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Rural Health Care System and Patients' Satisfaction towards Medical Care in Bangladesh: An Empirical Study

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Abstract: *The study examines the rural health care system with special reference to the selected areas of Bangladesh. It has explored health seeking behavior of people in rural areas of Bangladesh. It has also revealed patients' views towards health care services in Bangladesh. The study was conducted on 311 individuals located in twelve (12) villages from three different districts namely Comilla, Brahmanbaria, and Sylhet in Bangladesh. The variables of the SERVQUAL model used in this study are reliability, assurance, tangibles, communication, empathy, process features, cost and access. The result of the study indicates that from the eight variables of SERVQUAL model negative relationship is found with patients' satisfaction. Finally, the study provides some guidelines for solving the rural health care problem as well as for increasing patients' satisfaction towards medical services in Bangladesh.*

Keywords: *health care services, hospitals, patients' satisfaction.*

Introduction:

Health is a fundamental need that improves the quality of life of people. National economic and social development largely depends on the status of a country's health facilities of people. The socio-economic and technological development of a country is reflected by a health care system. It is the responsibility of a community or the government for improving health care facilities of its people. The effectiveness of a health care system depends on the availability and accessibility of services in a form where the people are able to understand, accept, and utilize. The government of Bangladesh incessantly attempts to improve the service quality of rural health care system of Bangladesh. It is also committed to supplying all medical requirements on the doorstep of poor people of our country (Bangladesh Constitution, Article- 18)[1]. Most of the people, who live in villages, get services from informal health care system. With the development of modern science and technology, health services emphasize primitive and

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[1] Constitution of the Peoples' Republic of Bangladesh, Article- 18

preventive rather than curative health care. Yet, a large number of people of Bangladesh, particularly in rural areas, remain with no or a little access to health care facilities. It would be critical for making progress in Bangladesh's health services without improving the rural health care system. The government therefore, seeks to create conditions whereby the people of Bangladesh have the opportunity to reach and maintain the highest attainable level of health care. Lack of awareness regarding health care and health service is a problem that has many dimensions and complexities. Education has a significant effect on people in health services. Administrative factors such as government interference could play a significant role in increasing rural people's awareness regarding health care. Even the present health care system in Bangladesh especially in the rural area is not poor people oriented. Health care services in rural areas of Bangladesh mainly emphasize the construction of Thana Health Complexes (THCs) and Union Health and Family Welfare Centers (UHFWCs) without giving much attention to their utilization and delivery services (Health policy 1999). That is why, poor people in the rural area are taking traditional method of treatment or Herbal treatment. The study reveals the rural health care system with significant reference to the specific rural areas of Bangladesh.

Objectives of the study:

The prime objective of the study is to reveal the rural health care system in Bangladesh in selected rural areas. The specific objectives of the study are:

1. To reveal the health seeking behavior of people and health care facilities in rural Bangladesh with special reference to the study area;

2. To identify the important features of health policy announced by government of the People's Republic of Bangladesh;

3. To identify the gap between government health policy implication and patients' expectation about health care services; and

4. To explain patients' views towards heath care services in selected rural areas of Bangladesh

Literature Review

Generally health refers to the soundness of body of living beings that is very often used to describe the health of economy, society, politics, culture, environment and even nation. "Merely the absence of disease does not signify health; rather it is a state of complete physical, mental and social well being" (WHO; 1984). It means complete freeness and freedom from mental, physical and social illness, and not only the freeness from any

diseases or infirmity. The current Health, Nutrition and Population Sector Program (HNPSP) outline activities from 2003-2010,with objectives to improve health outcomes, reduce health inequities, enhance quality of care, modernize the government health sector, and attain the health related Millennium Development Goal (MDGs). This document incorporated the MDG (4, 5 and 6) targets, while offering slightly different targets for HNPSP. The Revised Programme Implementation Plan (RPIP) of Health, Nutrition and Population Sector Programme (HNPSP 2003-2010) proposed budget for the whole health sector by dividing it into four sub-sectors: Health Programme (HP), Nutrition Programme, Population Programme (PP) and Ministry Level Sector Development. Major Reproductive Health (RH) components are included under HP and PP.

