

UNDERSTANDING AND MEASURING RESPONSIVENESS OF HUMAN RESOURCES  
FOR HEALTH IN RURAL BANGLADESH

by  
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## **Abstract**

### **Introduction**

Responsiveness of human resources for health (HRH) is defined as the social actions that health providers do to meet the legitimate expectations of service seekers. Lack of responsiveness may dissuade patients from early care seeking, diminish their interest in adopting preventive health information, decrease trust with health service providers, and marginalize at-risk population groups, leading to compromised wellbeing. Most importantly, responsiveness is related to the human rights of the patients. The overall goal of this dissertation was to examine HRH responsiveness in rural Bangladesh, to develop a scale to measure the responsiveness, and finally to demonstrate the application of the measurement method.

This goal has been addressed in three separate manuscripts, which aimed to answer the following questions, respectively:

1. What are the perceptions of outpatient healthcare users and providers regarding what constitutes responsiveness of physicians in rural Bangladesh?
2. How can we measure the responsiveness of physicians in rural Bangladesh?
3. What are the differences in responsiveness of physicians between those working in the public sector as opposed to those working in the private sector in rural Bangladesh?

### **Methods**

This study adopted a multiphase mixed methods design, in which the qualitative part was followed by a quantitative part in data collection (sequential). In the latter stage of the project, both qualitative and quantitative aspects simultaneously complemented each other in data analysis and interpretation (concurrent). Data collection took place in rural parts of Khulna, a southwestern division of Bangladesh. The qualitative portion consisted of in-depth interviews (IDI) of physicians (seven public, five private, five informal), in-depth interviews of clients (n=7), focus group discussions (FGD) with clients (two sessions each with males and females), and participant observations in consultation rooms of public, private, and informal sector healthcare providers (one week in each setting). The quantitative research consisted of structured observation (SO) of 393 physicians (195 from public and 198 from private sector). This data was collected for developing a scale of responsiveness through exploratory factor analysis (EFA), involving 64 items (generated through the

qualitative part of this project). This data was also intended for applying the scale, once developed, to compare the responsiveness of public and private sector physicians. Inter-rater reliability was assessed by same three raters observing 30 consultations, using the scale (later named as Responsiveness of Physicians Scale or in short ROP-Scale).

Study data were collected between August 2014 and January 2015. Qualitative data were analyzed by the framework analysis method. World Health Organization's (WHO) health systems responsiveness framework was modified, based on literature review and expert opinions, to include the following domains for qualitative analysis: Friendliness, Respecting, Informing and guiding, Gaining trust, and Optimizing benefit. Quantitative data were analyzed by EFA, followed by assessment of internal consistency by ordinal alpha coefficient and inter-rater reliability by intra-class correlation coefficient (ICC). For comparing responsiveness of public and private sector physicians two sample *t*-test, multiple linear regression (MLR), multivariate analysis of variance (MANOVA), and descriptive discriminant analysis (DDA) were used.

This dissertation presents three manuscripts. Manuscript-1 presents the qualitative component to facilitate understanding of the local perceptions around responsiveness of physicians. Manuscript-2 presents the quantitative data to develop a psychometric scale to measure responsiveness of physicians and then to evaluate the reliability and validity of the scale. Manuscript-3 used a mixed methods approach to compare responsiveness of public and private sector physicians.

## **Results**

Manuscript-1 showed that user and provider perceptions of responsiveness of physicians in rural Bangladesh often overlapped but at times diverged. Due to high patient load, physicians in the public sector usually failed to spend enough time with patients for proper history taking, asking questions, examining, and reassuring. Although not satisfactory, according to patients in qualitative part of the research, physicians in the private sector were more responsive towards the patients, especially in terms of conducting examinations with care, asking questions, and giving little reassurance. Most of the patients complained that physicians in general (i.e., both in public and private sectors) were not responsive, especially in terms of talking to them enough, compassionately touching them (for examining, for giving reassurance), and explaining their condition. They also complained of losing trust in physicians, as they seemed not to be caring, but businesslike. Patients demanded that, in order to be responsive, physicians should not only be prescribing drugs, but also be sensitive to patient's financial status. Physicians should tell them the cost of treatment, try to understand whether

patients can afford it, and if necessary, tailor the treatment accordingly. On the other hand, physicians also acknowledged their inadequacies, but attributed these to the overall health systems constraints, patient loads, lack of proper training on responsiveness issues, and often abuse by the patients.

Psychometric analyses, described in manuscript-2, identified 34 items grouped under five domains (or subscales) to constitute the Responsiveness of Physicians Scale or, in short, ROP-Scale. The five domains, derived through EFA and later named through discussing with the relevant experts, are as follows: Friendliness, Respecting, Informing and guiding, Gaining trust, and Financial sensitivity. There were high inter-factor correlations between Respecting and Informing and guiding, and between Respecting and Friendliness. The scale has a very high internal consistency with ordinal alpha coefficient of 0.91. Inter-rater reliability was also very high with intra-class correlation coefficient (ICC) (2, k) of 0.84. The scale also demonstrated face validity (through expert consultation), content validity (through qualitative research and literature review) and criterion validity (concurrent validity by correlation coefficient of 0.51 with consultation time; and known-group validity by comparing public and private sector physicians' responsiveness with private sector scoring 0.18 higher mean score).

The quantitative part of manuscript-3 was based on the application of ROP-Scale, in which an average of the score of 34 items was considered as the overall responsiveness score. Each item had four response categories, with the lowest score of one (signifying lack of responsiveness) and the highest of four (signifying best practice). The study found the mean responsiveness score of public sector physicians to be 1.98 and that of private sector physicians (in this manuscript only formal private sector was considered in both qualitative and quantitative analysis) 2.16; and the difference statistically significant in *t*-test with *t* statistic of -6.04 (*p*-value <0.01). The difference remained statistically significant in the multivariable models after adjusting for the confounding covariates such as age, gender and local origin of the physician and age, gender and level of education of the patient. Qualitative data added value to this finding by suggesting that, despite slightly better responsiveness of private sector physicians, none of the sectors were sufficiently responsive, according to service seekers. In domain-specific evaluation of responsiveness, the public sector outperformed the private sector in domains of Gaining trust and Financial sensitivity. The domain Respecting was identified in DDA as the most important domain in dividing the public and private sector based on responsiveness. The qualitative part of the study found the private sector physicians to be more tolerant, polite, and courteous than the public sector physicians, as opined



by patients. Nevertheless, private sector physicians were criticized by patients for attending more patients than their capacity, prescribing more diagnostic tests, and showing reluctance to refer patients who they failed to treat. Qualitative findings supported the quantitative findings that public sector physicians were more prudent in gaining trust and being financially sensitive to the patients.

## **Conclusions**

This study demonstrated the detailed process of development and application of a psychometrically validated ROP-Scale. In this process, I reviewed the earlier work on health systems as well as HRH responsiveness, defined the HRH responsiveness, discussed caveats in different aspects of understanding and measuring responsiveness, proposed a conceptual framework to examine HRH responsiveness, identified five domains of HRH responsiveness, presented the findings across the domains of responsiveness, and compared the responsiveness of public and private sector physicians' responsiveness. This study can pave the way for further research work, for example, on determinants of responsiveness, on contribution of responsiveness on health outcomes, validation studies in other settings and among other cadre, and comparative studies. This study can also contribute in the national and international policy decision-making. For example, at national level, this study can aid in in-depth understanding of expectation of people around performance of HRH, developing a context specific curriculum on doctor-patient communication, developing a guideline for regulatory interventions, and improving community ownership over health services. At international level, similar type of locally relevant testing of constructs and items can be tested, benefitting from the methodological and conceptual inputs from this study. This research can open up further avenues in the health policy and system research (HPSR) concerning the HRH both at local and global level.

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## Abbreviations

BHW	Bangladesh Health Watch
BM&DC	Bangladesh Medical and Dental Council
BNC	Bangladesh Nursing Council
BPMPA	Bangladesh Private Medical Practitioners' Association
CHW	Community health worker
DDA	Descriptive discriminant analysis
DGHS	Directorate General of Health Services
DRC	Discriminant ratio coefficient
EFA	Exploratory factor analysis
ERB-BRACU	Ethical Review Board of BRAC University
FGD	Focus group discussion
GDP	Gross domestic product
GIS	Geographic information system
GNI	Gross national income
GoB	Government of Bangladesh
GPS	Global positioning system
HNPSDP	Health Nutrition and Population Sector Development Program
HPSR	Health policy and systems research
HRH	Human resources for health
ICC	Intra-class correlation coefficient
IDI	In-depth interview
KMO	Kaiser-Meyer-Olkin
LGBT	Lesbian-gay-bisexual-transgender
MANOVA	Multivariate analysis of variance
MBBS	Bachelor of Medicine and Bachelor of Surgery
MCSS	Multi-country survey study
ML	Maximum likelihood
MLR	Multiple linear regression
MoHFW	Ministry of Health and Family Welfare
MRFA	Minimum rank factor analysis
NGO	Non-government organization
PCA	Principal component analysis
PD	Primary document
PHC	Primary Health Care
PPP	Purchasing power parity
RA	Research assistant
ROP-Scale	Responsiveness of Physicians Scale
SACMO	Sub-assistant community medical officer
SO	Structured observation
UHC	Upazila health complex
UH&FPO	Upazila Health and Family Planning Officer
VIF	Variance inflation factor
WB	World Bank
WHO	World Health Organization

# 1 Chapter 1: Introduction



## 1.1 Introduction and Rationale

### 1.1.1 Background

The World Health Organization's (WHO) report, *Everybody's business: strengthening health systems to improve health outcomes: WHO's framework for action* (WHO, 2007), identified human resources for health (HRH) as one of the building blocks of health systems. HRH is particularly important because it is closely linked with other building blocks; realizing the goals of an ideal health system largely depends on effective HRH. The focus of the work on HRH during the 1970s, lingered on the production and skill-mix of HRH. During the 1980s, this focus shifted towards curriculum development and modification as well as management training. More recently, analysts in the field of health policy and systems research (HPSR) started exploring issues related to performance of HRH (Martinez & Martineau, 1998). The *World Health Report of 2006* was a seminal publication that reviewed the previous work done on HRH performance and proposed a four-domain model of HRH performance, which includes: availability, productivity, competency, and responsiveness (WHO, 2006).

According to the preliminary reports prepared prior to the publication of *World Health Report 2000*, responsiveness had been defined as “how well the health system meets the legitimate expectations of the population for the non-health enhancing aspects of the health system” (Darby, Valentine, Murray, & DeSilva, 1999, pp. 1). However, the *World Health Report 2000* itself did not mention about ‘legitimate expectation’. It described responsiveness as, “...not a measure of how the system responds to health needs, ... but of how the system performs relative to non-health aspects, meeting or not meeting a population’s expectations of how it should be treated by providers...” (WHO, 2000, pp. 31). Thompson and Sunol (1995) classified expectations as: 1) ideal expectations, meaning clients’ idealistic perception about available services; 2) predicted expectations, meaning clients’ realistic expectations based on experiences, information about available services, etc.; 3) normative expectations, meaning clients’ expectations about what ought to happen; and 4) unformed expectations, meaning clients’ unarticulated expectations (due to various reasons such as lack of understanding, difficulty to express in language, fear, anxiety, social norms, etc.). DeSilva (1999) argued, ‘legitimate expectation’ is compliant with the concept of ‘normative expectations.’ She defined ‘legitimate’ as, ‘...conforming to recognized

principles or accepted rules and standards' (p. 04), and opined legitimate expectations be determined based on ethical norms and values.

While responsiveness of the health systems had been defined in earlier work (DeSilva, 1999; Darby, et al., 2000; Letkovicova et al., 2005; Üstün et al., 2001; WHO, 2000), responsiveness of HRH is yet to be clearly defined and understood.

### **1.1.2 Definition of HRH Responsiveness**

In 2004, *The Joint Learning Initiative on HRH* used the term 'responsiveness' in the context of HRH, but did not elaborate further (Joint Learning Initiative, 2004). In 2006, Dieleman and Harnmeijer (2006) prepared a report for WHO, *Improving health worker performance: in search of promising practices*, in which they proposed an analytical framework for HRH performance measurement. This framework suggested the aforementioned four domains of HRH performance, including responsiveness. The *World Health Report of 2006* also used the same framework around the same time (WHO, 2006). In none of these earlier publications, however, was a clear definition of HRH responsiveness proposed. In this dissertation I have referenced earlier literature on health systems responsiveness, HRH responsiveness, patient satisfaction, service quality, doctor-patient communication, as well as relevant studies in other fields (Please refer to Appendices 1 through 4 for complete list of the studies).

Using this past research, I propose the following definition of HRH Responsiveness:

*HRH responsiveness is the social actions that health providers do to meet the legitimate expectations of service seekers.*

By the term 'social action,' it is implied that the actions of service providers related to the therapy or technical aspects of care are excluded; only the non-medical aspects of care are included under HRH responsiveness.

### **1.1.3 Importance of HRH Responsiveness**

The concept of responsiveness is an important one, as lack of responsiveness may impede care seeking, and responsiveness is argued to be fundamentally related to the human rights of all patients. Lack of responsiveness may deter patients from seeking care earlier and decrease openness to health care providers, thus leading to diminished assimilation

of health information (Darby et al., 2000; DeSilva, 1999; Njeru, Blystad, Nyamongo, & Fylkesnes, 2009) and decreased trust with the health workforce (Gilson, 2003). Studies also indicated rude behavior by doctors commonly hampers care-seeking and wellbeing of specific population groups such as the elderly, patients suffering from non-communicable diseases (Bhojani et al., 2013), expectant and new mothers (Ekirapa-Kiracho et al., 2011), and the lesbian-gay-bisexual-transgender (LGBT) community (Elouard & Essén, 2013; O’Hanlan, Cabaj, Schatz, Lock, & Nemrow, 1997; Wirtz et al., 2014). Gostin, Hodge, Valentine, and Nygren-Krug (2003) demonstrated the congruence of responsiveness with the principles of human rights.

## 1.2 Literature Review

### 1.2.1 Concept and Domains of Responsiveness

The concept of ‘responsiveness’ first came into serious discussion among experts in HPSR with the publication of the *World Health Report 2000*. The report suggested three intrinsic objectives of health systems: level of health of the population, fairness in financial contribution, and responsiveness (WHO, 2000). The concept of responsiveness was derived from the fields of medical ethics, human rights, and human development (Valentine et al., 2007). Health systems responsiveness borrowed most of its early literature from patient satisfaction and quality of care studies (DeSilva, 1999; Letkovicova et al., 2005).

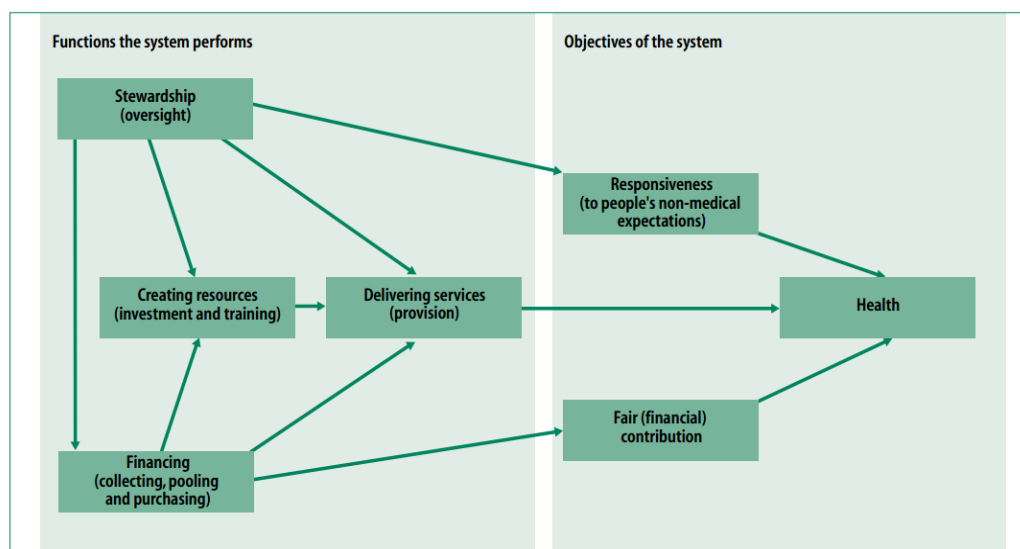


Figure 1-1 Health Systems Framework Showing Relations between Functions and Goals of Health System [Source: World Health Report 2000: Health Systems: Improving Performance]

The World Health Report 2000 suggested seven domains of health systems responsiveness: respect for dignity, confidentiality, autonomy, prompt attention, amenities of adequate quality, access to social support network (particularly for indoor patients), and choice of provider (DeSilva, 1999; WHO, 2000). Even after the publication of the report, research on responsiveness continued, and additional domains were examined (Darby et al., 2000; Gostin et al., 2003; Üstün et al., 2001). Published in 2005, *The Health Systems Responsiveness Analytical Guidelines for Surveys in the Multi-country Survey Study* (MCSS) proposed an updated version with an additional domain, 'clear communication' (Letkovicova et al., 2005, pp. 10). These initial domains, along with their sources, have been tabulated in Appendix 1. During and after the publication of the *World Health Report in 2000* and MCSS in 2005, many other scientists looked into the issue of responsiveness in specific geographical (e.g., Europe, Turkey, Kenya, South Africa, Taiwan, Iran, and Germany) or professional (e.g., primary health care, mental health, emergency department, HIV/AIDS testing, and public and private hospital) settings (Bramsfeld, Wedegärtner, Elgeti, & Bisson, 2007; Coulter & Jenkinson, 2005; Forouzan et al., 2011; Hsu et al., 2006; Javadi, Karimi, Raiesi, Yaghoubi, & Kaveh, 2011; Joarder, 2008; Morphet et al., 2012; Njeru et al., 2009; Peltzer, 2009; Ugurluoglu & Celik, 2006). These studies produced some additional domains, which are shown in Appendix 2. Additional studies from the fields of patient satisfaction and quality of care also lent some relevant ideas that might contribute to the conceptualization of HRH responsiveness; these are presented in Appendix 3.

