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Original Research Article

Identifying Perception Gap in Utilization of Services by Patients & Their Family Members in Government and Private Hospitals of West Bengal

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ABSTRACT

Health and education are among the basic capabilities that adds value to the human life. Good health of the citizens is a fundamental driver for economic growth and development of any country. India's healthcare system is challenging, primarily because of its huge population size, economic and social factors coupled with the increasing burden of both communicable and non communicable diseases. While there has been significant improvement in some of the major health indicators over the last two decades, our pace of progress has been inadequate as a nation. Public hospitals are heavily utilized by lower income groups of the society, up to more than 90 percent in case of free patients. Recent times have seen the emergence of private entities, bringing in more competition in the sector. The purpose of this study is to find out whether there are any significant perception gaps in utilization of services by patients and their family members in government and private hospitals of West Bengal. It also aims to determine the factors that are significant with patient satisfaction and identifies the challenges that impact on satisfactory service delivery in the healthcare facilities. Significant differences were found to exist in the perception and utilization of services in both types of facilities. Good patient services, information about patient's treatment and care, doctor's care and attention were found to be significant with patient satisfaction.

Keywords: satisfaction, service, perception, patient, government, private

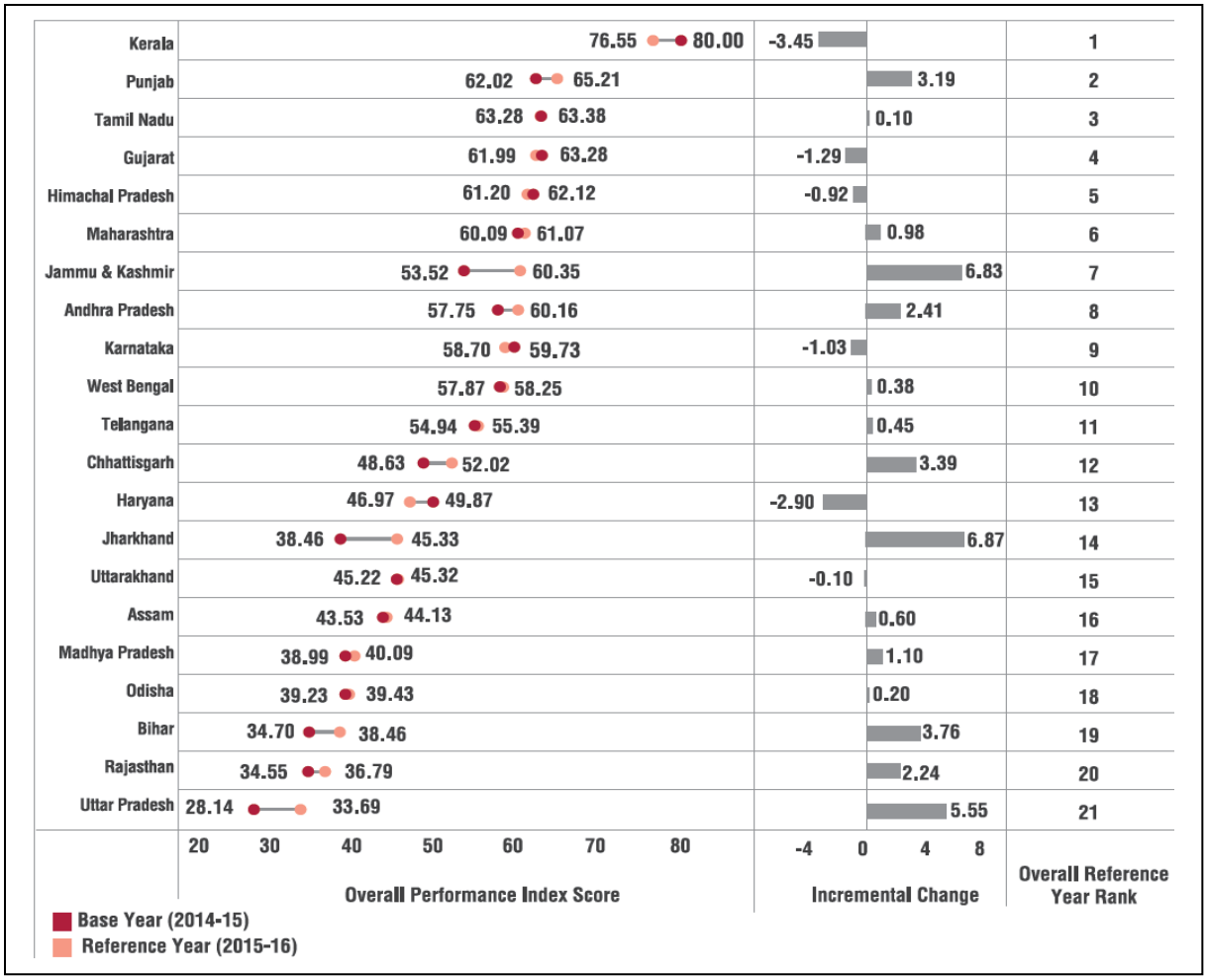
INTRODUCTION

The great Indian Nobel Laureate Amartya Sen postulates that health, like education is among the basic capabilities that adds value to the human life. Good health of the citizens is a fundamental driver for economic growth and development of any country. Improvements in health would translate into higher incomes, higher economic growth, and reduced population growth. [1] Fifty percent of economic growth differentials between developed and developing nations are recognized due to ill-health and low life expectancy. [2] India's healthcare system is challenging, primarily because of its huge population size, economic and social factors coupled with the increasing burden of both communicable and non communicable diseases. [3] While there has been a significant improvement in health indicators like life expectancy, infant and maternal mortality over the last two decades, our pace of progress has been inadequate as a nation. In a paper released in Lancet, a team of researchers identified several structural problems in India's healthcare system. Lancet reports that there is an inequitable distribution of public