The scarcity of skilled health personnel, especially nurses, is one of the main challenges in the health sector of Bangladesh as around five physicians and two nurses per 10,000 people (BHW; 2007). The density of qualified service providers, including doctors, dentists and nurses, in the country is 7.7 per 10,000 people. The existence of qualified service providers is highly urban based. There are 18.2 physicians, 5.8 nurses and 0.8 dentists per 10,000 people in urban area while the corresponding figures are 1.1, 0.8, and 0.08 respectively in rural area. The data also show that the number of male physician per 10,000 people is five times higher than that of female physician per 10,000 people (BHW; 2007).

A study undertaken for the United Nations (UN) Panel on People's Participation in 1982 (Oakley; 1988) reviewed the practice of participation in rural development and suggested four different, but not mutually exclusive forms of participation such as Participation as Collaboration, Participation through Organization, Participation in Community Development activities and Participation as a Process of Empowering. Salahuddin, et.al (1988) stated that Bangladesh, being a poor country with scarce resources, cannot afford to provide sophisticated medical care to the entire population. Emphasis is therefore given on primary health care covering the unserved and underserved population with the minimum cost in the shortest time. Mahmud (2004) explored people's perceptions and reality about participation in newly opened spaces within the Bangladesh public health care delivery system.

Bangladesh's National Health Policy (2000) envisages a participatory approach to caring for people's health, at least at the local level. It calls for the decentralization of services and the participation of the local population and local government institutions in the policy development, financing, and monitoring of health services. In reality, however, such participation is far from adequate. Consequently, decisions at the national level have been made in a non-participatory manner. Of course, the ordinary people have no scope

of participating in the national decision-making processes regarding how health services should be delivered to them. Regardless of the quality of service they receive, the absence of participation itself demonstrates a violation of the people's right to health.

Uzochukwu, et.al (2004) assessed the perceptions and practices of health workers and households in relation to community participation in the Bamako Initiative (BI) programme. The study was conducted in the Oji River local government area of South-East Nigeria, where the BI programme has been operational since 1993. Coelho (2004) examined the experience of municipal and district health councils in the city of Sao Paulo in the light of the literature on citizen participation in Brazil. This literature has attributed the success or failure of participatory mechanisms either to the degree of civil society involvement or to the level of commitment to such mechanisms on the part of the political authorities. Hoque and Hoque (1994) evaluated the NGOs' water and sanitation programmes in Bangladesh's rural areas. The rural villagers were provided with hand pumps, latrines, and hygienic education. Interviews were conducted with the woman users of woman pump projects. The study shows that there are problems of people's participation, hygienic practices as well as effective use and maintenance of hand pumps and latrines. The study also points out that there should be effective measures for the sustainability of water and sanitation projects. Chowdhury (2005) reviewed Bangladesh's health sector reform paper and found that these reforms were influenced by many factors and the main problems of implementing reforms were related to political agenda, professional unionism. Sometimes policy makers want to implement reform programs without much preparation and a long-term vision.

According to the National Health Policy (2000), the government has accepted the financier role of the Essential Service Package (ESP) on the ground of market failures and poverty/equity considerations. Insurance against risks of injuries, disabilities and death is very important for Bangladesh because of its impact on the poor. However, government intervention in insurance matter is not possible due to resource scarcity. Considering the importance of the ESP in the context of Bangladesh, the government has also assumed the provider role. "Government health services are provided by a four-tier system of government owned and staffed facilities. The municipalities are responsible for the publicly financed health service provided in urban areas (World Bank; 2001). However, the ESP has until now not been implemented.

The history of health services in Bangladesh can be traced back to the early 17th century when the East India Company came to rule over the Indian sub-continent and governed it as a police state from England (Rashid and Hyder; 1995). The early efforts of health administration were directed to the alleviation of sufferings due to sickness, catering

mostly to the needs of the urban elite class. Subsequently, some facilities were extended to small towns in the form of hospitals with few beds.

In 1974, the National Institute of Preventive and Social Medicine (NIPSOM) was established to serve as the national focal point for higher education in public health (see NIPSOM, 1998). In 1976, the number of Thana hospital beds was raised to 31. So, there was the number of sub-centers under each Thana, which was raised to 4 or 5, depending on the size and population of a Thana (see Rashid and Hyder, 1995). Bangladesh signed the Alma-Ata Declaration of 1978 and expressed its commitment with the world community to render minimum health care services for its people through what was called a primary health care (PHC) approach. Subsequently, when the World Health Organization (WHO) called upon the member countries to formulate individual national strategies and a plan of action for attaining Health For All (HFA) by the year 2000 , Bangladesh responded by preparing a country paper in 1980 .