### **1.2.2 Caveats of the Concept of Responsiveness**

Responsiveness should not be equated with patient satisfaction. Murray, Kawabata, and Valentine (2001) discussed how satisfaction depends on the perception of the individual regarding how the health system should operate. Satisfaction is the evaluation of the service seekers based on their fulfillment of these expectations (Williams, Coyle, & Healy, 1998). Satisfaction surveys do not measure what the health system actually does, rather to what extent the respondents are satisfied with what has been done with them. On the contrary, in responsiveness studies, one needs to determine what the health system or in this case HRH (i.e., legitimate expectations) are expected to do, and then to evaluate to what extent they are doing these.

Secondly, demonstration of responsiveness, either by the health system or by HRH, often depends on certain determinants. Availability or scarcity of resources and amenities often prompt HRH to behave (or fail to behave) in a certain way. For

example, if the health system and the administrative mechanism are not appropriate for HRH, employees may feel undervalued or mistreated, resulting in poor responsiveness (Cockcroft, Milne, Oelofsen, Karim, & Andersson, 2011). Similarly, lack of infrastructure may not allow the clinicians to maintain privacy of the patients, which could falsely portray them as unresponsive. Large numbers of patients and scarcity of HRH in health centers may not allow the clinicians to perform in a responsive manner, although under ideal conditions, they may perform with responsiveness (Cockcroft et al., 2011). Although identifying determinants of responsiveness is out of the scope of this study, in quantitative scale development, items that are determined more by the context than the physicians themselves are excluded. For example, patients might demand privacy, but this may be beyond the capacity of the physicians to provide, especially in the public sector settings. Physicians are assigned by the health center consultation rooms, which are often shared by other colleagues. This restricts them from providing privacy at own accord. Therefore, these types of items are not held against the responsiveness of physicians.

Finally, it is important to delineate responsiveness from other aspects of HRH performance (i.e., availability, productivity, and competency). Some aspects of responsiveness may seem overlapping with other aspects of HRH performance. For example, it is expected that physicians would provide explanations to their patients regarding their disease condition. Whether the physician provided the correct information in her/his explanation may indicate competency, which (whether the information is right or wrong) is out of the scope of this study. However, whether the physician provided explanations related to the disease condition (e.g., the cause, diagnosis, prognosis, treatment protocol, preventive aspects, side-effects of drugs, and importance of tests) and asked the patient whether s/he understood the explanation—may fall under responsiveness discussions.

### **1.3 Study Setting - Bangladesh**

#### **1.3.1 Bangladeshi Context**

Bangladesh is a South Asian country situated on the Gangetic delta. After a nine-month war, in which three million people died and 10 million became refugees to India, Bangladesh became an independent state on December 16, 1971 (Chowdhury et al., 2013). Bangladesh is one of the most densely populated countries of the world with a population of 156.06 million (estimated mid-year population in 2014) residing in an area of 147,570 square kilometers, resulting in a

massive population density of 1203 persons per square kilometer (Government of Bangladesh [GoB], 2014). The life expectancy at birth increased from 48 years in 1981 to a current expectancy of 70 years—a total addition of more than 20 years to the human life. Sixty-seven percent of the Bangladeshi population lives in rural areas. Per capita gross national income (GNI) in purchasing power parity (PPP) is \$3082, with 6% gross domestic product (GDP) growth rate over the past few years. Over 43% of the populations live under \$1.25 a day.

### **1.3.2 Health System of Bangladesh**

Health system of Bangladesh features a selective Primary Health Care (PHC), and a lack of effective prepayment based health-financing mechanism (Ahmed et al., 2015). Out-of-pocket health expenditure is 60.2% of total expenditure on health, and 93% of private expenditure on health (World Bank [WB], 2013).

After independence in 1971, the government of Bangladesh upgraded the Rural Health Centers to Thana Health Complexes, which are now known as the Upazila Health Complexes (UHC), and are serving as the hub for PHC delivery (Osman, 2004). UHCs are 31-50 bed hospitals (with very few exceptions where number of beds is 20 or 10) functioning in all upazilas (Sub-district), where people are entitled by constitutional mandate to receive free treatment and medication. Above the UHCs, there are the district-level secondary care hospitals, regional teaching hospitals, and national specialized institutions for tertiary level care with modest user fees. Below the level of UHCs, there can exist rural health centers, union sub-centers, and union health and family welfare centers (see Figure 1-2). On an average each UHC covers a catchment area of 320,444 persons (GoB, 2014).

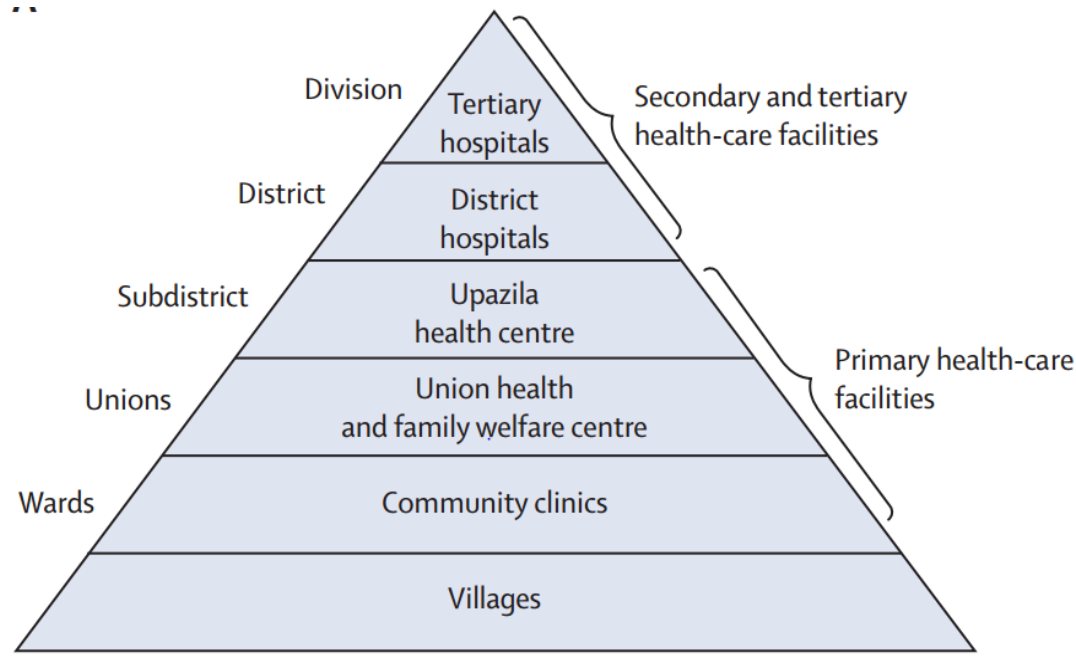


Figure 1-2 Administrative Divisions and Corresponding Health Infrastructures [Source: Harnessing Pluralism for Better Health in Bangladesh. Lancet, 382(9906)]

Although the health system of Bangladesh is governed through different directorate generals under the Ministry of Health and Family Welfare (MoHFW), Bangladesh today has a pluralistic health system, where many stakeholders or agents coexist. According to Ahmed, Evans, Standing, and Mahmud, (2013) the health sector is served through four major actors: government, private sector, non-government organizations (NGO), and donors. The government sector is responsible for both policymaking and service provision. The government, through Directorate General of Health Services (DGHS), runs 125 secondary and tertiary level hospitals, 467 upazila and lower level health facilities, and 18,000 community clinics. The private sector is rapidly expanding and is largely unregulated. This sector constitutes both formal and informal providers, the former targeted towards the rich with high-end service and the latter targeted towards the poor with drugstore based retailing services. NGOs are mostly involved in primary health care delivery and donors in technical assistance and financing (Ahmed, Hossain, Chowdhury, & Bhuiya, 2011; Ahmed et al., 2015, 2013; Bangladesh Health Watch [BHW], 2007).

### **1.3.3 HRH Scenario of Bangladesh**

The HRH scenario of Bangladesh is characterized by shortages, skill-mix imbalance, and inequitable distribution. Rural Bangladesh is extremely deficient in physician to population ratio with only 1.1 physicians per 10,000 population while urban is 18.2 and national average is 5.4 (Ahmed, Hossain, Chowdhury, & Bhuiya, 2011; BHW, 2007). Only 16% of total physicians cater to the rural population, who constitute 74% of the total population (BHW, 2007; GoB, 2014). Owing to the shortage of qualified health care providers in rural areas, the rural population, particularly the poor and the disadvantaged, predominantly rely on informal care providers (Cockcroft, Andersson, Milne, Hossain, & Karim, 2007). Dual job holding is allowed in Bangladesh and 80% of public sector physicians purportedly work in the private sector as well (Bergman, 2014; Gruen, Anwar, Begum, Killingsworth, & Normand, 2002). There are 65,767 registered physicians in total, of whom 53,929 are currently available in the country, with 38% in the public sector and the rest in private (GoB, 2014).

Ahmed, Hossain, and Chowdhury (2009) and Ahmed, Hossain, Chowdhury, and Bhuiya (2011) classified HRH in Bangladesh in the following way. The formal sector or ‘qualified allopathic professionals’ include physicians, dentists, and nurses, registered with Bangladesh Medical and Dental Council (BM&DC) and Bangladesh Nursing Council (BNC), respectively. The second group is defined as ‘semi-qualified allopathic providers,’ who receive training from formal institutions for a varying period of time. This group includes sub-assistant community medical officers (SACMO) (three years training), family welfare visitors and midwives (18 months training, often on top of nursing training in case of midwives), lab technicians, physiotherapists, community health workers (CHW) (trained in either public or NGO sector for varying period). The third group encompasses the informal sector or ‘unqualified allopathic providers.’ This group includes the village doctors, drugstore salespeople, traditional healers (kabiraj, ayurvedic, and unani), traditional birth attendants, and homeopaths.

### **1.3.4 Importance of Responsiveness in Bangladesh**

Responsiveness of HRH is an important issue in the Bangladeshi health system. The government of Bangladesh exercises its stewardship role in health sector through a sector-wide approach known as the Health Nutrition and Population Sector Development Program (HNPSDP) (Ahmed et al., 2015). Based on the findings in a study, where patients emphasized on



the behavior (expressed in the form of respect and politeness) of the service providers over their clinical competency (expressed by performing physical examination, giving clinical advice, and providing information about patient's health problem) (Aldana, Piechulek, & Al-Sabir, 2001), HNPSDP expressed its intent to improve the responsiveness of Bangladeshi HRH (Cockcroft et al., 2007; 2011).

Dissatisfaction of service seekers over the providers' attitude has often been expressed rather aggressively, according to numerous recent media reports ("Interns call off strike in Rangpur," 2012, "Patient's Death: DMCH doctors assaulted, ward ransacked," 2010, "Patients suffer as docs on strike in 2 districts," 2010, "Patients suffer at CMCH: Striking interns give 24-hr ultimatum for arrest of BCL man," 2012; Ismail, 2010). Physicians also responded to these violent acts by holding strikes and refusing to provide services. These tensions, many of which resulted from the lack of HRH responsiveness, eventually led to patient sufferings and even deaths. A growing number of social science studies are corroborating the newspaper reports, denoting the humiliation of the patients by HRH (Andaleeb, Siddiqui, & Khandakar, 2007b; Andaleeb, 2001; Zaman, 2004).

## **1.4 Conceptual Framework, Research Objectives, and Methodology**

### **1.4.1 Conceptual Framework**

The framework below describes how I conceived the idea of HRH responsiveness and how I might better understand and measure it. First, I would look at the 'service delivery context' pertaining to the providers. These may be, but not limited to, adequate number of HRH, infrastructure, workload, training, instruments, administrative support, etc. These create the supply potential among HRH, or the providers. These factors enable (or prevent) HRH to perform with responsiveness. Whatever they practice with the clients has been termed as their 'practiced responsiveness.'

But this (practiced responsiveness) is only one side of the equation. The demand-side, i.e., clients, are the recipients of the practices performed by the providers. There are some factors, termed here as the 'social context,' which shape the demand potential among the clients. These factors may include social norms about care seeking, perceptions about their health condition, comparing experiences of similar conditions with other service seekers, clients' perception and understanding

of own entitlements, etc. Whatever they experience from the providers has been termed as their ‘experienced responsiveness’.

I also need to be mindful of the fact that social context, to some extent, influences the supply potential of the providers as they also live in the society. Similarly, the service delivery context, to some extent, may influence the demand potential of the clients. For example, the unavailability of adequate HRH in a health center, if known to the clients, may decrease their expectation to be treated with responsiveness.