services amongst states. For example, while there is one government hospital bed for every 614 people in Goa it is one for 8,789 people in Bihar. This shortage is compounded by unbalanced distribution and shortage of finance and human resources. In community health centres in rural areas of many states, ranging from Gujarat to West Bengal, the shortfall of specialists exceeds 80%. Public health expenditure remains very low in India. The study also identified inadequate public investment in health, missing trust and engagement between various healthcare sectors and poor coordination between state and central governments as the main constraints why universal healthcare could not be assured in India. [4]

The newly published "Health Index Report" by NITI Aayog & World Bank, in consultation with the Ministry of Health and Family Welfare, reports that the top five performing States in India, in the reference year were Kerala (76.55), Punjab (65.21), Tamil Nadu (63.38), Gujarat (61.99), and Himachal Pradesh (61.20). On other end of the spectrum, Uttar Pradesh (33.69) scored the lowest and ranks at the bottom preceded by Rajasthan (36.79), Bihar (38.46), Odisha (39.43), and Madhya Pradesh (40.09). Among the 21 Larger States, Jharkhand (ranked at top) followed by Jammu & Kashmir and Uttar Pradesh made significant incremental progress, with more than a five-point change in Index score from base to reference year. [5] As per the report, the Index score has increased by 2 to 4 points for Bihar, Chhattisgarh, Punjab, Andhra Pradesh and Rajasthan. Limited improvement was observed in Madhya Pradesh, Maharashtra, Assam, Telangana and West Bengal (Refer Figure 1).

Figure 1: Larger States, Incremental Change & Ranks, with overall performance from base Year to Reference Year



[Source: NITI Aayog's State Report, 2015-16]

As per Census, 2011, West Bengal, considered as one of the 17 major States of India, has a population size of more than 91 million within the administrative jurisdiction covering an area of 88,752 km^2. It is the fourth most populous State in India with a population density of 1028 persons/km^2. The Government of West Bengal has been consistently working towards achieving the objectives laid down under the Health Sector Strategy. Investment in the sector has increased considerably over the years, and to achieve better outcomes, several reform measures have been initiated. Through the efforts of the State Government there has been a sustained improvement in the state's health indicators and figures are better off than the Indian average. However, when compared to many large Indian states like Kerala, Tamil Nadu, Maharashtra and Punjab, West Bengal represents a relatively mediocre position. The state is still far behind, recording, for example, nearly three times the infant and neonatal mortality rates of Kerala. [6] Table 1 given below summarizes the Basic Health Indicators of the state.

