment and extra rewards for those who are working in rural areas. By structuring salary system in a way that encourages doctors to work in rural areas also may improve the situation. For example: some country has differentiated payment system for those who are working far away from major cities. The administration has to be stricter and regular in monitoring the services that are provided by both public and private hospitals.

The dissatisfaction that arise from assurance and competence of physicians may be solved by increasing the number of healthcare service provider. Rural hospitals- both public and private need more number of medical technicians to improve the service quality. Increased number of service provider will also reduce the waiting time in private and public hospitals. Government of Bangladesh also made some specific medicines free for it's people but inefficient distribution of these medicine has made it difficult for rural

people to get the medicines and this is also increasing the corruption rate in this sector. An efficient distribution and better administration can solve this problem.

Strict rules should be introduced to control the excess cost of private hospitals and to monitor their activities. Government should also focus on emergency patient management facilities as no private hospitals are providing the service and the hospitals who are providing the service are also lack of some basic tools. The authority of the hospitals should be more active on providing a doctor in the emergency room for all day long.

As rural people do not aware of the consequences of getting medical services from quacks or SACMOs, awareness should be raised regarding this issue. The doctor community along with the local authority should raise voice against it and government should take necessary steps for preventing SACMOs and quacks from prescribing medicines. The local pharmacy can also play a role by rejecting to provide any medicine which is not prescribed by a certified doctor.

Government of Bangladesh has already taken steps to improve healthcare services in rural areas. Some of the major steps that are taken by government in recent years are: every doctor has to work minimum two years in a rural area, Sastho Surokkha Kormochuchi (SSK) project through which poor people are given free medical services along with necessary drugs, model health complex project through which Upazila health complexes will be built in a standardized manner, proper guidelines for private hospitals and clinics were launched and those guidelines are strictly enforced and monitored by local authorities, model pharmacy project through which government in ensuring that only prescribed medicines are sold. This project will also help to reduce the activities of quacks, unauthorized doctors and SACMOs.

6. Conclusion and Policy Implications

In the current paper, we analyze the current scenario of service quality in both public and private hospitals in Bangladesh. We directly talked with the patients visited both public and private hospitals/clinics. We analyzed their opinions and experiences. Our results suggest that public hospitals are providing relatively better services than private hospitals in terms of availability of physicians, cost, perception, emergency patient management and patients' waiting time. Private hospitals are performing better than public hospitals in terms of assurance and competence of physicians, empathy of doctors and nurses, and drug availability. Nevertheless, this study reveals that both sectors are struggling to meet global standards in terms of quality that requires immediate attention from government. More specifically, government needs to ensure the quality services in all regions of the country, more importantly, rural areas where people are unaware or unable to explain their health problem clearly.

Readers need to take caution in generalizing our research findings. This is because our study is conducted based on survey and we used two-sample mean test. Future researcher can conduct empirical analysis using secondary databases (Andaleeb, 2000; Siddiqui and Khandaker, 2007). In addition, interested researcher can compare survey data with empirical data to see the reliability, and they can make better contribution in this regard.

Despite above limitations, we do believe our paper will motivate or reinforce healthcare providers to improve the quality of services. This study will also be useful for formulating policies by the authority and administration, especially Ministry of Health, and Family Welfare (MOHFW) to monitor the quality, and to ensure better services to patients in an emerging and developing country like Bangladesh.

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Appendix

Sample Survey Questionnaire

Name of Health Care Organization:

Address:

Name:

Age:

Occupation:

Income:

Educational Level:

Availability of Physicians

1. Were doctors present during visiting hours?

1. Yes 2. No

Assurance and Competence of Physicians

2. Were the doctors competent in diagnosing the problem?

1. Yes 2. No

3. Did you feel comfortable in doctor's hand?

1. Yes 2. No

Empathy of Physicians

4. Was the Doctor willing to answer any question?

1. Yes 2. No

5. Did the doctor listen to you attentively?

1. Yes 2. No

6. Was the Doctor consistently caring?

1. Yes 2. No

Perceived Cost

7. How much you had to pay for the consultation?

8. Do you think the doctor's consultation fee was higher?

1. Yes 2. No

Drug affordability and availability

9. Was Drug available 24 hours?

1. Yes 2. No

Emergency Patient Management

10. Do the hospital has 24 hours emergency patient management facility?

1. Yes 2. No

11. If yes, is the doctor 24 hours present in the emergency room?

1. Yes 2. No

Waiting Time

12. How much you had to wait to get the service?