The study focused on the degree of people's participation in public health services of Bangladesh. It opined that the people's participation in health services was not satisfactory. The Government of Bangladesh has taken some initiatives according to the Alma-Ata Declaration of 1978 to increase the people's participation in health service. However, these initiatives have not achieved desired goals in Bangladesh till now.

Rationale of the study: Without good health, people cannot do work properly. They are affected by several diseases, leading life under malnutrition and fall into premature death. The study is significant for improving the health status of rural people. It can play an important role for creating the health awareness in the mind of people in rural Bangladesh. Moreover, the study will be helpful for increasing patients' satisfaction regarding health care. Readers, patients, researchers, rural as well as urban community will be benefitted by the study. The study findings may help government in framing policy regarding health related issues.

Methodology of the Study

Description of Target Population

It is an exploratory research. The target population of the study are people living in rural area under the selected districts of Comilla and Brahmanbaria, Sylhet in Bangladesh. The selected villages under the selected districts include prajapati, Babanipur, Yousofpur, Barashalgar are in Comilla district. Chandrapur, Bahadurpur, Nyamotpur, Mulgram are located in Brahmanbaria district. Moreover Beanibazar, Golapgonj, Supatala, Kasba are located in Sylhet district. People aging from 18-70 years in the selected villages are the actual respondents of the study.

Sample frame: The sampling frame of the study includes village leaders, aged persons, teachers (primary school), *Imams* (village Mosque),local health workers, *healers*, students, herbal physicians, traditional birth attendants, traditional surgeons, diviner (peer shaheb), herbalists, common people and other respected person in villages.

Sample Size: Survey has been conducted on 311 individuals located in (12) villages from three districts (Comilla, Sylhet and B.Baria) in Bangladesh.

Sampling unit: Individuals are sample units of the study.

Sampling technique: Non probability sampling (convenience sampling) technique had been used to collect data. This was purely convenient as this was the only feasible technique given resources, time and other variables. The respondents chosen were on a non random basis. Because whoever was willing and was vicinity, participated in the survey.

Reduction of error: The questionnaire was designed in such a way that would reduce the total error in the data collection process. The questionnaire was based on the funnel technique which started with the general questions and moved to specific ones so that respondents' biases could be reduced. All the questions were designed with a view to finding out what the respondents truly think about the rural health services.

Method of Data Collection

For this study, a structured questionnaire was used to collect primary data. Both quantitative and qualitative data was collected for conducting the study. Quantitative data was collected through questionnaire and qualitative data was collected through questionnaire as well as observational method. Whenever observational method was used to collect qualitative data, snow ball sampling method was applied in selecting respondents. Researcher observed very closely to know how the rural people go to the village physicians to collect medicines. It had been also observed the techniques of *Panipora* and *Jhar-fook* of the *Imams* and *Maolanas* residing in the villages. Secondary data have been collected for designing the background of the study. Some other sources for the survey are published materials of regional health offices, books, journals, records of Upazila health complex, internet and international health related journals, etc.

Method of Data Analysis

Collected data were processed, analyzed and presented in such a way that the reader could get the clear idea regarding the health care system of rural area of Bangladesh and they can easily evaluate the pros and cons of rural health care system through the

presentation of real scenario with special reference to the selected villages under selected districts. Raw data were tabulated by applying modern statistical tools and data were analyzed by different statistical tools such as SPSS, Regression analysis, tables, charts, graph etc.

Precaution to reduce error: Frequency distributions were obtained to check for data entry errors.

Analysis and Findings

1. Health Seeking Behavior

Health seeking behavior of the people of any society is related to a number of factors; these may be economic, social, cultural, and even political. Economics is a cardinal factor of human life, since it determines many important aspects of human society by moulding socio-cultural factors of individual. Education, another important social factor which often influences and moulds human character and culture. Belief systems, norms, and values of individuals are sometimes characterized and influenced by the systems of education. Most of the people in the selected area are poor and illiterate and their occupation is agriculture. As a result, most of the people cannot avail modern expensive treatment, which are not all available on their door-step. Since there is no medical center in these villages, they go to village physicians to collect medicines. Sometimes they go to *Imams* and *Maolanas* for *Panipora* and *Jhar-fook.*