Table 1: Basic Health Indicators of West Bengal

Health Indicator	West Bengal	India	Rank of West Bengal	Bigger States*/UT's better than West Bengal
Birth Rate 2016 (SRS)	15.4	20.4	4	Kerala(14.3), Punjab(14.9) Tamil Nadu (15)
Death Rate 2016 (SRS)	5.8	6.4	4	Delhi (4), Jammu & Kashmir(5), Jharkhand (5.5)
Infant Mortality Rate 2016 (SRS)	25	34	8	Kerala (10), Tamil Nadu (17), Delhi (18), Maharashtra (19), Punjab (21), J &K (24), Karnataka (24)
Total Fertility Rate 2016 (SRS)	1.6	2.3	1	Tamil Nadu(1.6)
Neonatal Mortality Rate 2016 (SRS)	17	24	6	Kerala (6), Tamil Nadu (12), Delhi (12), Punjab (13), Maharashtra (13)
Under 5 Mortality Rate, 2016 (SRS)	27	39	7	Kerala (11), Tamil Nadu (19), Maharashtra (21), Delhi (22), Punjab (24), J & K (26), HP (27)
Maternal Mortality Ratio 2014-16 (SRS)	101	130	7	Kerala (46), Maharashtra (61), Tamil Nadu (66), Andhra Pradesh (74), Telangana (81), Gujarat (91), Haryana (101)

*States/UT's having population 20 million or more as per Census, 2011,
Rates are expressed as per 1000 population
Maternal mortality ratio is expressed per 100,000 live births within the reference period
[Source: Sample Registration Survey (2017), Department of Health and Family Welfare, Govt. Of West Bengal]

In addition, there are large intra-state variations in health outcomes between districts and regions. Districts like Malda, South 24 Parganas and Uttar Dinajpur report high infant mortality rates, a major reason being that institutional deliveries are not a common practice in these regions. [7] Ghosh and Mistri conclude that though health infrastructure is quite satisfactory in Murshidabad, Birbhum and Koch Bihar, yet institutional deliveries are not preferred. Road conditions, location and distance of the healthcare centre have a great influence to measure the degree and status of healthcare service utilization of a given area. [8,9]

Health Planning in India started, as early as in 1943, when the Bhore Committee was appointed to get into health and medical needs of India. The committee recommended the control of major communicable diseases, and development of healthcare organizations for providing health services to the people. [10] Its recommendations were given due importance during the subsequent five year plans. Since then, there has been a shift in healthcare infrastructure from mainly urban and clinic based to the creation of preventive and rehabilitative services by building up primary, secondary and tertiary care institutions and linking them through appropriate referral systems. Public hospitals are heavily utilized by lower income groups of the society, up to more than 90 percent in case of free patients. In a

study to find out why reproductive healthcare seekers sought admission to tertiary level healthcare facilities in rural central India, the obvious causes for seeking treatment irrespective of the nature of the case, locality, age etc. were referrals, fame of the health facility, expertise of doctors and economic reasons. [11] Another study in the outpatient department of public healthcare facilities of Madhya Pradesh confirms that the major reasons for choosing the facility was inexpensiveness, infrastructure, and proximity of the facility. [12]

In the face of a wide gap between the demand for healthcare facilities by a growing population and the supply by the government, recent times have seen the emergence of private entities, bringing in more competition in the sector. Patients prefer to visit private healthcare facilities for varied reasons. A study in India found that patients visited private physicians as they were seen for longer durations, more likely to have a physical examination done and their diagnosis explained to them by private physicians than the public sector ones. [13] Another group of researchers investigating the performance of private and public sector delivery in low and middle-income countries concluded that they do not support the claim that the private sector is usually more efficient, accountable, or medically effective than the public sector. [14]

Healthcare is highly complex and a universally used service that especially includes an in-depth understanding of all relevant factors influencing the utilization of the service. [15]

Healthcare service quality can be defined as the perceived differences between the service a patient receives and the expectations he had about the services to be offered to him by a particular healthcare facility. A mismatch between his/her expectations and the services received is a major cause of dissatisfaction. Advances in medical technology, introduction of complex diagnostic and therapeutic procedures and use of sophisticated technology has raised some vital issues in this sector: what is the output and degree of excellence of hospital service? How far the patients needs have been met? What is the level of patient satisfaction? Could the same quality of service be available at a lesser cost?