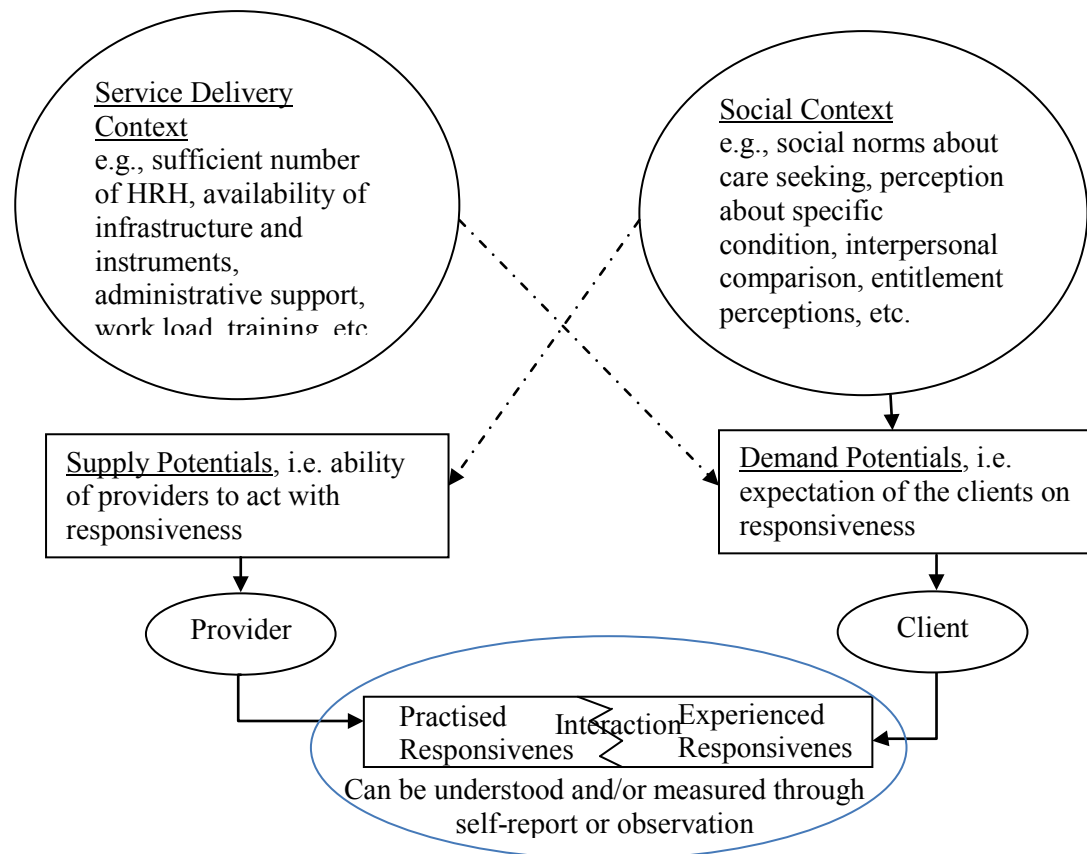


Figure 1-3 HRH Responsiveness Framework [Developed and Proposed for this Study]

In my study, I tried to understand the practiced responsiveness and experienced responsiveness through in-depth interviews (IDI), focus group discussions (FGD), and observation of the stakeholders. In the quantitative part of the study, however, I used a structured observation (SO) method to measure 'practiced responsiveness' only. Based on literature review (primarily studies on health systems responsiveness, with supplements from studies on HRH responsiveness, quality of care, and patient satisfaction) and inputs from the experts based in Baltimore and Dhaka, the following domains of HRH responsiveness have been proposed:

Table 1-1 Name, Definition and Elements of HRH Responsiveness Domains

<b>Name of Domain</b>	<b>Definition of Domain</b>	<b>Components of Domain</b>
Friendliness	How a provider shows friendly demeanor to a client	Greeting, identifying self by the physician, engaging in social talk, showing friendliness, giving reassurance, not using jargon or professional language, not showing hierarchical difference, exercising non-verbal communications, and being humorous.
Respecting	How a provider explicitly shows respect to a client	Expressing respect, listening to complaints completely and attentively, taking consent, being culturally sensitive, allowing patients to ask questions, refraining from discriminations (based on socio economic status, gender, religion, type of disease, or any other consideration), avoiding interruptions during consultation, having an acceptable appearance, and establishing or maintaining discipline inside consultation room.
Informing and guiding	How a provider gives information about health condition and guides a client	Communicating limitations, helping patients to find the right physician, involving patients in decision making and care, explaining to patients different aspects of their disease or condition (cause, diagnosis, prognosis, treatment, preventive aspects, side effects of drugs, and result of tests), providing patients with information on health promotion and disease prevention, writing prescription legibly, and facilitating follow up.
Gaining trust	How a provider gains trust of a client, or refrains from doing something that breaches trust	Maintaining confidentiality of information, referring immediately if necessary, taking help from colleagues in confusion, gaining trust, being service-oriented not businesslike, and refraining from illegal or unethical activities.
Optimizing benefit	How a provider tries to optimize the benefit of a client, going beyond the consultation	Counseling on social or family issues if related to the disease, going for a home visitation if demanded, considering individual need of the patient while prescribing, facilitating utilization of local resources, and showing financial sensitivity

## **1.4.2 Research Goal and Questions**

### ***1.4.2.1 Research Goal***

The overall goal of this dissertation is to examine HRH<sup>1</sup> responsiveness in rural<sup>2</sup> Bangladesh, to develop a scale to measure the responsiveness, and finally to demonstrate the application of the measurement method.

### ***1.4.2.2 General Research Questions***

1. What are the perceptions of outpatient healthcare users and providers regarding what constitutes responsiveness of physicians in rural Bangladesh? (Manuscript 1)
2. How can we measure the responsiveness of physicians<sup>3</sup> in rural Bangladesh? (Manuscript 2)
3. What are the differences in responsiveness of physicians between those working in the public sector as opposed to those working in the private sector in rural Bangladesh? (Manuscript 3)

### **Specific Research Questions under General Research Question 1**

1. What constitutes usual outpatient consultations with physicians in rural Bangladesh?
2. What are the common complaints of clients against the physicians with respect to responsiveness, and what are physicians' responses to those complaints?
3. What are the perceptions of clients and physicians regarding the responsiveness of physicians?

### **Specific Research Questions under General Research Question 2**

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<sup>1</sup>Formal (MBBS doctors) and informal (village doctors) providers from both public and private sector are in qualitative part, but only formal (MBBS doctors) providers are included in the quantitative part. Henceforth, 'physician', 'doctor' and 'provider' will be used as applicable instead of 'HRH' in this dissertation.

<sup>2</sup>In the context of this study, upazila or sub-district level has been considered as 'rural'.

<sup>3</sup>In the quantitative part of the study only formal sector (i.e., with minimum MBBS degree) general practitioners working in the outpatient facilities in public or private sector are included.

1. What are the components of responsiveness of physicians and how do they group together under different domains?
2. How reliable and valid is the method of measurement of responsiveness of physicians?

### **Specific Research Questions under General Research Question 3**

1. What are the levels of responsiveness of public- and private-sector physicians, and how different is the responsiveness score overall?
2. How different are the public and private sector physicians across different domains of responsiveness?

#### **1.4.3 Research Methodology**

Taking a pragmatist ontological position, I followed a mixed method study design. Creswell (2009) defined mixed method research as,

“... an approach to inquiry that combines or associates both qualitative and quantitative forms. It involves philosophical assumptions, the use of qualitative and quantitative approaches, and the mixing of both approaches in a study. Thus, it is more than simply collecting and analyzing both kinds of data; it also involves the use of both approaches in tandem so that the overall strength of a study is greater than either qualitative or quantitative research.” (p. 04)

Greene, Caracelli, and Graham (1989) listed five purposes of mixed method research: 1) triangulation, 2) complementarity, 3) initiation, 4) development, and 5) expansion. The purpose of choosing a mixed method design in this study, using this formulation, was principally ‘development.’ In this study, I used qualitative and quantitative methods such that results from the first method would inform the use of the second method, leading to the development of a psychometric scale.

Creswell and Clark (2011) suggested four aspects that need to be considered for designing a mixed method study: 1) level of interaction, 2) priority of the strands, 3) timing, and 4) mixing. In terms of level of interaction, this study had an ‘interactive’ level of interaction, as two methods were mixed before final interpretation (for better demonstration of this, please refer to Chapter 4). In terms of priority, both qualitative and quantitative components received equal weight. In terms of timing, this study followed a ‘multiphase combination timing,’ where data collection took place in ‘sequential’ form, i.e., qualitative data collection preceded the quantitative data collection in order to allow the qualitative findings to

act as a formative component for quantitative tool development (Nichter, Nichter, Thompson, Shiffman, & Moscicki, 2002). However, in data analysis and interpretation, a ‘concurrent’ approach was deemed more relevant, rendering this to be a 'multiphase design.’ In terms of mixing, the overall study was mixed at the level of design; however in the manuscript-3 (Chapter 4), mixing was done during interpretation of results. My research was based on current theories on health systems responsiveness. I developed the conceptual framework (section 1.4.1), which guided both qualitative and quantitative part of the research. The 'multiphase design' of this mixed method study is shown below using standard visual conventions:

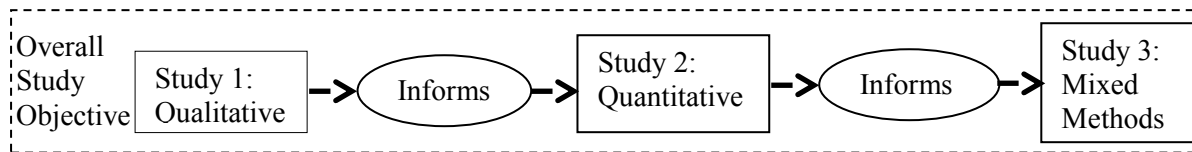


Figure 1-4 The Multiphase Design [Source: Creswell, J.W, and Clark, V.L.P. (2011), Designing and Conducting Mixed Methods Research]

#### 1.4.4 Ethical Approval

I obtained ethical approval from the Ethical Review Board of BRAC University (ERB-BRACU), Dhaka, Bangladesh on August 19, 2014 (Appendix 5). Before starting the quantitative fieldwork, I submitted an amendment request to include the quantitative component (data collection tools and consent forms) including mobile-based data collection techniques. Amendment request was approved by ERB-BRACU on December 12, 2014 (Appendix 5). In addition to approvals from ERB-BRACU, I obtained permission from DGHS, Bangladesh Private Medical Practitioners' Association (BPMPA), and the head of respective institutions (UHCs and private clinics), where I conducted my fieldwork (Appendices 6 and 7). All research assistants (RA) received training on human subject research ethics and data integrity, consistent with the *Johns Hopkins Bloomberg School of Public Health Human Subjects Research Ethics Field Training Guide*. Informed written consent was obtained from everyone participating in the research. The consent forms informed the subjects about the nature of the study, their freedom about participation and withdrawal at any point, and my contact information. A local advisory committee based in Dhaka was formed to tackle any unforeseen ethical issues that might arise during data collection.

## **1.5 Organization of this Dissertation**

There are four chapters in the rest of the dissertation. Three of these chapters correspond with stand-alone manuscripts:

- Chapter 2 is based on the qualitative study carried out in rural Bangladesh to understand the perceptions of both service seekers and providers on responsiveness of physicians.
- Chapter 3 is based on the process of developing responsiveness scale and its psychometric properties.
- In Chapter 4, I applied the responsiveness scale to compare the responsiveness of public and private sector physicians.
- Chapter 5 is the concluding chapter, where I summarized key finding, strengths and limitations of the study, future scopes of research, and policy implications.

**2 Chapter 2: Understanding Responsiveness of Physicians in Rural Bangladesh  
(Manuscript 1)**



## **Abstract**

### **Introduction**

Responsiveness of physicians is defined as the social actions that physicians do to meet the legitimate expectations of service seekers. Lack of responsiveness may adversely affect health and information seeking by patients. Aim of this study was to explore qualitatively the perceptions of outpatient users and providers regarding what constitutes responsiveness of physicians in rural Bangladesh.

### **Methods**

Data collection took place in Chuadanga, a district in southwestern Bangladesh, involving in-depth interviews of physicians (n=17 total, seven public, five private, five informal) and clients (n=7 total, 3 male, 4 female), focus group discussions with users (four total, two sessions each with males and females), and participant observations in consultation rooms of public, private, and informal providers (three weeks total, one week in each setting). Analysis was guided by a conceptual framework that defined physician responsiveness as constituting the following areas: friendliness, respecting, informing and guiding, gaining trust and optimizing benefit.

### **Results**

Most interviewed physicians recognized the importance of responsiveness; some even valuing this over clinical competence. Patients expected physicians would greet them before starting a consultation, but physicians considered this out of custom. Patients also expected physicians to engage in some social talks during consultation, which was not commonly practiced. Patients expected physicians to refrain from disrespecting them, by not speaking in an authoritative tone, not using offensive words; not bargaining for money, not refusing to provide care, not interrupting patients nor ejecting them from the room; but also to show respect explicitly. Both patients and physicians mentioned seeking consent by physicians before performing all therapeutic procedures was not so important, except for few situations like touching a female patient by a male physician, or examining a private organ. Patients desired explanation on at least the cause of illness or diagnosis, seriousness of illness, treatment and preventive steps. Yet we observed that physicians did not touch patients compassionately, did not explain health conditions to patients, nor encourage them to ask questions. Another expectation was that physicians would not involve in illegal or unethical activities related to patients' health. One of the

most important expectations, as expressed by patients, was financial sensitivity. Some physicians, acknowledged their limitations in responsiveness and attributed this to high patient loads, personal and professional frustrations, lack of training, absence of guideline, absence of basic health systems and administrative support, and abuse of the system by the patients (e.g., fake patients taking free medicines, politically influential persons breaking queues, and demanding fake certification).

### **Conclusion**

While users and providers had similar perceptions in many areas, important divergences were also found. Qualifications regarding how consent is perceived and the emergence of new areas such as financial sensitivity indicate that some of the constituents of physician responsiveness are context-specific.

## 2.1 Introduction

The concept of responsiveness was derived from the fields of medical ethics, human rights, and human development (Valentine et al., 2007). The *Joint Learning Initiative* (2004) on Human Resources for Health (HRH) used the term ‘responsiveness’ in the context of HRH, but did not elaborate further. In 2006, the World Health Organization (WHO) published the *World Health Report 2006: Working Together for Health*, which exclusively featured different aspects of HRH (World Health Organization [WHO], 2006). This report used the term ‘responsiveness’ in the context of HRH, in regards to the dimensions of HRH performance (other dimensions being availability, competence, and productivity). In this paper, based on the earlier literature on health systems responsiveness, HRH responsiveness, patient satisfaction, service quality, doctor-patient communication, as well as relevant studies in other fields (Please refer to Appendices 1 through 4 for complete list of the studies); I propose the following definition of HRH Responsiveness:

*HRH responsiveness is the social actions that health providers do to meet the legitimate expectations of service seekers.*

Responsiveness of health workers improves the care-seeking of patients in general. Studies show that lack of responsiveness may dissuade patients from early care seeking, diminish their interest in adopting preventive health information (Darby et al., 2000; DeSilva, 1999; Njeru et al., 2009), and decrease their trust in health service providers (Gilson, 2003). Studies also indicate a discourteous attitude in physicians often hampers care-seeking by specific population groups such as the elderly, patients suffering from non-communicable diseases (Bhojani et al., 2013), expectant and new mothers (Ekirapa-Kiracho et al., 2011), and the lesbian-gay-bisexual-transgender (LGBT) community (Elouard & Essén, 2013; O’Hanlan et al., 1997; Wirtz et al., 2014), leading to compromised wellbeing. Importantly, Gostin, Hodge, Valentine, and Nygren-Krug (2003) demonstrated the congruence of the concepts of responsiveness with the principles of human rights.

The importance of responsiveness has also been recognized in Bangladesh in the Health Nutrition and Population Sector Development Program (HNPSDP). According to one patient-satisfaction survey in Bangladesh, the most important predictor of satisfaction of the patients with government health care providers was the behavior of the providers with the patients rather than their clinical competence (Aldana et al., 2001; Cockcroft et al., 2007, 2011). Dissatisfaction among service seekers over the provider’s attitude has often been expressed rather aggressively, according to numerous recent

media reports. Physicians also responded to these violent acts by holding strikes and refusing to provide services. These tensions, many of which result from the lack of HRH responsiveness, eventually lead to patient suffering and even death (“Interns call off strike in Rangpur,” 2012, “Patient’s Death: DMCH doctors assaulted, ward ransacked,” 2010, “Patients suffer as docs on strike in 2 districts,” 2010, “Patients suffer at CMCH: Striking interns give 24-hr ultimatum for arrest of BCL man,” 2012; Ismail, 2010). A growing number of social science studies are corroborating the newspaper reports, denoting the humiliation of the patients by providers (Andaleeb et al., 2007b; Andaleeb, 2001; Zaman, 2004).

The aim of this study was to explore qualitatively the perceptions of outpatient users and providers regarding the constituent elements of responsiveness of physicians in rural Bangladesh.

## **2.2 Research Questions**

### **2.2.1 General Research Question**

What are the perceptions of outpatient healthcare users and providers regarding what constitutes responsiveness of physicians in rural<sup>1</sup> Bangladesh?

### **2.2.2 Specific Research Questions**

1. What constitutes usual outpatient consultations with physicians in rural Bangladesh?
2. What are the common complaints of clients against the physicians with respect to responsiveness, and what are physicians' responses to those complaints?
3. What are the perceptions of clients and physicians regarding the responsiveness of physicians?

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<sup>1</sup> In the context of this study upazila or sub-district level has been considered as 'rural'

## 2.3 Methods

### 2.3.1 Study Site and Population

This qualitative research was conducted in the southwestern part of Bangladesh, in all three upazilas (Alamdanga, Damurhuda, and Jibannagar) of the Chuadanga district. One of the reasons for choosing Chuadanga is personal; Chuadanga is my ancestral district. This allowed me to have a better understanding of the local language, culture, society, geography, and politics. Secondly, Chuadanga shares a fair similarity with the rest of the country in terms of ethno-cultural and socio-demographic profiles. The table below shows how the statistics of this district is comparable with rest of the country (Bangladesh Bureau of Statistics, 2012).