Disease/Illness and Practice of Treatment Taken by the Villagers

It was possible to collect data from 311 persons of different age groups in different villages of different unions in different districts namely prajapati, Babanipur, Yousofpur, Barashalgar from Comilla district and Chandrapur, Bahadurpur, Nyamotpur, Mulgram from B.Baria district. Moreover Beanibazar, Golapgonj, Supatala, Kasba are seleted from Sylhet district. Data were collected from those people who were suffering from various types of diseases. Among of 311 persons, 232 people took different types of treatments namely, Allopathic, Homeopathic, Herbal, etc. In addition to these methods, some of them took help from *imam, Jeen Kabiraj,* and *Ojha* for their treatments. A few of them adopted more than one method of treatment i.e. cosmopolitan methods for their treatment. These peoples are comparatively rich and educationally a little bit high.

Treatments by Traditional Methods

It has been observed that the villagers applied several methods of treatments for recovering their illness which are namely Allopathic, Homeopathic, Herbal,

Cosmopolitan, Religious, quack Physicians, *Jeen Kabiraj, Imam, Peer Shaheb, Maulana* and *Ojha.* Out of these types of treatments, religious physicians attracted special attention during the period of fieldwork. In addition to these, quack and *Ojha* played a vital role in connection with treatments in the study villages. It had been able to detect 86 cases of traditional treatments so far taken by the villagers (observation).

Existing Health Care Facilities in Bangladesh: Ministry of Health and Family Planning (HFP) of the Government of Bangladesh is entrusted with the task of preparing plan and executing policies of the government in connection with health and family planning for its people. Under the Health and Family Planning Ministry, there is a Health directorate, which controls and supervises the activities of the Deteriorate of Health, located in seven Divisional Head Quarters (DHQ). These DHQs give directive and supervise the health programmes of 64 district health offices in Bangladesh. District health office, known as Civil Surgeon Office (CSO), plays supervisory role on the Thana Health Complexes (THC), located throughout whole Bangladesh.

The primary health care service is provided through the following three tires systems in selected villages:

a) Community level (village level): Community health care workers are called Health Assistants, Family Welfare Assistants, and T.P.A.s of which the first two categories are full time paid employees. On the other hand, the TPAs are trained for providing safe delivery services. Each community health workers services cover a population of 4000.

b) Union Health and Family Welfare Centers (Union Level): It provides health and family planning care to approximately a population of 20,000-25,000.

c) Thana Health Complex (Thana level): It provides curative treatment for various ailments having emphasis on prevention of diseases. It covers a population of about 200,000.

Moreover, the secondary health cares are provided by the hospitals of 64 districts with beds 50-250 located at district levels. Tertiary level health care is provided by eight medical colleges which are spread throughout the country. Specialized health care is provided by specialized hospitals numbering nine, mainly located at the national headquarters.

Table-1: Methods of Treatment practiced by the ill persons in the selected villages

Methods of Treatment	Number of affected persons	Percentage
Allopathic	10	0.03
Homeopathic	50	0.12
Ayurvedic	45	0.13
Unani	47	0.12
Folk	150	0.57
Cosmopolitan	09	0.03
Total	**311**	**100**

Source: Field Survey

Out of 311 interviewees, 50 persons took Homeopathic treatment and 150 took folk treatment from the recovery of diseases. The above figure indicates that how much poor the people of the selected area.

2. Important Features of Health Policy Announced by Government of the People's Republic of Bangladesh

Government of Bangladesh for the first time announced it's Health Policy in 1999. The salient features of which are as follows:

1. Find out ways and means for the common people living in the rural areas to ensure easy health services;
2. Ensure primary health care services at the Thana level, development of its standard and acceptability of the common people;
3. Implement combined effective programmes to reduce the extent of malnutrition among the common people particularly for mother and children. Although human development index indicates three things for measuring countries development. These are life expectancy, infant mortality, and literacy;
4. Take appropriate measure with a view to reducing the existing death rates of mother and children and to fix it in an acceptable limit within five years;
5. Ensure the highest development facilities in the area which are related to health services;

6. Ensure the presence of doctors, nurses and health assistants at the Thana health complexes and union health welfare centers and also provide the delivery and maintenance of necessary apparatus and medicines;
7. Develop the overall standard of services among the hospitals and find out ways and means to ensure cleanliness and management;
8. Formulate suitable policy for control and administration of private clinics and medical colleges;
9. Strengthen family planning programmes, with a view to achieving the expected level of fertility;
10. Find out the ways and means of making the family planning programme more effective and easy accessible to the poor and marginal people of Bangladesh;
11. Quickly arrange special health care facility for the disabled, handicap, and retarded people; and
12. Reduce and discourage going abroad for medical treatment by evolving effective method of complicated treatment.