The reality picture of India's private healthcare sector narrated by renowned gynecologist, Dr. Arun Gadre is practically true and a bold revelation of the bitter truth. Irrational drug prescribing and doctors defying prescription codes, kickbacks for referrals, and unnecessary investigations and surgical procedures are common in India. [16] A study by Singh, Hashmi & Swain reports that C-section births are nearly three times more in private as compared to public sector health facilities. The higher rates of CS births, especially in private sector, not only increase the cost of care but may pose unnecessary risks to women when there are no indications for CS. [17] Private Providers are required to be registered according to the Clinical Establishment Act, and there is an inspection system, but in practice inspections are rare and regulations are inadequate. Very recently, to curb malpractice, The West Bengal Clinical Establishment Regulatory Commission was conceptualized and announced in the presence of Ministers, management of Private Clinical Establishments (over 100 beds) and the media persons. On 3rd March, 2017, West Bengal Clinical Establishment (Registration, Regulation and Transparency) Bill, 2017, a significant move was passed in the West Bengal Legislative Assembly. [18]

The main objective of this study is to find out whether there are any significant perception gaps in the utilization of services by patients and their family members in government and private hospitals of West Bengal. It also aims to determine the factors that are significant with patient satisfaction and identifies the challenges that impact on satisfactory service delivery in the healthcare facilities.

MATERIALS AND METHODS

Survey questionnaires were given to 300 inpatients (150 from private and 150 from government hospitals). The study was conducted on patients who were admitted for at least three days in the indoor wards of Department of Gynaecology & Obstetrics, Department of Surgery, Department of General Medicine & Cardiology of these healthcare facilities. Inpatients in high risk wards like ICU, ITTU, HDU were not included in this study. Standard instruments (Demographic, Pareekhs's Patient Satisfaction Questionnaire & Hospital Community Questionnaire) were used in this study. The questionnaire uses a 3-point Likert scale to rate each aspect of service provided by the healthcare facilities. [19]

The methodology includes analysis of primary data (one to one interview of patients), as well as study of secondary data. The researcher obtained prior permission from the concerned authorities for undergoing the study in the hospitals. Inpatients were explained in details about the study, its objectives and implications. They were also given an informed consent form to willingly sign and participate. Since many inpatients did not understand English, the questionnaire was also translated into local languages (Bengali & Hindi). The study was without any intervention, and hence no risk was intended towards any patient. Any information revealing the identity of a respondent is not included in the final report of this study.

Statistical Analysis

Scores are expressed as Mean, Median and Standard Deviation. The statistical software SPSS version 20 has been used for the analysis. An alpha level of 5% has been taken, i.e. if any p value for the responses is less than 0.05, it has been considered as significant ($p< 0.05$). Factor analysis using Principal Component Method was used to identify distinct quality of care attributes. Prior to conducting factor analysis, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett's test of sphericity were performed. The KMO score generated was 0.69, exceeding the recommended value of 0.6 (Kaiser, 1970, 1974) and Bartlett's test of sphericity (Bartlett, 1954) was highly significant (χ^2 2936.59, df 231, $p<0.001$), and thus supported the appropriateness of using factor analysis to explore the underlying structure of perceived quality of healthcare services.

RESULTS

Table 2: Socio-demographic Characteristics of Inpatients in Private & Government Hospitals

In-Patient Characteristics	No. of Inpatients in Government Hospitals (N_{PG}= 150)	Frequency (%)	No. of Inpatients in Private Hospitals (N_{PP}= 150)	Frequency (%)
Age (years)				
< 21	13	8.67	0	0
21-30	48	32	24	16
31-40	30	20	32	21.33
41-50	26	17.33	39	26
51-60	22	14.67	16	10.67
61 and above	11	7.33	39	26
Sex				
Male	44	29.33	57	38
Female	106	70.67	93	62
Religion				
Hindu	88	58.67	127	84.67
Muslim	62	41.33	18	12
Sikh	0	0	3	2
Christian	0	0	2	1.33
Marital status				
Single	14	9.33	12	8
Married	129	86	126	84
Divorced	3	2	0	0
Widowed	4	2.67	12	8
Education				
Illiterate	27	18	0	0
Primary school	65	43.33	11	7.33