Table 2-1 Comparison of Socio-Demographic Characteristic of Chuadanga District with National Average of Bangladesh

<b>Indicator</b>	<b>Chuadanga</b>	<b>Bangladesh</b>
Population Density (per square kilometers)	962	976
Annual Population Growth Rate	1.13	1.47
Average Household Size	4.05	4.44
Sex Ratio <sup>1</sup>	100	100
Total Fertility Rate	1.93	2.1
Urbanization (%)	27.12	23.30
Literacy (% , both sex)	45.9	51.8
School Attendance (% , 5 to 24 years, both sex)	51.9	52.7

### 2.3.2 Timeline and Data Sources

I developed semi-structured guidelines for in-depth interviews (IDI), focus group discussions (FGD), and participant observations that were based on the literature review and consultation with experts based in Baltimore and Dhaka (Appendix 8). All tools were written in both English and Bengali side by side. Although I started the formal data collection after I received ethical approval from the Ethical Review Board of BRAC University (ERB-BRACU) on August 19, 2014, I started spending time in the field site much earlier. I spent this time contacting the gatekeepers, developing a list of respondents, receiving permission for participant observation, and building rapport with the respondents as well as the local community. My data collection ended on September 14, 2014. Data sources included IDIs

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<sup>1</sup> Sex ratio is defined as the number of males per 100 females in the population. A sex ratio higher than 100 denotes a higher number of males, while less than 100 means the females are more numerous

with seven public sector physicians, five private sector physicians, five village doctors, and seven clients; four FGD sessions with patients (two sessions each with males and females); and participant observation in consultation rooms of public sector physicians, private sector physicians, and village doctors for a period of one week in each setting. A trained female research assistant (RA) conducted the two FGDs with the females. Respondents were added to the list until data saturation (Ritchie, Lewis, & Elam, 2003) was achieved. A detailed respondents list is provided in Appendix 9.

### **2.3.3 Selection of Respondents and Observation Locations**

For identifying public sector physicians, first, I visited all three upazila health complexes (UHC) of the Chuadanga district. These upazilas share similar socio-demographic characteristics, located close to one another geographically (highest distance of only 52 kilometers by road, between Alamdanga and Jibannagar), and are not known for any particular difference. I sought suggestions and assistance from Upazila Health and Family Planning Officers (UH&FPO), i.e., the chief of the health complex for my research. I explained the purpose of my study and obtained a list of all the physicians. With their help, I finalized the list of respondents from all three UHCs. For private sector physicians, I followed the same process with the President of Chuadanga branch of Bangladesh Private Medical Practitioners' Association (BPMPA). For village doctors, I relied on the list obtained from local journalists.

For sampling of providers, I followed principles of heterogeneous purposive sampling (Ritchie et al., 2003), aiming maximum variation in gender, age and experience. From the list of public sector physicians I obtained from the UH&FPO, I ensured variation in the sample by selecting five males versus two females; among whom two had work experience of 30 years or more, one had that of 20 years, and four had less than 10 years. From the list of private sector physicians I obtained from the President of Chuadanga branch of BPMPA, I sampled four males and one female (only one female exclusively private practicing physician was available there); among whom one had work experience of over 40 years, one had that of over 30 years, two had above 20 years, and one had only two years. However, since there was no female village doctor, I only maintained heterogeneity in terms of age and experience. One of them had work experience of over 30 years, two had over 20 years, and two had less than 10 years.

Since it is permitted and commonly practiced for physicians to have two jobs (Bergman, 2014; Gruen et al., 2002), I enlisted the few exclusively private practicing physicians in rural areas of Chuadanga district. However, in the public

sector, I could not find any physician engaged exclusively in public sector. Nevertheless, I ensured their responses reflect their views and experiences from public sector practices only. I requested them, and reminded them during the interviews (by probing techniques), to respond to my questions only based on their experiences and views related to their services in public sector.

For identifying the clients for qualitative interviews, initially I tried to approach random patients from the UHCs. This approach was unsuccessful as the patients were in a hurry, and finding a proper location for an interview was difficult. So, I generated a list of potential respondents with inputs from local residents (personal contacts) and contacted them myself. The list of respondents was developed based on the following criteria: persons older than 18 years of age, who went to a doctor at least twice in their lifetime, and last visit to a doctor was within the last year. In addition, I followed heterogeneous purposive sampling, with maximum variation in their age, gender, level of education and occupation. In terms of age, five were in their 40s, and two in their 20s; in terms of gender, four were female and three were male; in terms of level of education one had primary education (up to class five), one had secondary (up to class 10) one had higher secondary (up to class 12), three had bachelors, and one masters. Four were teachers, two housewives, and one businessman.

Finding female respondents for FGDs was initially difficult, as they did not agree on a common place and time to meet. So, I contacted the principal of a college and the headmaster of a girls' school to allow us to conduct the sessions with their female employees. For FGDs, I followed homogenous purposive sampling, which is recommended for FGDs to keep the groups more focused, and to facilitate effective intra-group interactions (Ritchie, 2003). Maintaining homogeneity was attempted in terms of gender (and profession in case of females).

The selection of sites for participant observation was based on principles of convenience sampling as well as purposive sampling (Ritchie et al., 2003). I chose them in a way conducive for my travel to those locations at different times of the day; but at the same time I refrained from choosing sites, where my identity might create social desirability bias.

Observation took place in consultation rooms of the UHC, located in an upazila 31 kilometers away from Chuadanga district center. I chose this location because, during my frequent visits in different UHCs, I found the UH&FPO to be friendly, supportive, and interested in assisting in research work. He also helped in accessing the site for participant observation of private sector physicians in a private clinic in another upazila, where he worked part-time. Observation of

private sector providers took place in a private clinic and a non-government organization (NGO) clinic, located in an area noted for commercial, cultural, and industrial activities since British colonial period. Since my observation site for public sector was in one upazila, and that for private sector was in another; I decided to conduct observation of village doctors in the third one. The location was a prospering village bazaar, the fortune of which rose with the establishment of a police outpost and a paved road in 1994. There were about 15 village doctors, of whom I selected three. I spent most of my time, however, in the chamber of one of them, as he had the highest patient turnover. Observations took place in their medicine shops. I was careful to select the site to be far from my ancestral residence as the informal providers who knew my identity would be hesitant to prescribe in front of me, fearing any mistake. Besides, patients coming to their shops would ask treatments and prescriptions from me, if they knew I was a physician.

#### **2.3.4 Data Collection Process**

The location and time of data collection was determined based on the preference of the respondents. An appointment was set beforehand and I went to their preferred setting. All IDIs were digitally recorded with a small recorder, with the permission of the respondent. They were also told they could ask to turn the recording off at any point, should the respondent intend to say something confidential. Duration of the IDIs ranged from 35 minutes to one hour 15 minutes and that of FGDs from 45 minutes to one hour 30 minutes. Most FGD sessions had eight respondents except one, which had seven.

Almost all public sector physicians practiced privately after their public hospital office hours. Most of my public sector physician respondents preferred to talk after their office hours in their private chamber. Four out of seven public sector physicians gave interview in their private chamber; and three gave interview in the UHC when there was less patient load. In case of the private sector physicians, all five respondents gave interview in their private chamber. It was a bit problematic as patients were coming for consultation and the interview was interrupted many times. In case of informal providers, three out of five interviews were taken in their chambers. The interview was scheduled at times where they had less patient load. Two of the respondents came to my ancestral residence for the interview.

In case of the patients, two out of seven interviews were conducted in their homes, two near upazila health complex, one in a shop of respondent's friend, one in another respondent's home (as they were colleagues), and one in her office. In the



interviews at home, one family member was present during the interview. It would be discourteous to ask them to leave the room. In one case, the wife of the respondent even contributed to the interview, by interjecting her views. I politely requested her not to do so, and told her that although her views are interesting I had to record only the respondent's views on the topic. The two interviews near the UHC were also interrupted by some onlookers. In case of the FGDs, the two FGDs with the male respondents took place in my ancestral residence. The two FGDs with the females were conducted by the female RA, in the office room of a college and a girl's school. The respondents were the teachers of the respective institutions, so it was easy to find a suitable room for the purpose.

In each participant observation setting, I spent the first day gaining a grasp of the surroundings and people; the second and third day were spent inside the facilities to observe overall functions and relationships; and the remaining four days were focused on observation of consultations. I jotted down small notes during the observation and later that day typed elaborately in computer.

Before starting the participant observation in the public sector setting, I obtained permission from the UH&FPO of the observed UHC. In the private sector, I obtained permission from the owner of the private clinic. Since the medicine shop was owned by the observed village doctors, no such permission was obtained separately from the owners. However, written consent of all observed and interviewed providers and clients were collected separately. There were no refusals, except for one female patient leaving the UHC, who had hurry to reach home.

### **2.3.5 Data Analysis**

Both inductive and deductive methods were applied for data analysis. Atlas ti version 7.5.2 (latest version at the time) software was used extensively for analysis. The analysis process included the following steps: familiarizing with the data, developing coding schema or framework, coding the data, grouping the data, and interpreting the data. The process is described sequentially in the following paragraphs.

Since the interviews and FGDs were digitally recorded, two RAs transcribed them verbatim, using transcription pedals. I listened to each record, checked the transcripts line-by-line, transcribed myself if anything was found missing, and finalized the transcripts. I also word-processed the observation notes. All the documents were given names following

consistent naming convention. In Atlas ti, I created a new hermeneutic unit and added all the files (transcripts, and observation notes) as primary documents (PD).

Data familiarization was done in different ways. Since I collected most of the data, I was already familiar with it to large extent. Then I listened to all the recordings and finalized the transcription. Then I read the documents again after these were added in Atlas ti as PDs.

After getting familiar with the data, I created a codebook, containing name and definition of the code (Appendix 10). Initial codes were derived from literature (Appendix 4) as a priori codes; inductive codes were added along the way during data familiarization, and applying codes to text segments (or 'quotations', according to Atlas ti terminology). There were 80 codes in total, which were grouped under nine broad categories: 1) background or context related codes, 2) general consultation process related codes, 3) initial item generating codes, 4) inductive and deductive codes pertaining to responsiveness domains, 5) codes to determine which expectations might not be legitimate, 6) constraints to provide responsive care, 7) suggestions to improve responsiveness, 8) difference in responsiveness of public, private and informal providers; and 9) quotations and stories (Appendix 11).

'Focused coding' technique was applied on the code category 'inductive and deductive codes pertaining to responsiveness domains' (category number four in previous paragraph), to fit my qualitative data into a more concise and suitable framework. For doing so, I grouped these codes (38 inductive and deductive codes in total) into 10 sub-subthemes: 1) dignity, 2) confidentiality, 3) autonomy, 4) participation, 5) considerate care, 6) attention, 7) appearance, 8) clear communication, 9) interpersonal aspects of care, and 10) beneficence to patients. After numerous meetings and discussions with thesis committee based in Baltimore and the local scientific committee based in Dhaka, I lumped them further to the following five themes: 1) Friendliness (combining clear communication and inter-personal aspects of care), 2) Respecting (combining dignity and confidentiality), 3) Informing and guiding (combining autonomy, participation, and considerate care), 4) Gaining trust (combining attention and appearance), and 5) Optimizing benefit (from beneficence to patients).

After applying the codes to the full dataset, I created primary document families for physicians, informal providers, patients, and participant observations; based on the type of the data sources (i.e., physicians, informal providers, patients,

participant observations. Using the 'global filter' option in Atlas ti, I got all the texts under codes, stratified by the data sources. These outputs were used for data interpretation and report writing.

## **2.4 Findings**

### **2.4.1 Description of Respondents and Observation Settings**

Among the public sector physicians, the senior-most person was almost at the end of his public service career, and was working as a UH&FPO. Two others were in their forties, and were working as Medical Officers. The remaining four were new, and had joined the service in the last five years. All of them also practiced privately, as dual practice is allowed in Bangladesh (our interviews with them were based only on their experiences and views pertaining to public sector work). Among the five respondents from private sector, there were two who never worked in the public sector, nor did they intend to work there in the future. Other private sector physicians either retired from public service, or would start public service shortly. Among the private practitioners, the senior-most person was almost 70 years of age, and the junior-most one just graduated two years ago and was looking forward to joining public service shortly. All physicians hailed from Chuadanga. All of them, except the youngest two, graduated from government medical colleges.

The village doctors were all from Chuadanga and practiced close to their home, even sometimes inside their own home. They had motorbikes to attend calls at patients' homes. Most of them sold medicine in their shop, and attended to patients as a side business. Most of them completed college education (equivalent to high-school graduation in many countries), then received training from unrecognized institutions or learned treatment while working in the private chamber of an acquainted doctor.

Client respondents were divided into two groups: the IDI respondents and the FGD respondents. Four of the in-depth interviewees were teachers, two housewives, and one businessman. Half of the FGD respondents were males and half were females. The majority of client respondents were in their mid 30s to mid 40s. Most of them were teachers as the female FGD respondents were all sampled from two educational institutions, but there were some farmers, small businessmen, and one retired government official. Almost all of the IDI and FGD respondents were living with their families in rural parts of Chuadanga.

In observation of the public sector, although the official outpatient service time was from eight in the morning to two in the afternoon, neither the doctors nor the patients used to show up before nine in the morning and stay after one in the afternoon. The consultation room was shared by more than one physician, or sometimes even with the semi-qualified providers known as the sub-assistant community medical officers (SACMO). They sat in different tables in the same room and patients queued up inside the room, extending in front of the consultation room as a crowd. Sometimes two doctors shared a single table and patients crowded around the table. Nobody maintained the patient flow, nor was there a way to restrict the non-patient visitors (e.g., the pharmaceutical representatives, and dalals<sup>1</sup>) inside the room. Most of the patients coming to the UHC were females; most belonged to lower socio-economic group as indicated by their dress. I conducted a charting exercise, which indicated almost two thirds of the patients came with mild illnesses, one third with moderate and only two patients with severe conditions. They came with all types of health conditions such as pruritus, dysentery, cough, musculoskeletal pain, peptic ulcer disease, headache, nausea, dizziness, eye conditions, skin diseases, weakness, hysteria, etc.

The doctors in the private clinic used to start seeing patients around five in the afternoon (after finishing their job in public service) and continued until nine in the night. The doctor in the NGO-clinic maintained a strict duty hour from nine in the morning to two in the afternoon. He worked exclusively in the private sector (though he practiced privately in other clinics outside his duty hours in the NGO-clinic). The consultation rooms were better maintained in private sector- only the next patient in the line, along with the consulting patient, entered the room and waited till her/his turn came. In the NGO-clinic, only the patient and an accompanying attendant entered the room. In both the private clinic and the NGO-clinic, there was a person assigned to maintain the patient flow. Patients coming to the private clinics belonged to low to middle socio-economic group. Some affluent people came too. Most of the patients coming to the female doctor came with gynecological complaints such as follow-up ultra-sonogram, antenatal checkup, pregnancy related issues, urinary tract infections, etc.; whereas the male doctor got variety of patients such as peptic ulcer disease, menstrual disorder, common cold, pregnancy related issues, psychiatric disorder, abdominal pain, skin diseases, typhoid, etc. Most of the patients were moderately ill.

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<sup>1</sup> Brokers of diagnostic centers and clinics, who roam around there to entice the innocent rural patients to their clinics and diagnostic centers

All of the village doctors continued their consultation throughout the day, as long as people visited the bazaar- usually from nine in the morning to nine in the night. There was no separate consultation room for informal providers; they sat behind a wooden deck at the anterior of the shop. There was a chair or bench at the outer side of the deck, where local visitors coming for relaxed chatting sat, along with the patients who came for consultation. The village doctor often received requests in mobile phones to visit in patients' home. The environment was very informal, none was there to enroll patients or maintain their flow. Most of the people visiting them were from lower socio-economic group. Most of the patients came with variety of diseases such as males coming with diarrhea, peptic ulcer disease, respiratory diseases; females coming with headache, body ache, and gynecological diseases. Most of them had mild illnesses. Characteristics of the respondents and observation settings are summarized in Table 2-2 below.