The gap between government health policy provisions and the expectation of patients about health care services may be understand by the following:

1. Patient Safety**:** Patients want safe health care services. Patients should not be harmed by health care services intended to help them. The problem is the lack of dedication to quality care by health professionals.

2. Effectiveness: Patients always expect effective treatment from health care services. But effective care is based on scientific evidence that treatment will increase the likelihood of desired health outcomes. Evidence comes from laboratory experiments, clinical research, epidemiological studies, and outcomes research. These services are not available in the rural health care center.

3. Timeliness: Seeking and receiving health care is frequently associated with delays in obtaining an appointment and waiting in emergency rooms and doctors' offices. Failure to provide timely care can deny people critically needed services or allow health conditions to progress and outcomes to worsen. Health care needs to be organized to meet the needs of patients in a timely manner.

4. Patient Centered Attitude**:** Patient-centered care recognizes that listening to the patient's needs, values, and preferences is essential to providing high-quality care. Health care services should be personalized for each patient, care should be coordinated, family

and friends on whom the patients' reliance should be involved, and care should provide physical comfort and emotional support.

5. Efficiency: Efficient treatment is essential to all. The goal is to continually identify waste and inefficiency in the provision of health care services and eliminate them. But existing health care system has enough lacking on it.

6. Equity**:** The health care system should benefit all people. The evidence is strong and convincing that the current system fails to accomplish this goal.

4. Findings of the Study

4.1. Role of Patient Satisfaction

Hospitals in the developed world recognize the importance of delivering patient satisfaction as a strategic variable and a crucial determinant of long-term viability and success (Davies and Ware 1988; Makoul et al. 1995; Royal Pharmaceutical Society 1997). Donabedian (1988) suggests that 'patient satisfaction may be considered to be one of the desired outcomes of health care information and patient satisfaction should be as indispensable to assessments of quality as to the design and management of health care systems'.

4.2. Factors Driving Patients' Satisfaction:

Studies in the developing countries in the world like Bangladesh have shown a clear link between patients' satisfaction and a variety of explanatory factors, among which service quality has been prominent (Rao et al. 2006; Zineldin 2006) . It can be said that this link is also important in the health care sector of Bangladesh. Earlier studies suggest that service quality can be adequately measured by using the SERVQUAL framework (Parasuraman et al. 1991, 1993), and it is refined version in the context of Bangladesh (Andaleeb 2000a, 2000b) that help to explain patients' satisfaction. The framework further embellished on the basis of this paper and discussions are as follows:

4.3. Service Factors

4.3.1. Reliability

Reliability refers to providers' ability to perform the promised service dependably and accurately. In Bangladesh, reliability of the provider is often perceived as low for various reasons, such as the accusation that doctors recommend unnecessary medical tests, there is an irregular supply of drugs at the hospital premises, supervision of patients by care

providers is irregular, and specialists are unavailable. Perceptions of reliability are also attenuated when doctors do not provide correct treatment at the first visit. In view of these reliability drivers, the more reliable the health care providers, the greater will be the patients' satisfaction. Responsiveness means patients expect hospital staff to respond promptly when it is needed. They also expect the required equipment to be available, functional and able to provide quick diagnoses of diseases. In addition, patients also expect prescribed drugs to be available and properly administered. Thus, it has been shown that the greater the responsiveness of health care providers, the greater the satisfaction of patients.

4.3.2. Assurance

Knowledge, skill and courtesy of the doctors and nurses can provide a sense of assurance to the patient's that they have the patient's best interest in mind and that they will deliver services with integrity, fairness and beneficence. For a service that is largely credence based (Zeithaml and Bitner 2000) where customers are unable to evaluate the quality of the services after purchase and consumption, the sense of assurance that is engendered can greatly influence patient satisfaction. In the health care system, assurance is embodied in service providers who correctly interpret laboratory reports, diagnose the disease competently, provide appropriate explanations to queries, and generate a sense of safety. Nurses also play an important part in providing additional support to patients' feelings of assurance by being well-trained and by addressing their needs competently. Thus, the greater the perceived assurance from the health care providers, the greater will be the satisfaction of patients.