Table 2 to be continued…				
Junior high school	34	22.67	7	4.67
High school	8	5.33	15	10
Graduate/ post graduate	16	10.67	117	78
Area of residence				
Colony	106	70.67	7	4.67
Lower middle class area	40	26.66	2	1.33
Middle class area	3	2	80	53.33
Upper middle class area	0	0	61	40.67
Others	1	0.67	0	0
Occupation				
Service	30	20	75	50
Business	32	21.33	18	12
Self-employed	32	21.33	13	8.67
Unemployed	16	10.67	0	0
Others	40	26.67	44	29.33
Household Monthly Income				
< 2000	7	4.67	0	0
2001- 8000	106	70.67	0	0
8001-20,000	37	24.66	3	2
20,000-40,000	0	0	19	12.67
>40,000	0	0	128	85.33
No. of dependents in the family				
0-2	98	65.33	110	73.33
3-5	49	32.67	39	26
6-8	3	2	1	0.67
9-11	0	0	0	0
>11	0	0	0	0
Healthcare Insurance Facility				
Available	13	8.67	107	71.33
Not available	137	91.33	43	28.67
Not aware about health insurance	116	77.33	25	16.67

Table 2 represents the socio-demographic characteristics of inpatients in private and government hospitals. It is clearly evident that majority of inpatients included in this study from both category of hospitals were females. In government hospitals, 18% inpatients were illiterate, 43.33% completed primary schooling and 22.67% completed junior high school. On the contrary, 78% inpatients in private hospitals completed graduation degree. 70.67% of inpatients seeking care at government hospitals came from colonies and 26.66% from lower middle class localities. Inpatients availing services in private facilities mostly came from middle class (53.33%) and upper middle class localities (40.67%). 20% respondents in government facilities were service holders, 21.33% had small business, the same numbers were self employed as domestic helps, maids, cleaners, or engaged in their own farm lands while 10.67% were unemployed and fully dependent on their family members. On the other hand, 50% inpatients in private facilities were service holders and 12% had their own business. 29.33% inpatients were retired service men or homemakers. 75% respondents in government hospitals had a monthly income less than eight thousand rupees and 24.66% earned less than twenty thousand Indian rupees. In private facilities, 85.33% inpatients had a monthly income more than forty thousand Indian rupees. India's health-related out-of-pocket expenditure is among the world's highest. One of the main reasons is low enrolment under health insurance schemes and not enough people eligible for it know about them. [20,21] In this study too, it was found that 91.33% of inpatients in government hospitals were not covered under any health insurance scheme, and 77.33% of them were not aware of health insurance. On the contrary, 71.33% of inpatients in private facility were insured.

Table 3 represents the perception differences of patients in government and

private hospitals for various items of the satisfaction questionnaire. Significant differences were observed in fourteen items of the questionnaire. These were item numbers 1,4,5,6,7,9,10,11,12,14,15,20, 21 and 22. Differences existed with respect to admission procedures, cleanliness, availability of beds and equipments, food, service of nursing staff and ward attendants, recovery rate and reputation of the hospitals. Services related to clinical care (treatment and care by doctors, discharge after fully cured, availability of necessary medicines and diagnostic procedures) were rated fairly favorably by both categories of respondents. Total score of inpatients in government hospitals was lower than total mean score of inpatients in private hospitals. A significant difference was found to exist in the overall perception of inpatients in government and private hospitals (P_G: M_G = 37.73, SD= 3.38; P_P: M_P=39.56, SD=4.72; $p<0.05$, two-tailed).