Table 2-2 Characteristics of Respondents and Observation Settings

<b>In-depth Interview with Public Sector Physicians</b>	
Number	7
Gender	2 Females and 5 Males
Range of graduation year	1982 – 2009
<b>In-depth Interview with Private Sector Physicians</b>	
Number	5 (2 of them retired from public sector, 1 was accepted in public sector and waiting to join, and only 2 had no linkage with public sector)
Gender	1 Female and 4 Males
Range of graduation year	1973 – 2013
<b>In-depth Interview with Village Doctors</b>	
Number	5
Gender	5 Males
Range of number of years in practice	2 – 32
Range of level of formal education (excluding training in medicine)	Secondary – Bachelor
<b>In-depth Interview with Clients</b>	
Number	7
Gender	4 Females and 3 Males
Range of age in years	25 – 48
Range of level of education	Primary – Masters
Types of occupation	High school teacher, kindergarten school teacher, businessman, homemaker
<b>FGD with Clients</b>	
Number of sessions	4 (2 with Females, 2 with Males)
Number of participants	7 - 8 in each session
Range of age in years	19 – 72
Range of level of education	Primary – Masters
Type of occupation	College teacher, high school teacher, retired government official, businessman, farmer

<b>Participant Observation</b>	
Setting	3 settings: public sector (consultation rooms in an upazila health complex), private sector (consultation rooms in a for-profit private clinic and a not-for-profit NGO-clinic), and informal sector (consultation rooms of 3 village doctors in a village bazaar)
Duration	1 week in each setting

#### **2.4.2 Usual Consultation Process**

Patients usually went to informal providers as a first point of consultation. If informal providers failed, or the patient perceived the disease to be a serious one, they first went to UHC, then to local private practitioners, and finally to the district town (mostly to Chuadanga, or neighboring Kushtia, Jessore, or Khulna). Some patients also mentioned they took the serious patients to neighboring India, which is very close to Chuadanga. A common believe among the patients was that they would get a good treatment if they were referred by another known physician. So, before consulting a physician they desperately searched for a physician among their circles of friends and families to introduce them to the physician they were going to consult. Otherwise, they feared a lack of proper attention from the physician.

In government health facilities, patients used to first buy a ticket<sup>1</sup> with two taka (approximately 2.5 cents) and stand in queue. Then they entered the consultation room and stood surrounding the doctor's table along with other patients. Sometimes the doctor collected the tickets from patients' hand, stacked them together and called the surrounding patients one by one. Otherwise, patients competed with each other in a chaotic manner to get the opportunity of consultation. Doctor usually casted a quick glance, without much talk and listened as the patient started mentioning the problem. Since the presence of other surrounding patients created pressure on both the doctor and the patient to hurry, there remained very small room for proper history taking, touching compassionately, asking questions, examining, and reassuring. Giving diagnostic tests was very uncommon. Although there were exceptions, an excerpt from the observation data provides a picture of a typical consultation in the UHC:

*“Doctor: Yes?*

*Patient: Coughing a lot.*

*Doctor puts stethoscope on chest. Then casts a slight glimpse on the patient.*

*Doctor: Age?*

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<sup>1</sup>A piece of paper purchased by the patients from the health facility, name and age of the patient is written on it by the person in charge of selling it, and doctors write prescription on this paper only

*Patient: 29 years.*

*Doctor starts writing the prescription. An office clerk comes in when the doctor was still writing the prescription. Doctor signs some papers and gives them back to the clerk. Then he finishes the prescription and hands it over to the patient, without wasting a word or any time on anything else.*

*The next patient was waiting beside the table, along with many other patients. Same process went on.*

*Consultation time one and half minutes.”*

[Public sector observation note, 3rd day of observation, 10:20 am]

In private facilities, patients often needed to take a number from before and be seated in a designated waiting area.

However, observation data reveals that, it was common to enter the doctor’s room when the previous patient was still being consulted. In private settings doctors were more accommodating towards the patients and conducted some clinical examinations such as checking the blood pressure, measuring temperature by thermometer or hand, seeing the tonsils by using a tongue depressor, and examining the chest by stethoscope. The instance of giving diagnostic tests was higher than that in the public sector; most of the clinics had a diagnostic center attached to it, where the tests were mostly done.

Doctor asked one or two questions, listened attentively to the patient, prescribed, gave little reassurances ("It will be cured"), but he did not explain much. Sometimes there was an assistant who explained the drug doses and preventive issues. It was very common for the patients to come to the consultation room along with an attendant. They never asked for permission to stay, nor did the doctor ask the patient if s/he was okay with this. An excerpt from my observation note demonstrates a typical consultation in the private clinic:

*“A female patient of mid 20s, accompanied by an elderly woman, gave salam upon entering. Sensing patient's hesitation about my presence, doctor introduced me as a researcher and a doctor. Patient took her face near doctor's ear.*

*Doctor: What's the name?*

*Patient: Shirin*

*At this point another male person stood near consultation room's door, which bothered the patient. The man left after a while himself.*

*Doctor: What's the problem?*

*Patient: I have severe bleeding during menstruation.*

*Doctor: How many days does it stay?*

*[Patient replied, doctor asked few other associated questions]*

*Doctor performed the clinical procedures such as he measured blood pressure over the sleeves (This is a common practice among doctors, to measure blood pressure over the sleeve, when patient wears full-sleeved dress), asked about other symptoms (cough, cold, fever) while measuring the blood pressure, touched for fever upon patient's request to do so.*

*Doctor: Do you take pills?*

*Accompanying attendant (presumably mother in law): Her husband is not here for two and a half months; she is not taking anything.*

*Doctor calculated something on finger, prescribed some pills, explained the drug. However he did not tell the diagnosis, cause, or prognosis. Consultation time three minutes."*

[Private sector observation note, 4th day of observation, 07:40 pm]

Contrary to formal providers, village doctors gave more time to the patients. They spoke in a local and familiar tone, asked about the family and many household matters, as most of the patients were known to them personally. Village doctors examined the patient by measuring blood pressure, measuring temperature, auscultating the patient, and examining eyes for jaundice or anemia. Giving laboratory diagnostic investigation was very uncommon with the village doctors. They compassionately touched the patients more than the formal providers did. Many village doctors did not take fees; they lived on the profits by selling the medicines, which again they often did on credit. Village doctors also went to patients' homes if called, which was very uncommon with the formal doctors. Village doctors often took a patient in his motorbike to a familiar doctor, if the village doctor himself failed to treat. An excerpt from my observation note demonstrates a home visit by a village doctor:

*"Mintoo doctor (pseudonym) received a mobile phone call requesting him for a home visit. He was trying to bypass it by saying "I will go later" (He later explained the reason of his reluctance. He said, when patients come to medicine shop, they bring at least some money with them. He doesn't take any fees from them but earns some profit by selling medicines. But in home visits he cannot sell medicines, or cannot force them for payment due to social acquaintances. All his service is given in credit; on top of this he has to lose some money on the fuel cost). Sensing my interest on a home visit, he then agreed to go. He knew the household, where he went by driving his motorbike through unpaved muddy village road for 10 minutes, having me on the backseat. The patient was young lady of 25 years. She was lying in the courtyard. Mintoo doctor asked a boy in the house to spread a 'madur' (a form of mat made of local shrubs) for me to sit.*

*Mintoo doctor: Hey Parul, what's up? What have you done to yourself? (In an informal tone of Bengali language, used to call close ones only).*

*Parul (the patient): Feeling dizzy since last night. You know I am weak too.*

*Mintoo doctor measured her blood pressure, which was normal.*

*Mintoo doctor: Fold up your sleeves.*

*Mintoo doctor opened up his black leather bag (These leather bags are one of the characteristic features of village doctors in Bangladesh, previously carried by formal doctors as well.) and brought out a syringe and two ampoules. He injected Ranitidine in one arm and vitamin in another.*

*Patient was happy and bade farewell to Mintoo doctor with a smile.*

*While leaving,*

*Mintoo doctor (to Parul's father): The bill is 150 Taka (approximately \$2).*

*Parul's father: I will give it to your medicine shop in next 'hat' day (the weekly market day in village bazaars. Most rural people do grocery shopping on 'hat' days)".*

[Informal sector observation note, 6th day of observation, 11:20 am]



### 2.4.3 General Complaints by Clients against Physicians, their Responses, and my Observations in this Regard

Although patients perceived public sector physicians to be less sincere than the private sector physicians, patients expressed some general complaints against all formal sector physicians. Patients complained that doctors were reluctant to touch the patients compassionately, be it for examining or for giving reassurance (e.g., touching shoulder, or hand). They were too busy for a proper consultation, forgoing explanation of diagnosis, treatment, prognosis, and preventive advices. They consulted more patients than they could handle per day. They discriminated based on political power, and familiarity with them. They were unresponsive to emergency situations. They were less caring and more businesslike, especially in the private sector. They did not refer patients to other doctors when they themselves could not manage. They often suggested patients to do unnecessary procedures such as appendectomy or caesarian section for own benefit, which breached the trust of patients. Patients also complained that many doctors indicated specific diagnostic centers to carry out the tests, instigating suspicion that the doctor might have clandestine deals with the diagnostic center. According to patients, doctors gave more diagnostic tests than were required for treatment. Above all, doctors were indulgent to pharmaceutical representatives, who interrupted during consultations and influenced doctors to prescribe substandard drugs of their company. Lack of responsiveness, according to patients, was a general feature of the physicians, irrespective of their practice setting, as one patient said,

*"Interviewer: Are private sector physicians much better than the public sector physicians then?"*

*Respondent: Not 'much better', as they don't live up to my expectations regardless of setting."*

[IDI with a teacher, male, 45 years]

Physicians recognized the importance of responsiveness; they also admitted that they had deficiencies in this regard. Some physicians even valued responsiveness above clinical competency. They said that, without responsiveness, patients would not be satisfied even with right treatment. Due to lack of responsiveness, patients often misunderstood them as negligent and often mistakenly held them responsible for an adverse outcome. One doctor said,

*"If a patient receives bitter encounter, even a sweet drug would not satisfy him."*

[IDI with a private sector physician, male, year of graduation 1980]

Physicians admitted that they did not show up in office timely, and could not afford to give sufficient time due to patient load. Some physicians also admitted that they were very bad at counseling, explaining issues related to patients' health condition, and encouraging patients to ask questions. A major issue raised by most of the responding physicians was that,

they lost their nerves when attendants asked irrelevant questions. According to physicians, it was the patients' attendant who created most of the 'troubles'. Physicians also said they sometimes did not touch the patient for reassuring, despite this being considered as an important issue. Physicians also said they could not maintain privacy due to lack of facilities (e.g., curtain, separate room, etc.). Some physicians failed to show proper respect to the patients. Finally, some doctors mentioned that they are aware that some physicians encouraged patients to consult with them in private chambers.

In my observations, I found some complaints against doctors to be true, but failed to observe many allegations as well. For example, I found doctors referring patients to relevant doctors, and forbidding a patient to conduct appendectomy and caesarian section (as opposed to the allegation by patients that physicians perform unnecessary procedures for personal financial gains). I also found most of the pharmaceutical representatives entering doctors' room after consultations with patients were over. Throughout my whole observation period, I did not experience a single incident of a doctor abusing or misbehaving with a patient (which may be due to Hawthorne effect). Other allegations such as those related to compassionately touching the patients, explaining the health condition, and encouraging to ask questions were observed to be correct.

#### **2.4.4 Domains of Responsiveness**

This section is organized along the five domains (for the origin of the domains please refer to Section 2.3.5) of responsiveness of physicians. Definitions and elements of each of these domains are given in Table 2-3 below.

Perspectives of stakeholders along with my observations on each of the items in domains are discussed sequentially in the respective sections.

Table 2-3Name, Definition and Elements of HRH Responsiveness Domains

Name of Domain	Definition of Domain	Components of Domain
Friendliness	How a provider shows friendly demeanor to a client	Greeting, identifying self by the physician, engaging in social talk, showing friendliness, giving reassurance, not using jargon or professional language, not showing hierarchical difference, exercising non-verbal communications, and being humorous.
Respecting	How a provider explicitly shows respect to a client	Expressing respect, listening to complaints completely and attentively, taking consent, being culturally sensitive, allowing patients to ask questions, refraining from discriminations (based on socio economic status, gender, religion, type of disease, or any other consideration), avoiding interruptions during consultation, having an acceptable appearance, and establishing or maintaining discipline inside consultation room.
Informing and guiding	How a provider gives information about health condition and guides a client	Communicating limitations, helping patients to find the right physician, involving patients in decision making and care, explaining to patients different aspects of their disease or condition (cause, diagnosis, prognosis, treatment, preventive aspects, side effects of drugs, and result of tests), providing patients with information on health promotion and disease prevention, writing prescription legibly, and facilitating follow up.
Gaining trust	How a provider gains trust of a client, or refrains from doing something that breaches trust	Maintaining confidentiality of information, referring immediately if necessary, taking help from colleagues in confusion, gaining trust, being service-oriented not businesslike, and refraining from illegal or unethical activities. ,
Optimizing benefit	How a provider tries to optimize the benefit of a client, going beyond the consultation	Counseling on social or family issues if related to the disease, going for a home visitation if demanded, considering individual need of the patient while prescribing, facilitating utilization of local resources, and showing financial sensitivity

#### 2.4.4.1 *Friendliness*

An ideal greeting, according to patients, would include giving salam or replying to salam by a patient (or other greetings according to religion), asking his wellbeing, addressing with appropriate salutation (mother or father to elderly; brother, sister, sister-in-law or bhabi to similar aged persons; babu, shona, etc. to children), and asking them to take seat. Patients also felt that if the patient is elderly the doctor should stand up when the elderly person stands up. Physicians acknowledged the importance of greetings as they read about this in their textbooks, but they perceived this out of local custom,

*"Actually there is no custom of saying 'hi, hello' in our culture. Sometimes we just ask them to come in, and upon entering they simply start telling their problems"*

[IDI with a public sector physician, female, year of graduation 2009]

Observations revealed, usually it was the patient who initiated greeting; many doctors responded politely, but some did not. I also found closing salutation was more common than saying introductory greetings. Typical closing salutations included shaking hands, saying walaikum-assalam, 'ok, you may come (saying 'come' instead of 'go' is a culturally appropriate way of closing salutation), 'stay well', etc.

In my observation of the public sector, I found patients became confused if they did not know the doctor's identity (especially the doctor's designation, e.g., Medical Officer, SACMO etc. or specialty, e.g., pediatrician, gynecologist etc.). When asked about this issue, patients suggested there should be a signboard mentioning designation, a name badge or any other means of identification for physicians. They should introduce themselves in the absence of such means.

According to patients, doctors should at least ask name of the patient as a part of social talks. This may also include questions like 'who are there in the family', 'how many children do you have', etc. Among the social talks, patients gave the highest importance on asking about their family. Additional items may include patient's profession, education, that day's weather, etc. A retired public sector physician, who is currently in private practice, said that he commonly exchanged smiles and engaged in social talks with his old patients only, but engaging in social talks in general was not the norm. In my observations I found, private sector physicians asked the name and wrote it down on the prescription script. However, this seemed not done with intention of communicating, rather merely as a therapeutic culture of writing patient's name, age, and gender on the prescription. In public sector, the name was already written on the ticket<sup>1</sup>, so they did not care asking it again. I found engaging in social talks by formal sector doctors in general very uncommon; but informal providers were quite apt at this.

Patients said that they wanted their doctors to be friendly. Friendliness of a doctor, according to the patients, can be understood by: remembering the face or name of the patient from a previous encounter, calling the patient by the name in

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<sup>1</sup>A piece of paper purchased by the patients from the health facility, name and age of the patient is written on it by the person in charge of selling it, and doctors write prescription on this paper only

a friendly tone, asking or making comment about an event of the patient's family, praising the patient (about clothing or anything else), asking for an opinion of the patient about anything (weather, politics, etc.).

Doctors are expected by patients to give encouragement and reassurance to the patients, so that patients do not have to worry or be frightened of the therapeutic procedures. A patient said,

*"Half of the disease is cured only by reassurance."*

[IDI with a teacher, female, 40 years]

According to patients, reassurance can be expressed both verbally and non-verbally. Reassurance expressing speech and behavior may include phrases like 'you have no problem', 'I would be able to cure your disease inshallah', and gestures like putting hands on the shoulder of the patient, giving him courage by holding his hand, and giving courage by putting hand on the body. Almost all of the physicians acknowledged the importance of giving reassurance, which was supported by my observation too. In my observation in private sector, the physician I observed, patted gently on the shoulder of almost all the patients, and said, "It will be cured". In my observation of the same physician in the public sector, he reassured patients in the same way, but infrequently.

While probed on their views on use of medical terminology (jargon) by doctors, patients recognized it as an impediment to communication, but they themselves did not accuse physicians of using jargon. In my observation too I found the physicians quite good at communicating in local tongue, and explaining, whatever little they do, in culturally sensitive manner. They did not use jargon while talking to patients.

It was commonly expected by interviewed patients that the doctor's behavior would not show hierarchical difference.

Hierarchical difference could be understood, according to patients, by the following issues: difference between the sitting arrangement of the physician versus the patient, physicians putting on shoes while patients were restricted from wearing one inside consultation room, and overall gesture of the physicians. In my observation I found physicians always sat on a cushioned chair with longer height, with comfortable backrest and headrest. There was a towel hanging on the backrest, signifying their superiority. For patients there was a small stool to sit. This difference was more clearly observable (due to the more gorgeous chairs of the physicians) in the private sector. Such symbols of hierarchical differences were less pronounced, if not absent, in consultation settings of the informal providers.