4.3.3. Tangibles

Physical evidence that hospital provide will be satisfactory. These services are very important to justify patients' satisfaction. Generally, good appearance (tangibility) of the physical facilities, equipment, personnel and written materials create positive impressions. A clean and organized appearance of a hospital, its staff, its premises, restrooms, equipment, wards and beds can influence patients' impressions about the hospital. However, in Bangladesh especially in selected rural areas, most of the hospitals/clinics have lacking in many of these attributes, thereby attenuating patient satisfaction. It is posited that the better the physical appearance (tangibility) of the health care service facility and the service providers, the greater will be the patients' satisfaction.

4.3.4. Communication

Communication is also vital for patients' satisfaction. If a patient feels alienated, uninformed or uncertain about his/her health status and outcomes, it may affect the healing process. When questions of concern can be readily discussed and when patients are consulted regarding the type of care they will be receiving, it can alleviate their feelings of uncertainty. Also, when the nature of the treatment is clearly explained, patients' awareness is heightened and they are better sensitized to expected outcomes. Appropriate communication and good rapport can, thus, help conveying important information to influence patients' satisfaction. In particular, patients expect doctors and nurses to communicate clearly and in a friendly manner regarding laboratory and other test results, diagnoses, prescriptions, health regimens, etc. Similarly, nurses are expected to understand patients' problems and to communicate them to the doctor properly. It is proposed that the better the quality of communication perceived by the patients', the greater will be their level of satisfaction.

4.3.5. Empathy

Health care providers' empathy and understanding of patients' problems and needs can greatly influence patients' satisfaction. Patients desire doctors to be attentive and understanding towards them. Similarly patients expect nurses to provide personal care and mental support to them. This reflects service providers' empathy. It can be posited that the more empathy received from the service provider, the greater the satisfaction of the patients'.

4.3.6. Process Features

Process features refer to an orderly management of the overall health care service process. This reveals patients' expectation that doctors will maintain proper visiting schedules and that there will be structured visiting hours for relatives, friends, etc. Updated patients' records and standard patients' release procedures also facilitate patients' care. The practice of paying 'Baksheesh' (an informal but small facilitation payment) is an indication of process failures that can sometimes go out of control. Generally we feel that the better the process features at the hospitals, the higher will be the level of satisfaction of the patients'.

5. Additional Factors

5.1. Cost

In addition to service factors, perceived treatment cost is another factor that patients' may perceive as excessive. In the more affluent Western world, Schlossberg (1990) and Wong

(1990) suggest that health care consumers have become much more sensitive to costs, despite of health insurance coverage. Wong also predicts that consumers will shop for the best value.

In the developing world, especially in Bangladesh, cost is a perennial concern among those who seek health care services because of their low earnings. Such costs include consultation fees, laboratory test charges, travel, drugs and accommodation. While basic health care service is supposed to be free in public hospitals, patients end up bearing the costs of medicine and laboratory tests, as well as some additional unseen costs. Private hospitals are not free but their costs vary markedly across hospitals. It has been observed that the lower the perceived overall cost of health care services, the higher will be the level of patients' satisfaction.

5.2. Availability/access

Availability of doctors, nurses and hospital beds is of concern to patients' in defining the level of access they have to health care. Scarcity of beds and cabins in the government hospitals sometimes forces patients to choose private hospitals, often non-reputed ones. To access a foreign hospital, visa processing matters and arranging for accommodation and food are major concerns; patients usually prefer countries with minimum hassle in this regard. Therefore, it is hypothesized that when a hospital has easy physical access, where doctors, nurses, beds/cabins and so on are available and when visa processing (for those seeking care abroad) is simple, patients will be more satisfied. In other words, the greater the patients' access to hospitals, the greater will be their satisfaction.

Basic Model: The basic model being tested in the study is given below:

Satisfaction = a + b1_reliability + b2_responsiveness+ b3_assurance + b4_tangibles+ b5_communication + b6_empathy+ b7_process features + b8_cost+ b9_access + error.

While some research is now available on Bangladesh's rural health care system, patient satisfaction issues have barely been examined. Interviewer initially conducted in-depth discussions with 400 patients (covering heath care services) about the entire process that they underwent to obtain the necessary care when afflicted. These discussions revealed a variety of factors that were grouped under the above nine variables of the model, i.e. reliability, responsiveness, assurance, tangibles, Communication, empathy, process, cost and access.