Table 3: Patient's Perception about Utilization of Services in Government & Private Hospitals

S. No.	Interview Question	Group I						
		Inpatient Government Hospital			Inpatient Private Hospital			p Value
		Mean	Median	SD	Mean	Median	SD	Patient Govt. vs. Patient Pvt.
1.	Time taken for Admission	1.68	2.00	0.47	1.76	2.00	0.59	0.007
2.	Information given to patients	1.87	2.00	0.48	1.75	2.00	0.66	0.055
3.	Discharge after fully cured	1.63	2.00	0.61	1.71	2.00	0.46	0.537
4.	Cleanliness in Wards	1.57	2.00	0.58	1.81	2.00	0.45	<0.001
5.	Cleanliness of garments and bed	1.71	2.00	0.47	1.92	2.00	0.27	<0.001
6.	Hospital Equipments availability	2.00	2.00	0.00	1.95	2.00	0.24	0.014
7.	Bed for individual patient	1.57	2.00	0.81	1.95	2.00	0.21	<0.001
8.	Medicine availability	1.76	2.00	0.63	1.87	2.00	0.50	0.062
9.	Quality of food	1.21	1.00	0.42	1.75	2.00	0.46	<0.001
10.	Quantity of food	1.93	2.00	0.32	2.00	2.00	0.00	0.008
11.	Food Service	1.78	2.00	0.42	1.98	2.00	0.14	<0.001
12.	Service of Ayas & ward boys	1.74	2.00	0.52	1.84	2.00	0.49	0.014
13.	Service of Sweepers/ scavengers	1.91	2.00	0.31	1.94	2.00	0.33	0.094
14.	Availability of Nursing staff at desk	1.59	2.00	0.49	1.82	2.00	0.46	<0.001
15.	Promptness of nursing staff to help	1.69	2.00	0.46	1.82	2.00	0.39	0.011
16.	Attention from doctors	1.94	2.00	0.24	1.95	2.00	0.21	0.608
17.	Delay in medical care due to reports	1.71	2.00	0.54	1.59	2.00	0.70	0.260
18.	Right pull	0.93	1.00	0.86	1.05	1.00	0.91	0.244
19.	Satisfied with Care & Treatment facility	1.92	2.00	0.27	1.81	2.00	0.51	0.107
20.	Recovery rate	1.90	2.00	0.30	1.52	2.00	0.59	<0.001
21.	Control of Visitor Entry in Wards	1.93	2.00	0.30	1.83	2.00	0.37	0.002
22.	Reputation of the Hospital	1.74	2.00	0.44	1.93	2.00	0.26	<0.001
23.	Total Score	37.73	38.00	3.38	39.56	41.00	4.72	<0.001

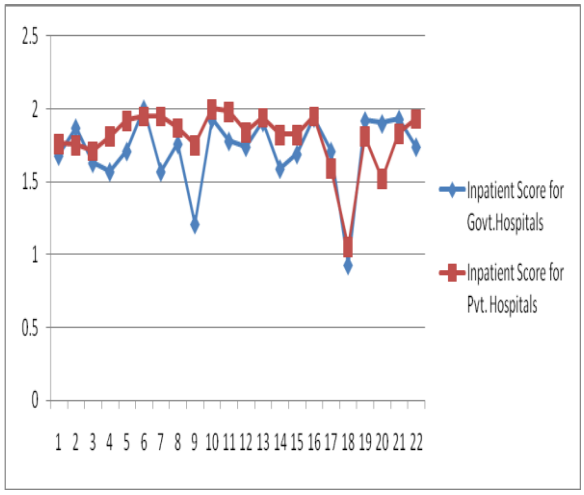


Fig 2: Line Graph Representation of Inpatient's Mean Score for Government & Private Hospitals

All the 22 items of the satisfaction questionnaire were computed by factor analysis to generate an overall quality of care index. In this study, 7 Factors were extracted which explains 59% variation in the data. Factor 1 could explain 16.145% of the total variation and hence can be identified as the most significant factor followed by Factor 2 - Factor 7 (Refer Table 4). These factors were identified as services related to patient and his treatment, information and help, housekeeping, timely delivery of services, availability of resources and hospital reputation.