Patients expressed much emphasis on non-verbal communications by doctors, such as compassionately touching them while examining or giving reassurance. Patients traditionally hold the belief that even the touch of a doctor has therapeutic significance.

Another expectation, as expressed by the patients, was that doctors would have some sense of humor. At least they should keep a smiling face during consultation. Some doctors, both males and females, were observed to be quite humorous. One such example of being humorous is, when a young lady asked for vitamin syrup, the doctor replied with a humorous tone, "*leave these baby foods, you are a nice young lady now, not a baby anymore.*"

#### **2.4.4.2 Respecting**

Patients mentioned that they expect the physicians to not only refrain from showing disrespectful demeanor, but also show some explicit signs of respect. Disrespectful demeanor, according to patients, comprises of, but is not limited to the following: using offensive words, bargaining for money, denying to provide treatment on any ground, stopping the patient in the middle, talking in an authoritative tone, scolding, and ejecting the patient out of the room. On the contrary, a physician may demonstrate respect by giving honor to an aged patient by standing up, helping an aged patient to sit down, and talking softly with the patient. Most of the patients admitted that doctors in general were not disrespectful, but there were some bad examples. The most common misbehavior of doctors was, as reported by many patients in both in-depth interviews and FGDs, when they said, "Do you understand better than me? Then why didn't you become a doctor yourself?" In interviews with physicians, almost all of them admitted that showing respect was necessary and they all practiced it; however, three doctors admitted they often breached it. One young public sector physician, on condition of not recording his statement, mentioned the following (I took note instead of recording):

*"Many doctors scold the patients and behave rudely. Sometimes patients come with dirty clothes due to low socio-economic conditions; they are scolded and misbehaved for this too. I myself sometimes cannot control my temperament. I scolded patients severely on some occasions and ejected them out of the room."*

[IDI with a public sector physician, male, year of graduation 2007]

In my observation, however, I did not see any physician disrespecting a patient, but explicitly displaying respect was uncommon too.

Patients expect that doctors will start writing the prescription only after listening to the complaints in detail and completely. Contrary to my preconceptions, I observed the doctors, both in public and private sectors, do listen to patients quite attentively. This might be due to the fact that they hardly spent time on history taking, physical examination, and diagnostic tests. So they entirely depended on what the patient says as their chief complaints. This rendered them to be attentive listeners.

As opposed to the western notion of consent, many patients considered this unnecessary. They suggested, it might however be necessary in some specific cases such as: placing the stethoscope on the chest of a female patient by a male doctor, uncovering any covered part of the body or touching a part of the body while examining (except touching the forehead for fever), and examining the private parts of any patient. Doctors expressed their cognizance of the value of consent from textbooks, but in a Bangladeshi context they considered it redundant.

When probed on cultural sensitivity (please refer to Appendix 4 for the source of the studies on this), patients demanded that physicians should prescribe treatment considering the religious and cultural orientation of the patients. Examples given by them of cultural sensitivity included: making adjustments while giving medicine to a Muslim patient during Ramadan, suggesting 'pottho' (diet) that are available during that season, not giving advice of doing or eating anything which is religiously prohibited, and giving idea about the disease and treatment by using household language.

Patients said they expected the doctor to give them the opportunity to ask questions, listen to their questions attentively, behave in a way that would encourage them to ask questions, respond to the question himself (i.e., he would not refer to his assistants to answer patients, which is not very uncommon), keep patience if patients ask irrelevant questions and tell them nicely that it is not related to their disease. According to patients, behaviors that might denote discouragement to ask questions may be: repeatedly looking at the clock, giving reminder to the patient to be short, writing prescription while answering the question, ultra-seriousness, answering very shortly (in one word). On the other hand, behaviors denoting encouragement to questions may be: keeping a smiling face during consultation and answering, listening carefully and patiently to the questions, shaking head while listening, looking at the patient, asking question to hear more, the nuances of voice, and some interest-revealing words (e.g., well, hmm, etc.). In interview with physicians, they also acknowledged the importance of answering the patient's questions. However, some physicians blamed patients for asking irrelevant

questions, too many questions, or repeating same question by persons accompanying the patient- causing them to lose patience and temper. One physician said,

*"Suppose I consulted a child patient, I explain the prescription to accompanying mother. After some time you will see child's father coming, so I explain again. Then you will see child's grandmother coming with questions. These make us irritated and we often lose our nerves."*

[IDI with a public sector physician, male, year of graduation 2004]

Doctors, however, admitted that they did not particularly encourage their patients through their gestures or verbal cues to ask questions. In my observation I found the doctors to answer to patients' questions very briefly, even in a single word. Village doctors were observed to be quite lenient about patients' questions. In the interviews too, all of them emphatically said they would never lose patience with patients' questions, whatever they asked.

In regards to discrimination, patients said, doctors usually did not discriminate based on gender, religion, disease condition, and age, but they often did on social and political status and familiarity with the patient. One elderly male FGD participant said,

*"Now that Awami League (ruling government party at the time of data collection) is in power, even if some young boys of their party go to a doctor, the doctor will see them first. I, being an old man, will have to keep waiting along with other suffering patients."*

[FGD participant, male]

In an interview with physicians, a female public sector physician, who practiced privately as well, suggested that patients also understood the helplessness of the doctors in this regard. In this type of situations, she suggested, doctors should inform the patient and ask for permission as a gesture of courtesy.

As interruptions serve as a deterrent against responsiveness (please refer to Appendix 4 for the source of the studies on this issue), I also observed the nature of interruptions during consultation. I found instances of various interruptions during the consultations, such as using mobile phone, clerical staff coming during consultation with official work, peeking in by outside people like pharmaceutical representatives, and dalals.

Respondents of an FGD with female patients mentioned that, the doctors' appearance should be neat and clean, tidy, and professional. In my observation I found doctors usually did not put on professional dress such as apron or white coat.



However, almost all of them were in formal outfit, e.g., pants and shirts by males and sarees and salwar-kameez by females. Some female doctors put on a headscarf.

I observed discipline was not really maintained as patients waited around the doctor's table; children were crying, people talking, colleagues chatting, dalals preying on patients—all inside the consultation room. I found some doctors striving for establishing or maintaining discipline in the consultation room, which might be regarded as an expression of responsiveness. The most common approach to maintain discipline was to take the tickets<sup>1</sup> from patients' hand and call them one by one.

#### **2.4.4.3 *Informing and guiding***

Many patients, both in IDIs and FGDs, mentioned that conflict with physicians was very common. However, most physicians denied this to be common, and few physicians mentioned that patients and doctors often engaged in conflict mostly due to disproportionate expectations of patients with the service they receive. So, according to physicians, if there was a possibility of such situations arising, they might communicate it with the patients at the outset. If doctors clarified which services were available, patients' expectations would remain realistic and thus potential disputes could be avoided.

According to some studies (please refer to Appendix 4 for the source of the studies), patients have the right to choose a care provider based on their preferred criteria. When probed about this, respondents of the FGD with females mentioned they preferred a female doctor for some health conditions, but often they could not decide who would be a good one. They said it would be useful for them to receive suggestions regarding this from nearby physicians free of cost. Some patients demanded similar services from physicians in finding an appropriate specialist, such as a cardiologist, a nephrologist, etc. While asked about their views on the right of the patients to go to a provider of their choice, and the physician's role in helping them in this regard, a physician brought an interesting issue. He said, in the context of Bangladesh, where many patients were uneducated, and ignorance or superstitions were prevalent, allowing patients to go to the provider of their choice might turn out to be harmful. So, he said, he would not mind if the patient wanted to go to a qualified formal sector provider, but if he wanted to visit a 'quack' (the term used to mean informal providers), then it would not be acceptable.

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<sup>1</sup>A piece of paper purchased by the patients from the health facility, name and age of the patient is written on it by the person in charge of selling it, and doctors write prescription on this paper only

Some studies (please refer to Appendix 4 for the source of the studies) suggest that patients need to be involved in care-related decision-making. Patients expressed unfamiliarity with this notion and expressed that the doctor should decide what is best for them. Patients, however, demanded their involvement in providing care to their family members, especially in chronic conditions. Both patients and physicians confirmed the nonexistence of a formal way of getting patients or their family members into the treatment process. In my observation too, I did not find any patient to be involved in therapeutic decision-making or care giving.

Explanation was one of the most important things that a patient desired from a doctor. Patients expect that the doctor would explain everything to them, such as cause of the disease, diagnosis (at least the name of the disease), prognosis and severity, treatment (at least explain the prescription), side effects of the medicines (if any), report of diagnostic tests (if any), and preventive measures of disease (specially the diet). Many doctors in Bangladesh did not find enough time to explain things to their patient. So, sometimes they delegated this to their assistants, and untrained pharmacists. Patients expect that the doctor himself would explain everything to them. It is also important that the doctors make sure whether patients have understood the explanation, as many patients are illiterate or are simply unfamiliar with the basic anatomy and physiology. Among all the things that a doctor can explain, patients expected a minimum of the cause or diagnosis of disease, the seriousness of illness, how they should take the medicines, and the preventive aspects of disease. It was a common complaint of the patients that the doctors did not explain sufficiently, with some rare exceptions of course.

Physicians were divided in their opinion regarding the importance of giving explanations to patients. Some physicians said it was the right of the patients to receive explanation on their health condition. Some said explanation was important only in critical diseases like liver cirrhosis, tuberculosis, etc. Few others said, giving explanation to patients was useless unless patient themselves were educated, conscious and willing to receive explanation.

Preventive issues, especially diets, are traditionally seen an integral part of therapy in Bengali therapeutic culture—as per my interviews with the patients and my personal understanding of Bengali culture (by virtue of being a Bengali myself). These are known 'pottho' and are always pronounced in the same phrase with medicine, like 'oshudh-pottho', meaning 'medicine and diet'. Patient expected that the doctor, along with the treatment of the disease, would also explain in details about diet, which foods are allowed and which are forbidden, and prevention of the disease. In my observations, I found that doctors usually told about some disease prevention and health promotion measures related to the disease of the

patient; but they did not give general health promotion advices, which is also demanded from physicians in some literature (please refer to Appendix 4 for the source of the studies).

It is a common joke in Bangladesh, even shared by patients during interviews, that doctors have a very bad handwriting; so anybody having a bad handwriting is equated with a doctor. Many patients, especially in FGDs with females, shared their stories on what difficulties and confusions they faced in following prescriptions due to bad handwriting of physicians. One female FGD respondent shared the following story:

*"A doctor prescribed me a drug when I was pregnant. Doctor prescribed a drug related to my pregnancy condition; but the medicine salesman in the dispensary mistakenly gave some medicine for asthma, as they could not read doctor's handwriting. For some reasons I was suspicious that this might be a wrong medication. So, I did not take the medicine and went to the doctor again. Seeing the medicine the doctor was shocked and said if I had that medicine it would be terribly harmful for my fetus. So, it's important for doctors' handwriting to be clear."*

[FGD participant, female]

Patients expressed that the doctors should give them a post treatment follow-up plan. Physicians complained that, they did not emphasize on follow-up because patient did not comply with it. While probed about this, patients replied, they apprehended that the doctor would give more tests and medicines in the follow-up visit to drain more money out of their pocket. They demanded the follow-up should be free. In my observation, I found that it was common by doctors to tell the patient or write on the prescription when the patient should come for a follow-up. Usually the follow-up involved half of the usual consultation fee. In the public sector, follow-up was very rare.

#### **2.4.4.4 Gaining trust**

In regards to confidentiality of their information, patients did not express their concern over this issue. One physician said, “patients in our country, contrary to western notions, rather preferred their information to be shared.” He gave the example of the nationwide surveillance against acute flaccid paralysis or polio eradication campaign. Doctors had to share the patients' information with several national and international bodies, and patients were appreciative of this. They supposedly thought they would get a better attention and treatment if their information were shared with different stakeholders. Physicians mentioned it was important to keep some sensitive information of the patients secret, in congruence with the professional codes of ethics. In my observation I found no patient information was preserved properly, so leaking of information was out of the question. However, the NGO-clinic had a specific protocol to maintain the confidentiality of patients' data.

Patients said they expected that the doctor would refer the patient immediately. Patients alleged that, doctors seldom referred their patients because,

*"...they don't want to let their patients go, this is their mentality. They think, 'if I let this patient go to a different doctor, and if the patient gets cured, that doctor will earn name and my business will be ruined'."*

[IDI with a teacher, female, 45 years]

Physicians denied these allegations, saying they were quick to refer; it was the patients who often did not want to go in fear of the hassle and cost. In my observation, I found there was hardly any instance of referral in the public sector, as doctors perceived poor patients could not afford to go to higher-level health facilities. Interestingly, I found doctors in private clinics referred patients more readily. When probed about this, physicians replied the reasons to be, first, patients were wealthier, and second, doctors and the private clinics wanted to stay away from the troubles of complicated patients.

I observed that doctors often did not seek assistance from other colleagues in confusion. In one occasion, a pregnant woman came to the NGO-clinic, and the physician performed ultra sonogram of abdomen. It was presumed to me that the doctor was not confident about the findings. After looking at the printout of the ultra sonogram for couple of minutes, the doctor told the patient that everything was normal. His lack of confidence was evident to me from his voice and appearance. The patient then informed that another doctor told her that she was having twin pregnancy. Then the doctor took back the ultra sonogram, looked at it again and said it indeed was a twin pregnancy. In another occasion, in a public sector setting, I observed a young physician had failed to diagnose a skin condition. I suspected this from my own clinical training and experience. The doctor prescribed a drug and the patient left. After patient's departure I asked the physician whether he was confirmed of the diagnosis. He admitted that he was not. I also observed doctor's inability to understand an X-ray, electrocardiogram, and diagnose few other diseases. There were doctors, and SACMOs nearby, but the doctor neither asked them nor informed the patient of his inability.

Patients demanded the doctor should not say or do anything that might breach their trust; rather he should strive to earn trust. Examples given by patients of such behavior that might cause breach of trust included: telling the patient to do a test from any specific diagnostic center, encouraging them to buy medicines from a specific pharmaceutical company, asking the patient (in public sector) to come to visit him in a private clinic, and moonlighting. When asked how a physician might earn trust, patients emphasized physicians' providing sufficient explanations for the treatments, and tests.

Patients also complained that doctors have become more business-oriented rather than service- or care-oriented. One example of businesslike behavior of physicians was demanding fees forcibly from incapable patients. Most of other examples overlapped with the examples of breaching trust. Patient expressed their highest distaste about physicians' suggesting patients to do diagnostic tests from specific diagnostic centers. They alleged that, although some doctors did not do this, many doctors indirectly insinuated getting the tests done from specific centers. Sometimes they even advised directly or even forced the patients to do so.

Patients did not want to see the doctors involved in illegal or unethical activities, especially if it was related with their treatment. Some such activities as alleged by the patients are: taking money from patients against free services (public sector), bringing patients in own private clinics with the help of dalals, collusion with diagnostic centers, accepting gifts from medical representative and prescribing substandard medicine, and taking advantage from dalals in various ways. In my observation, however, I did not find any doctor visibly involved in such illegal or unethical activities; but some activities might seem to have a tacit approval. For example, physicians in the public sector allowed dalals around the chamber, or they did not take any step to expel them. In a private clinic, I saw a dalal receiving money in exchange for enticing a patient away from another clinic.

#### ***2.4.4.5 Optimizing Benefit***

Although most of the expectations around responsiveness of physicians are expressed by patients, the following one was suggested by a physician. Based on his experiences of violence against his female patients, a senior public sector physician and UH&FPO of a UHC suggested, a doctor should talk with the perpetrator if needed and contact and report such incidents immediately to the concerned authority. The physicians should solve the family problems of patients if that is related to her/his health condition (e.g., torturing by husband, family feud, etc.) with the help of the concerned person of that area (e.g., political representative, administrative personnel, health sector personnel, etc.).

Home visits by doctors were culturally expected from the patients, which was both expressed in interviews with patients and known to me beforehand (by virtue of my being a native to the culture). In my interviews with formal sector physicians, I realized they were reluctant to visit patients at home, leaving this practice mostly for the informal providers. Informal providers usually went for home visits, but they were also often reluctant on the ground of financial issues

(described earlier in Section 2.4.2). I found the most elderly private sector physician (retired from public sector) still going for home visits, but he did it reluctantly as the patient earnestly requested.