6. Analysis

Table-2: Descriptive statistics

	Full Samples (n=400)		**Local: Patients Public Hospital (n=153)**		**Local: Patients Private Hospital (n=153)**		**Foreign: patients Private hospital (n=94)**	
Variables	Mean	S.D(∂)	Mean	S.D(∂)	Mean	S.D(∂)	Mean	S.D(∂)
Satisfaction	3.93	0.89	3.49	0.96	3.95	0.73	4.6	0.51
Doctor	4.09	0.68	3.89	0.7	3.99	0.6	4.57	0.49
Nurse	3.95	0.75	3.66	0.84	3.95	0.62	4.45	0.46
Tangibles (hospital)	3.77	0.9	3.07	0.76	3.92	0.64	4.67	0.44
Tangibles (staff)	4.44	0.57	4.34	0.57	4.36	0.58	4.76	0.45
Access	4.07	0.74	3.85	0.8	3.96	0.63	4.63	0.49
Process	3.97	0.71	3.7	0.71	3.93	0.66	4.46	0.58
Hospital cost	3.11	0.86	2.82	0.74	3.53	0.75	2.9	0.95
Baksheesh	2.11	1.11	2.48	1.33	2.16	0.93	1.74	0.84

6.1. Results

Means and standard deviations are presented in Table 2. The mean of satisfaction for the full sample is 3.93 on a five-point scale and has a positive valence, being above the scale midpoint of 3.0. When broken down by public, private and foreign hospitals, the satisfaction rating for foreign hospitals came out substantially higher. Yet, it was surprising that, after all the woes reported about health services in Bangladesh, both public and private hospitals in Bangladesh scored commendably (3.49 and 3.95)—both on positive territory. We feel this is because the two public hospitals chosen— Dhaka Medical College Hospital and Mitford Hospital—are among the oldest hospitals in the country. As a result, there may be a positivity bias in the mean rating of public hospitals that may not hold for other public hospitals, especially in the semi-urban and rural centers. Also, except for two constructs, the standard deviations for the public hospitals in Bangladesh are the highest. From Table 2, it was noted that the doctor and nurse service orientation composites were rated high in all three categories (see means) as were tangibles (staff) and access. The similarity in the mean scores for doctors in the public and private hospitals in Bangladesh may be explained by the fact that, given the dearth of

doctors, they offer their services to both sectors. A similar finding was reported by Andaleeb (2000).

6.2. Regression Model

The model being tested by regression analysis. The revised model is represented by the equation:

Satisfaction = a + b1 (doctor service orientation)+ b2 (nurse service orientation)+ b3 (tangible hospital) + b4 (tangible staff)+ b5 (access composite)+ b6 (treatment cost) + b7 (process features)+ b8 (baksheesh) + error.

As the results indicate (Table 3), the model for the full sample is significant at $P<0.001$ ($F8391=124.40$) and explains 71% of the variation in the dependent variable. Three factors—doctors, nurses and tangibles (facilities)—explain the high percentage of variation in patients' satisfaction. The standardized betas indicate that the variable having the greatest impact on patients' satisfaction is the 'doctor composite' followed by 'tangible (facilities) composite', and the 'nurse composite'. The measures of each composite ought to provide clear guidance on what patients need from the health care system and how these ought to be incorporated to deliver greater patients' satisfaction. By partitioning the data into the three hospital categories, it has been observed that the models were significant, as indicated by the F-statistics and the R2 values. The results suggest that a monolithic and standardized health care system is not what patients' desire; the needs of each segment differ. For the local public hospitals, for example, five significant factors explained patients' satisfaction. In order of importance (reflected in the standardized beta values), these are: doctors, tangibles (facilities), treatment cost, tangibles (staff) and nurses. The model explained 66% of the variation in the dependent variable. For local private hospitals, in order of importance, there were four significant variables: doctors, baksheesh (facilitation payments), nurses and hospital procedures. The model explained 73% of the variation in the dependent variable. Finally, for foreign private hospitals, there were four significant variables: doctors' service orientation had the strongest effect, while tangibles (hospital), tangibles (staff) and process features had similar and lower effects on patients' satisfaction. Surprisingly, the service orientation of nurses was not significant. We attribute this to the likelihood that it is the doctors that draw patients to foreign hospitals, where their stay may not be very long. Since all concerns are discussed directly with the doctors, who probably give patients more time and attention than at home, the relevance or importance of the nurses diminishes. Tangible evidence of the facilities also had a relatively strong effect on satisfaction.