Table 4: Rotated Component Matrix[@]

	Component						
	1	2	3	4	5	6	7
Patient services							
Cleanliness of patient's garments & beds	0.751						
Quality of patient's food	0.711						
Cleanliness in Wards	0.683						
Bed for individual patient	0.643						
Control of Visitor Entry in Wards	0.465						
Quantity of patient's food	0.410						
Treatment & Care							
Satisfaction with Care & Treatment		0.740					
Attention given by Doctors		0.683					
Recovery rate		0.511					
Information & Help							
Promptness of nursing staff to help			0.839				
Availability of Nursing staff at desk			0.776				
Information given to patients			0.501				
Right pull			0.250				
Housekeeping Services							
Service of Sweepers/ scavengers				0.835			
Service of Ayas & ward boys				0.833			
Timely delivery of Services							
Discharge after fully cured					0.782		
Delay in medical care due to reports					0.628		
Time taken for Admission					0.561		
Availability of Resources							
Hospital Equipments availability						0.703	
Food Services						0.659	
Medicine availability						0.615	
Hospital Reputation							
Reputation of hospital							0.557

Extraction method: Principal Component Analysis
@Rotation converged in ten iterations.
Rotation Method: Varimax with Kaiser Normalization

DISCUSSION

This study contributes to the growing literature on patient satisfaction and its usefulness for healthcare organizations in improving their services. Component wise, there are significant differences in the perception and utilization of services by patients in government and private facilities. For the government hospitals, patients and their family members were highly satisfied with the availability of free medicines, equipments & diagnostic facilities in the hospital premises, attention, care and information given by doctors about their diagnosis, treatment & care, visiting time of meeting the patients. This research thus shares similar views with previous studies conducted by Goel & Khera in the state of Rajasthan and Debnath & Ray in West Bengal. They found out that provision of free medicine and diagnostics have impacted positively on the patient utilization rate in the state. [22,23] The least satisfying aspects in government hospitals were long waiting time for getting OPD ticket, consulting and admitting the patient, poor cleanliness of the toilets and the wards, unavailability of bed for each patient in the hospital, and quality of hospital food.

The most satisfying aspects in the private hospitals were cleanliness of bed, linen and wards, availability of medicines, equipments & diagnostic facilities within the facility, attention and care given by the doctors. The least satisfying aspects were time taken for admission and discharge procedures, particularly for insured patients, expensive treatment, lack of information to the patient about his diagnosis, treatment & care, behavioural attitude of nursing staff and nursing orderlies apart from nursing staff - patient communication problem.

This study was limited to the patients admitted in the indoor wards of Department of Gynecology & Obstetrics, Department of Surgery, Department of General Medicine & Cardiology of both the government and private healthcare facilities. Trauma, ICU, ITU, HDU, where death rates are fairly high, were not included in this

study and hence there can be some common challenges in the results. Nevertheless, the results can be used as performance indicators at every level of a healthcare facility to identify patients needs, areas of service failure and scope for advancement. Future research can address the issues raised here and investigate the reasons for the perceived quality gaps.

CONCLUSION

In its mission to improve the health status of the underprivileged in West Bengal, the Department of Health and Family Welfare issued an order that patients will get free diagnostics, pathology, therapeutic and surgeries along with free beds in all government hospitals and health centers across the State. [24] Government's another initiative was to open fair price medicine shops and diagnostics centre's operating with PPP model, within the premises of the public healthcare facilities. [25] The most significant indicators of satisfaction identified in this study were services related to the patient, his treatment & care, information & help, housekeeping services, timely delivery of services, and availability of resources. One major reason for infrastructural problems in government facilities is the excessive patient load compared to the doctor-patient or nurse-patient ratio, particularly in the gynecology, maternity, emergency and medicine wards of the hospital. The government's directive of adding more beds and setting up 42 super specialty hospitals across the state in the future would certainly improve the quality of treatment, hygiene and care in the facilities. [26] The passing of West Bengal Clinical Establishment (Registration, Regulation and Transparency) Bill, 2017 to track the functioning of private healthcare establishments is also noteworthy. In addition, the researcher lays a strong emphasis on building an accountability based public healthcare system with a clearly articulated supportive role for the private and indigenous sectors. As suggested in an earlier study by Debnath and Ray, soft-skill development, periodic training modules and recognition for health workers at all levels must be initiated to increase their knowledge and motivation towards work. [27] The ideal healthcare system must offer choice of care that is rational, accessible and of good quality, support cashless service at the point of delivery, and ensure accountability through strict but healthy governance.

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