Each patient is an individual person and the patients' context is also different, so are their needs; a doctor should be considerate of individual needs (please refer to Appendix 4 for the source of the studies in this regard). When probed about this issue, patients also expressed that the doctor should provide treatment complying with their individual needs:

*"One of sons had an accident once. I took him to Dr. (X). He suggested me to take my son to Dhaka to check if he had a fracture on his skull. I said, my other son has exam now, how can I leave that son here? I need to take that son to exam location, which is far from here and he cannot go alone. The doctor then checked my son again, and started treating himself. He is cured now, and I did not have to hamper my other son's education too."*

[FGD participant, male]

I observed that a doctor strived to facilitate the services at the locality of the patient; which is an instance of responsiveness (please refer to Appendix 4 for the source). The excerpt from my observation note in this regard is as follows:

*"I saw that the doctor prescribed saline to a woman. He was asking the patient how she would administer the saline at home. Patient said that a village doctor near her home may help. Doctor asked the name of the village doctor. Patient mentioned the name. Doctor said he had heard his name and he is reliable. She can go and get the saline pushed by the village doctor."*

[Private sector observation note, 7th day of observation, 11:30 am]

Patients demanded in IDIs and FGDs that the doctors should consider the financial strength of the patients and help them get treatment within their financial ability. Helping the needy patients, according to them, may involve the following steps: first, trying to understand the financial condition of the patient; then, giving idea about treatment cost; and finally, helping the patient if necessary. When physicians were asked if and how they tried to understand the financial condition of the patients, they replied they often did this, especially in the public sector, by asking the patients directly about their income or whether they would be able to bear the treatment cost or by asking him indirectly (such as, asking his profession). They said patients themselves also commonly expressed their inabilities. Beside these, according to physicians, it might be guessed by observing the patient's conversation, behavior and clothing. In terms of giving an idea of treatment costs, physicians in both public and private sectors denied this to be their responsibility. They said this was the job of pharmacists or medicine retailers. Informal providers were on the contrary quite good at this, which the informal providers attributed in the IDIs to the fact that most of them ran medicine shops alongside their consulting patients. In my

observations, I found some instances of helping the needy patients by physicians. These included prescribing low-cost antibiotics, taking a lower or no consultation fee (in case of private doctors), helping patients from a 'poor fund' (a fund often organized by a group of physicians), helping to get free medicines from the hospital (in case of government doctors), giving time and advice to collect money, focusing on the history and physical examination to avoid investigation, prescribing the essential tests only, compromising the commission paid by diagnostic centers to the doctor for each test, and recommending a treatment method that saves money.

#### **2.4.5 Non-Legitimate Expectations**

When asked, the physicians complained that patients often came to the public health centers only to get some free medicines without diagnosis. While most patient respondents expressed their ignorance about this issue, one 45-years old male high school teacher, acknowledged such abusive practices by some users. Informal discussion with a public sector physician during my participant observation revealed more information on this issue. According to him, some patients complained to the local administrative authority of the government about scarcity of drugs at the health centers, which are supposed to be distributed free of cost. There was an allegation that health center personnel sold the drugs from government supply to the private pharmacies. The then army backed caretaker government ordered that no person should be denied of free medicine, hoping this would create pressure on health center personnel to have more drugs available, by decreasing pilferage to private pharmacies. According to the physician, this order backfired, as many people started coming to the health center to take free medicine, as physicians would give them whatever asked, fearing retribution from administrative authority of the government. In my observation too I found some patients asking for free medicines by name of the medicine, without even mentioning what health issues they had.

Another issue raised by the physicians, was that influential persons would jump the queue when seeking care. Doctors were often compelled to comply with their demands, which made them feel bad and make the other patients feel neglected. In other instances, patients came and demanded immediate attention. They allegedly forgot that the doctor might have other patients or some other emergency priorities. He might even have some personal issues to take care first. Another issue that physicians brought up was that they could only solve patients' medical problems; but many patients expressed their inability to follow the prescription due to their personal problems. For example, he might be engaged in a profession demanding him to act contrary to doctor's advice. Patients might need to buy expensive medicines, which they

might not afford. Doctors could not really solve these issues, despite expectations from patients. Some patients allegedly came to doctors and asked for false certificates. They wanted to produce these to the court and gain some advantages over their opponents in various matters. Doctors were humiliated and even threatened if they did not comply with these demands. Doctors also said that, they should not be expected to answer to patients' questions considered irrelevant to them (discussed in more detail in Section 2.4.4.2).

#### **2.4.6 Constraints to Responsiveness**

When asked about constraints in providing care with responsiveness, physicians pointed out the biggest constraint to be the shortage of qualified human resources against massive patient load. Each doctor in public sector reportedly attended around 200 patients on average. This patient load created fatigue, which was often reflected as lack of responsiveness.

Doctors also had their own frustrations regarding either their personal or professional life. Issues in personal life might reflect into their dealings with patients. A public sector physician said,

*“A doctor is a social being too. He has to maintain many social obligations. Apart from his clinical duties, he also deals with issues in his personal, family, and social lives. He may have been facing discord with his wife, or dealing with some problems related to his children. These problems may affect responsiveness of a physician.”*  
[IDI with a public sector physician, male, year of graduation 1994]

Besides personal issues, they complained about many job related issues, e.g., not receiving promotion for a long time (public sector physicians), failure to enroll in a post graduation study, lack of amenities in rural location, and comparison with officers of other government cadre (public sector physicians).

Patients' non-cooperation and even exploitation often lead to unresponsive behavior of doctors, as expressed by them. Biggest complaint in this regard, mentioned by almost all the doctors, was the seeking free medicine by fake patients. A doctor said,

*“Many patients here just come to take free medicine. When I see 100-150 patients in front of my room, it starts triggering inside my head, ‘this patient may be a fake patient, that one may be a fake’- like that. Then I don't feel like spending my energy on being nice.”*  
[IDI with a public sector physician, male, year of graduation 2004]

Lack of training on responsive care was identified by some young doctors as an obstacle to serve with responsiveness.

Most doctors in public sector pointed out the lack of administrative support rendering them to be unresponsive, e.g., lack



of a doorman to control patient flow, improper sitting arrangements, absence of a functioning record keeping system (preferably an electronic health record system), and absence of a guideline for responsive care. In my observation I noticed, there were often lack of very basic amenities such as electricity in the hot and crowded room, which might turn them irritable and prevent them from being good to their patients.

## **2.5 Discussion and Conclusion**

Despite being a relatively new concept (DeSilva, 1999) the importance of responsiveness has been acknowledged in health systems literature (WHO, 2000), yet there is a paucity of studies on responsiveness and there are hardly any literature on HRH responsiveness (Coulter & Jenkinson, 2005; Lutwama et al., 2012; Pongsupap & Van Lerberghe, 2006; Rodriguez et al., 2012). This study contributes to the literature on responsiveness in general, and HRH responsiveness in particular, by exploring five domains and many themes (or sub-domains) under the domains. By exploring the perceptions of service seekers and providers, some general understandings can be reached, which are discussed below.

Some domains and sub-domains of responsiveness are congruent with the previous studies on health systems responsiveness, HRH responsiveness, quality of care, patient satisfaction, and doctor-patient relationship (Please refer to Appendices 1 through 4 for complete list of the studies). However, there are many findings that are unique to this study and can be regarded as new inclusions to the existing list. For example, in 'Friendliness' domain not showing hierarchical difference; in 'Respecting domain establishing and maintaining discipline inside consultation room; in 'Informing and guiding' domain writing prescription legibly, and communicating limitation; in 'Gaining trust' domain taking help from colleagues in confusion, and refraining from illegal or unethical activities are either absent or rarely mentioned in earlier literature. The definition of the domain 'Optimizing benefit', i.e., "the expectation that doctors would satisfy some specific expectations even beyond their consultation period"—is a new concept in responsiveness discussion, as most of the earlier domains and items related to responsiveness pertained to the consultation setting only. This domain includes items such as counseling on social or family issues if related to the disease, going for a home visitation if demanded, and showing financial sensitivity; which are inductively derived from data, while facilitating utilization of local resources was discussed in only two studies (Forouzan et al., 2011; Thom & Tirado, 2006).

This study thus elucidates some context-specific issues, which may be applicable only to Bangladesh and comparable countries. Generalizing these to different settings, e.g., western, or advanced industrialized societies should be done with caution. For example, taking consent was not seen as important by both patients and physicians. Another such contrast was that patients showed lenience towards discrimination of some sorts, such as allowing socially or politically influential persons to cut in line. Patients mentioned that, it was socially acceptable that important persons would have priority in doctor's chamber. Although they were not happy with it, they knew it was commonly practiced and they did not want to meddle with them. A study on European patient's views on responsiveness of health providers revealed that 23% of the respondents (from Germany, Switzerland, Sweden, Slovenia, Italy, United Kingdom, Poland, and Spain) thought patients should have the primary role in therapeutic decision making; 16% thought physicians should make the decision after discussing with patients, and only 10% thought physicians alone should make the decision (Coulter & Jenkinson, 2005). Contrary to findings from European countries, patients in rural Bangladesh left therapeutic decision making entirely to doctors. Some of these issues may be raised by patients as these are practiced in Bangladesh or similar countries. For example, doctors establishing discipline in the consultation room may not be necessary in a non-Bangladeshi setting where this issue is already taken care of by the health system managers. Showing disapproval of some illegal activities, e.g., asking patients to get tests done from specific diagnostic centers may not be in practice in many countries. However, this issue of denouncing illegal activities and consequent dissatisfaction has been supported by other studies in Bangladesh (Andaleeb et al., 2007b; Andaleeb, 2000b, 2001; Cockcroft et al., 2007; Siddiqui & Khandaker, 2007; Zaman, 2004). Financial counseling may also be unimportant where a well functioning health insurance mechanism is in place.

The study also discovered nuances in cultural practices even within a Bangladeshi setting. A doctor and a patient may have different perspectives on the same theme due to their different backgrounds, education, and social position (Zaman, 2004). For example, the patients complained that doctors often do not even respond to their greetings, while the doctors said greeting words are not a part of the culture. This research may pave the way for mending the gaps between patients' expectations from a doctor and the doctors' understanding of what they should and should not do.

Although patients blamed doctors for some issues, they accepted that they had encountered many good doctors. For example, patients commonly blamed them for not engaging in social talks, not providing sufficient explanations, delaying in referring critical patients, or being involved in illegal activities, which are supported by evidence (Aldana et al., 2001;

Andaleeb, Siddiqui, & Khandakar, 2007a; Andaleeb et al., 2007b; Rahman, Shahidullah, Shahiduzzaman, & Rashid, 2002). On the other hand, although some doctors dismissed these allegations, some of them accepted their shortcomings and all of them acknowledged the importance of being responsive as demanded by patients. Some even placed more importance on responsiveness than just clinical competency. This created an opportunity for understanding each other's perspective and reconcile based on the understanding.

This study suggests that, instead of blaming the doctors for not being responsive outright, it begs consideration of the constrained settings in which they provide services (Ali, Ahmad, Rahman, Sultana, & Al-Azad, 2013; Cockcroft et al., 2011), identify their limitations, and appreciate their strengths. Some areas in which physicians failed to live up to the clients' expectations include: talking to them enough, touching them compassionately (for examining, for giving reassurance), explaining the health condition, gaining trust, avoiding businesslike behavior, and providing information on the cost of treatment. Also, it is important to look critically towards some of the allegations against physicians, as some of these might have originated from the service seekers' side. Physicians fared well in some respects too, despite the constraints they face in providing services. They did well in terms of providing reassurance, using household language, listening to complaints attentively, having an acceptable appearance, trying to establish discipline in the consultation room, being culturally sensitive, not discriminating on gender, age, religion, and disease condition, and trying to help poor patients from within their means. They demonstrated good responsiveness in such aspects in the face of severe workforce shortage, insufficient health systems support, lack of formal training on responsiveness, and exploitation by some patients (e.g., fake patients coming for free medicines, political persons breaking line, and patients' attendants abusing).

### **2.5.1 Strengths and Limitations of the Study**

Lincoln and Guba (1985) suggested four dimensions of trustworthiness in qualitative research: credibility, transferability, dependability, and confirmability. To achieve credibility, I stayed for a prolonged time in the field. I started staying in the field site even before starting the formal data collection and continued during the formal data collection. I attained methodological triangulation through employing different methods such as IDIs, FGDs, and participant observations, and source triangulation through collecting data from different types of respondents such as patients, physicians, and informal providers. For transferability, I produced thick description of both the research process and the research outcomes or

findings. For dependability, I updated regularly my thesis committee and the local scientific committee of the steps I was undertaking in the field. I also shared the findings time-to-time and received feedback on subsequent steps. For confirmability, I kept a recorded audit trail of all the steps. All the raw data (both records and transcripts and photographic evidence), data reduction and analytic products, data reconstruction and synthetic products, memos, and research instruments are stored in a cloud-based application.

A limitation of this study, inherent to all qualitative research, is the lack of its potential for statistical generalization. However this limitation was overcome by achieving analytic generalization and transferability (Polit & Beck, 2010) through providing thick description. Secondly, the power relationship and hierarchical distance between the researcher and the subjects, the local constructs around the gender, class, language, and age might come into play during the interaction between the researcher and the respondents, which might consequently affect the quality of the data. The Hawthorne effect might restrict me from observing the real behaviors of physicians (Leonard & Masatu, 2006; Rowe, Lama, Onikpo, & Deming, 2002; Rowe et al., 2006). A longer duration of observation might be more appropriate to avoid this limitation. Thirdly, owing to sampling the female FGD participants from educational institutions, the level of education of the respondents were higher than the other Bangladeshi rural women. Therefore, their experience of interaction with physicians, and expectations from them would be different than general female populace. Finally, in this study, I considered both for-profit and not-for-profit private sector as a single entity; they might be very different in terms of responsiveness. Observation findings from private clinic and NGO-clinic suggested such differences, but I failed to explore this more in-depth. This study also did not examine how the same provider performed, or how their perceptions regarding responsiveness varied when a physician served in a public sector versus when the same person did in private.

### **2.5.2 Future Research**

A quantitative survey, developed based on the qualitative findings, may allow us to measure the status of responsiveness in comparable settings. Psychometric study including factor analysis may allow us to examine the dimensionality of the domains. A scale of responsiveness can be developed to measure responsiveness in rural Bangladesh, and can be validated in relevant setting.

The observation finding of general consultation processes in public and private settings indicates that there might be a difference in the level of responsiveness in these two settings. Patients also often alluded to this in the IDIs and FGDs. It may be useful to see the differences in responsiveness between public and private sector physicians both qualitatively and quantitatively. It can also be seen if they differ in terms of all the domains of responsiveness, or they differ only in certain domains.

This study was conducted in rural areas, where most of the service seekers belonged to a lower socio-economic and educational group. Perceptions around responsiveness may be different in an urban setting. This study was conducted in outpatient setting, so understanding of responsiveness in other settings, such as inpatient, emergency, delivery ward, and maternity care may be useful too.

This study found that, lack of health systems support triggered lack of responsiveness among providers. There may be some other determinants, e.g., social, political, economic etc., understanding of which may be beneficial to addressing those issues.

This study found that people consider informal providers as their first resort for therapy, which is supported by several studies in Bangladesh and neighboring countries (Ahmed et al., 2013; George & Iyer, 2013; Mahmood, Iqbal, Hanifi, Wahed, & Bhuiya, 2010; Wahed, Rasheed, & Bhuiya, 2012). It also argued that some characteristics of the informal providers may render them more trustworthy in the eyes of rural based service seekers (George & Iyer, 2013). This specific feature pertaining to the informal providers may also contribute to our understanding of responsiveness and in learning from them, which may contribute to improving the responsiveness of all HRH.

### **2.5.3 Policy Implications**

The government of Bangladesh, along with the governments of many other countries, adopted an organizational restructuring scheme following the suggestions of the World Bank. One of these suggestions is to make health services responsive to clients' needs. Bangladeshis currently striving for not just increasing the number of its HRH, it is trying to improve their performance as well (Aldana et al., 2001; Cockcroft et al., 2007, 2011). Responsiveness of HRH is regarded as one of the components of HRH performance. This is gaining more importance with the adoption of performance based

financing by many countries. Performance as a composite concept, or responsiveness as a standalone concept, will gain more importance in coming days as these may be considered as the parameters of performance based payments. This study can be an important source in providing an evidence base for performance based financing schemes.