Table-3: Regression results: satisfaction as dependent variable

	Full sample (n = 400)			Local: public (n = 153)			Local: private (n = 153)			Foreign: private (n = 94)		
	beta	Standard error	Standardized beta	beta	Standard error	Standardized beta	beta	Standard error	Standardized beta	beta	Standard error	Standardized beta
Constant	−0.332			−0.705								
Doctor	0.557***	0.059	0.425	0.488***	0.099	0.358	0.717***	0.079	0.597	0.616***	0.105	0.601
Nurse	0.189***	0.051	0.159	0.209**	0.082	0.182	0.224**	0.076	0.192	−0.034	0.092	−0.033
Tangibles (hospital)	0.338***	0.040	0.345	0.400***	0.077	0.319	0.006	0.073	0.005	0.439**	0.139	0.382
Tangibles (staff)	0.016	0.056	0.010	0.219**	0.098	0.131	−0.063	0.076	−0.050	−0.359**	0.114	−0.313
Access	−0.055	0.043	−0.046	−0.131	0.07	−0.109	0.030	0.062	0.027	0.034	0.080	0.033
Procedures	0.060	0.043	0.048	0.016	0.073	0.012	0.151**	0.063	0.127	0.215**	0.073	0.248
Treatment cost	−0.041	0.029	−0.040	−0.245***	0.064	−1.89	0.055	0.044	0.057	0.019	0.034	0.035
Baksheesh	−0.030	0.024	−0.038	−0.009	0.037	−0.013	−0.149***	0.037	−0.192	0.065	0.041	0.108
	$R^2 = 0.72$			$R^2 = 0.67$			$R^2 = 0.74$			$R^2 = 0.71$		
	$AR^2 = 0.71$			$AR^2 = 0.66$			$AR^2 = 0.73$			$AR^2 = 0.68$		
	$F_{8391} = 124.40$; $P < 0.001$			$F_{8144} = 37.12$; $P < 0.001$			$F_{8144} = 52.36$; $P < 0.001$			$F_{885} = 20.98$; $P < 0.001$		

***$P < 0.001$; ** $P < 0.01$; * $P < 0.05$.

Sources: Survey and data analyzed through SPSS.

Based on our sample, the service orientation of doctors has the greatest effect on patients' satisfaction across all three types of hospitals. This factor deserves the most attention from administrators and policy makers responsible for building a better and more patient-centric health care delivery system. Tangibles (facilities), or the visible aspect of hospitals, was also important in the case of both public hospitals (where looks can often be quite unsightly) and foreign hospitals (where looks are expected to be prim and proper). The service orientation of nurses is an important factor for ensuring patients' satisfaction in Bangladesh. The dearth of nurses, however, is a real problem in the country and the demands made on them are likely to be very substantial.

7. Suggestions

In developing countries like Bangladesh, few studies have sought patients' views on satisfaction with services, and there is little effort to involve them in measuring satisfaction or defining health service standards.

1. Consequences of patients' dissatisfaction dissuade others from seeking health care from the system. It tarnishes the image of health care system in a particular country. In the health policy of government, it should be mentioned that patients' satisfaction is the prime motto of health care services.
2. Service orientation of doctors is important for influencing patients' satisfaction in hospitals. So it is essential to make the doctor service oriented.

3. Service orientation of nurses is also an important factor for ensuring patient satisfaction in Bangladesh, but the dearth of nurses is a continuing problem. So sufficient number of nurses should be appointed.
4. Foreign hospitals are rated the highest in all service dimensions. It is necessary to follow the service pattern of foreign hospital in order to increase the service quality of hospitals in Bangladesh.

8. Conclusion

Formal healthcare system is not sufficient to meet the demand of the curative services of the health diseases in rural Bangladesh. Village doctors are indivisible part of our present health care system. This is not yet to take proper intervention to reduce harmful and inappropriate use of drugs by the village doctors for saving the vast majority of our rural population. Rural people and rural communities are faced with many of the same health care issues and challenges confronting the rest of the nation—exploding heath care costs, large numbers of people are uninsured and underinsured. It is essential to extend existing health care infrastructure. However, there are numerous back dated health care issues facing rural people in different rural places of Bangladesh. It can be addressed that rural issues should be considered in health care reform legislation. As there is a debate over national health care system, reform should place in rural health care system. Researchers hope that proper monitoring and health awareness is important to improve the rural health care system in Bangladesh.

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