International or multilateral organizations take important policy decisions based on the status of the countries in certain respects. For example, United Nations Development Program's assistance varies according to the Human Development Index ranking. Although my study was conducted in a rural Bangladeshi setting, this may provide conceptual and methodological inputs in conducting similar type of locally relevant studies in other countries. Understanding of HRH responsiveness across different countries can aid in important international policy decisions.

An absence of a guideline on what constitutes responsiveness may hamper a doctor's being responsive. This research can provide inputs to any such guideline in terms of what stakeholders perceive, and what is generally done in reality.

Physicians now can reshape their consultation process accordingly in order to be more responsive physicians. Managers can guide their employees based on the learning from this study on meeting expectations of patients coming to the health facilities. Educators may use this to develop physicians more responsive from the beginning. Researchers may develop quantitative tools based on qualitative findings of this research to measure responsiveness of physicians quantitatively and generate useful policy inputs.

**3 Chapter 3: A Scale to Measure Responsiveness of Physicians in Rural Bangladesh  
(Manuscript 2)**

## **Abstract**

### **Introduction**

Responsiveness of physicians is defined as the social actions that physicians do to meet the legitimate expectations of service seekers. Since there is no such a scale available, this study aimed at developing one for measuring responsiveness of physicians in rural Bangladesh, by applying psychometric methods.

### **Methods**

Data was collected from Khulna division of Bangladesh, through structured observation 393 physicians. The tool consisted of 64 items, with four Likert type response categories, each anchored with a scenario. Inter-rater reliability was assessed by same three raters observing 30 consultations. Data was analyzed by exploratory factor analysis (EFA), followed by assessment of internal consistency by ordinal alpha coefficient and inter-rater reliability by intra-class correlation coefficient (ICC).

### **Results**

After removing defective items, 45 items were considered for EFA. Parallel analysis suggested a 5-factors model. Nine items were removed from the list owing to  $<0.50$  communality,  $<0.32$  loading in un-rotated matrix, and  $<0.30$  on any factor in rotated matrix. Since 34 items (i.e., the number of remaining items after removing nine items by EFA) were loaded neatly under five factors, explained 61.38% of common variance, and demonstrated high internal consistency with coefficient of 0.91, this was adopted as the Responsiveness of Physicians Scale (ROP-Scale). The five factors were named as 1) Friendliness, 2) Respecting, 3) Informing and guiding, 4) Gaining trust, and 5) Financial sensitivity. Inter-rater reliability was high with ICC (2, 1) of 0.64 and (2, k) of 0.84.

### **Conclusion**



The Responsiveness of Physicians Scale (ROP-Scale) developed consists of 34 items grouped under five factors. One can apply this scale with confidence in comparable settings as this scale demonstrated higher internal consistency and inter-rater reliability.

### 3.1 Introduction

The concept of ‘responsiveness’ was highlighted by the *World Health Report 2000*, which suggested responsiveness to be one of three objectives of health systems, alongside improved health status, and fairness in financial contribution (World Health Organization [WHO], 2000). The *World Health Report 2006*, which was a seminal work on human resources for health (HRH), described the performance of HRH in terms of four parameters: availability, competency, productivity, and responsiveness (WHO, 2006). None of these earlier publications defined HRH responsiveness.

After reviewing literature on health systems responsiveness, HRH responsiveness, patient satisfaction, service quality, doctor-patient communication, as well as relevant studies in other fields (Please refer to Appendices 1 through 4 for complete list of the studies), I propose the following definition of HRH Responsiveness:

*HRH responsiveness is the social actions that health providers do to meet the legitimate expectations of service seekers.*

By the term 'social action,' actions of health providers related to the therapy or technical aspects of care are excluded; only the non-medical aspects of care are included under HRH responsiveness. The term 'legitimate expectation' used in this definition demands explanation. Thompson and Sunol (1995) classified expectations as: 1) ideal expectations, meaning clients’ idealistic perception about available services; 2) predicted expectations, meaning clients’ realistic expectations based on experiences, information about available services, etc.; 3) normative expectations, meaning clients’ expectations about what ought to happen; and 4) unformed expectations, meaning clients’ unarticulated expectations (due to various reasons such as lack of understanding, difficulty expressing in language, fear, anxiety, social norms, etc.). DeSilva (1999) argued, ‘legitimate expectation’ is compliant with the concept of ‘normative expectations.’ She defined ‘legitimate’ as, ‘...conforming to recognized principles or accepted rules and standards’ (p. 04), and opined legitimate expectations be determined based on ethical norms and values.

The aim of this study was to develop a scale for measuring responsiveness of physicians in rural Bangladesh, by applying psychometric methods. I focused on the upazila or sub-district level, which has an average population of 320,444 persons (Government of Bangladesh [GoB], 2014). Ahmed, Hossain, and Chowdhury (2009) and Ahmed, Hossain, Chowdhury, and Bhuiya (2011) classified HRH in Bangladesh into the following categories: 1) Formal sector, 2) Semi-qualified

providers, and 3) informal or unqualified allopathic providers. In this study, I focused only on the formal sector physicians working either in the public or private sector. They usually hold a minimum of an MBBS degree (or equivalent foreign degree), and are licensed formally through Bangladesh Medical and Dental Council (BM&DC).

## **3.2 Research Questions**

### **3.2.1 General Research Question**

How can we measure the responsiveness of physicians<sup>1</sup> in rural<sup>2</sup> Bangladesh?

### **3.2.2 Specific Research Questions**

1. What are the components of responsiveness of physicians and how do they group together under different domains?
2. How reliable and valid is the method of measurement of responsiveness of physicians?

## **3.3 Methods**

### **3.3.1 Measurement Model and Item Generation**

The first step of scale development is to determine the unobservable latent variable and the observable indicators or items that would measure the intended latent variable (DeVellis, 2011). In this model, the latent variable is responsiveness, which would be measured through some observable items or indicators. These items are generated through formative qualitative research (Chapter 2), and review of relevant literature. The source of each item is indicated in Appendix 12. After generating an inclusive item-pool (or Version-1), the following criteria were used to finalize the items included in the structured observation (SO) tool (Version-2).

- Whether the item denotes the responsiveness of the physicians, or if this is beyond the control of the individual physician. For example: Patients might demand privacy, but this may be beyond the capacity of the physicians to

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<sup>1</sup> In this study only formal sector (i.e., with minimum MBBS degree) general practitioners working in the outpatient facilities in public or private sector are included.

<sup>2</sup> In the context of this study upazila or sub-district level has been considered as 'rural.'

provide, especially in the public sector. Physicians are assigned consultation rooms often shared by other colleagues, restricting them from providing privacy at their own accord.

- Whether the item denotes responsiveness or some other component of performance. For example: It is expected that physicians would provide explanations to their patients regarding their disease condition. Whether the physician provided the correct information in her/his explanation may indicate competency, which (whether the information is right or wrong) is out of the scope of this study. However, whether the physician provided explanations related to the disease condition (e.g., the cause, diagnosis, prognosis, treatment protocol, preventive aspects, side-effects of drugs, and importance of tests) and asked the patient whether s/he understood the explanation—may fall under responsiveness discussions.
- Whether it is legitimate or too much to ask. For example: Patients may expect physicians to attend to them at once, keeping another emergency patient waiting. This may not be considered a legitimate expectation. Nevertheless, deciding about legitimacy is difficult and warrants more in-depth studies, for the purpose of this study I relied on the qualitative findings (Section 2.4.5 in Chapter 2) as well as expert opinions from Baltimore and Dhaka based scientists.
- Whether the item is an observable social action. For example: Patients wanted additional consultation time. Although consultation time was measured, this was not included in the final item list on the ground of its not being a social action. It was argued that consultation time is a consequence of actions done by physicians. Besides, consultation time may be spuriously increased due to interruptions, as time wasted in interruptions was not measured. Therefore, consultation time has been used to assess the criterion validity of the scale.
- Whether the item is observable in the given context. For example: Patients may expect that the doctor would take consent before performing a surgery. Since this research is conducted in outpatient settings, this may not be observed in the context of this research.
- Whether the item is observable or measurable with the given method. For example: Discrimination may be discerned by observing more than one consultation. But in this study, only one (the 11th) consultation was recorded, so it would not be possible to see if doctors discriminated among patients based on any characteristic such as gender, socio-economic status, religion, or disease condition. However, discrimination may be evaluated separately by comparing the overall responsiveness score across different groups, such as males versus females,

younger patients versus older patients, or wealthier patients versus poorer patients. This aspect is kept out of scope of this paper.

The items were finalized based on a series of meetings and discussions with Dhaka- and Baltimore-based experts, having considerable understanding of the local context (i.e., rural Bangladesh) and/or expertise on the area of this research (i.e., HPSR with a focus on HRH and psychometric study).

Based on the item-pool of Version-2, an SO tool was developed, with observable response categories. Each response category was anchored with a scenario. In the SO tool with Likert type responses, response category '1' was the lowest score, which represented a physician lacking responsiveness at all. Scenario for response categories '2' was representative of a typical physician while scenario for '3' was of a better than average responsive physician. Response category '4' was the best practice or a textbook scenario. Items that could not be observed due to inapplicability in the given context or any other reasons were coded as 'Not Applicable'. Although the scenario (principally for response categories '2' and '3') were taken from qualitative research, categorizing them was a difficult task. A tentative categorization was initially adopted through consultations with local scientific committee based in Dhaka. This was further calibrated later through inputs from series of field tests, involving 20 research assistants (RA). Their field-based experiential inputs were integrated through group discussions over a period of 10 days. An even number of responses was adopted to avoid choosing the neutral option by raters, which is typically the middle option in an odd-number response pool. The tool was developed in Bengali, as this is my first language, and the qualitative findings were also written in Bengali. After repeated scrutiny by the experts based in Dhaka and Baltimore, and by being careful about the face and content validity of the items, the tool was approved for field-tests (Version-3).

The cloud-based mobile software Magpi (Magpi, 2014) was used for data collection. I created a form (the web/mobile based version of the tool) in Magpi, based on the SO tool. I also included an item on geographic information system (GIS) location in order to track the location of data collection. The first field-test aimed at testing the applicability of the tool using mobile phones; and this was done in an upazila, located 10 kilometers away from Dhaka. The second field-test was done in the actual location of data collection, i.e., within Khulna division, in an upazila- 50 kilometers away from Khulna city. This test helped to further fine-tune the mode of structured observation and, based on this field-test, it was finally decided to observe only one (11<sup>th</sup>) consultation after 10 initial 'washout' consultations.

The third and final field test corresponded with the training of the RAs and a concordance test, which took place in another upazila of the Khulna district—about 10 kilometers away from Khulna city. I divided the 18 trainee RAs into three groups, each consisting of six members. We (I and each group) observed a patient together and uploaded the data using mobile phones. Their disagreements with me in recorded data were analyzed in a spreadsheet and then we discussed the confusion-causing issues one by one. We discussed every item that was not clear to them and kept on refining the SO tool. So, this exercise simultaneously served as a field-test, which improved the scenarios for response categories, making the given scenarios amenable to observation, and clarifying the language of the observation items.

Based on these exercises, I finalized the SO tool (Version-4) for actual data collection from field sites. This tool, consisting of 64 items and associated response scenario, has been shared in Appendix 13. The RAs were allowed for data collection only after achieving at least 90% agreement with me in the concordance test. This is to note that, this agreement test was conducted solely for training and recruitment purpose, not as a test of reliability of the scale. However, this exercise may have implications on the reliability. This approach may increase the reliability of measures in my study, which may not be the case in subsequent studies attempted by others using this tool. A summary of the training of the RAs is available in Appendix 14. The role of three spells of field tests is summarized in Appendix 15.

### **3.3.2 Sampling and Data Collection**

#### ***3.3.2.1 Sample Size Calculation***

There are different recommendations for calculating sample size for factor analysis. For example, some scientists suggested a fixed number, e.g., 100, 200, 300, etc. Some others recommended a range of sample sizes, e.g., sample size of 100 as poor, 200 as fair, 300 as good, 500 very good, and 1000 as excellent. Another commonly used approach is five to 10 respondents per item (DeVellis, 2011; Netemeyer, Bearden, & Sharma, 2003; Streiner & Norman, 2008). I calculated “n to p ratio” first, and calculated the sample size based on that ratio where ‘n’ is the sample size, and ‘p’ is the number of items; the ratio I adopted was 6:1. Since the initial tool consisted of 64 items, the sample size was as follows:

$$n / p = 6$$

$$\Rightarrow n = p * 6 = 64 * 6 = 384$$

I targeted 400 samples anticipating some non-response and refusal rates in survey participation.

### ***3.3.2.2 Sampling Frame Preparation and Data Collection***

In order to prepare a sampling frame, I sent an RA to all the potential upazilas under the Khulna division to prepare a list of all the physicians who were likely to be present during the data collection period of December 12, 2014 until January 3, 2015. Since most of the doctors were concentrated in and around the Khulna district under Khulna division, I decided to center in Khulna district and then expand my field around Khulna district to obtain 400 samples. I chose the census method, as there were not sufficient doctors for sampling. I calculated the distance of surrounding upazilas from Khulna district and contacted all the doctors of upazilas with increasing distance until I reached the desired number of consenting doctors. I managed to collect data from 397 consultations, 197 from the public sector and 200 from the private sector. Four of these observations were discarded for being defective, as the RAs mistakenly observed them twice. Finally, 393 observations were taken into analysis, 195 from public sector and 198 from private sector (Appendix 16). Since many of the public sector doctors work in the private sector as well, we observed 40 doctors twice, i.e., both in public sector and private sector. I avoided the Sadar upazila (the upazila corresponding with the district town) of all the districts in order to restrict the sample of observed consultations from rural areas only.

Responsiveness is shown by service providers and is perceived by service seekers, so data needs to come from both the parties. In the context of this study, where recording the actual behavior of the physicians is intended, observing the actual interaction, instead of interviewing the clients or providers, can achieve this goal better. In similar studies, different approaches—such as reviewing patients' records, direct observation of provider, interviews of providers, exit interviews with patients, and simulated patients methods—have been attempted and compared (Franco, Daly, Chilongozi, & Dallabetta, 1997; Leonard & Masatu, 2005; Peabody, Luck, Glassman, Dresselhaus, & Lee, 2000). Franco, Daly, Chilongozi, and Dallabetta (1997) showed direct observation to be the method of choice (comparing direct observation with provider interviews and simulated patients—in the context of quality of case management of sexually transmitted diseases); however, several studies discussed caveats of this method too. For example, service providers may change their behavior when they are aware that they are being observed (Hawthorne effect) (Leonard & Masatu, 2006; Rowe et al., 2002; Rowe et al., 2006). But Leonard and Masatu (2006) showed in their study that the performance of the observed

physicians tend to return to the pre-observation state after the tenth observation. Based on these studies, I adopted the ‘structured observation’ method (Bernard, 2006), and allowed the first 10 observations to serve as ‘washout’ consultations. We recorded the eleventh observation in order to avoid or at least minimize the potential Hawthorne effect.

Since dual job-holding is allowed in Bangladesh and 80% of public sector physicians purportedly work in the private sector as well (Bergman, 2014; Gruen et al., 2002), classifying them strictly into such categories as public and private sector physicians could be difficult. However, this problem could be easily averted in this study as the unit of data generation was the observation of consultations; not the individual physicians or the patients per se. Thus, a physician was counted in the public sector if s/he was observed in a public sector setting (e.g., upazila health complex [UHC]); and similarly was counted in private sector if observed in a private sector setting (e.g., clinic, pharmacy, chamber in residence, etc.).

The RAs were sent in teams to cover one upazila at a time. The teams of three or four RAs had a team leader, who talked with the Upazila Health and Family Planning Officer (UH&FPO), i.e., the chief of the UHC (who I talked and briefed earlier), submitted the documents (a permission letter addressed to the UH&FPO, copy of ethical approval, and copy of permission letter from Directorate General of Health Services [DGHS]), and obtained permission. They made a plan to cover all the public and private sector doctors in that upazila in two to three days. One RA was assigned to set appointments with the private sector doctors, usually after office hours (2 pm); then other RAs in the team followed that schedule. Thus, the teams managed to accomplish data collection more efficiently and moved on to the next upazila.





### Figure 3-1 Map of Sampled Consultations

The RAs were given a package containing the necessary guidelines and tools for data collection. This included a mobile phone, an SO tool, a route guide for their travel to the assigned upazila, a document enumerating steps of data collection (Appendix 17), an abridged observation checklist (Appendix 18), pencil, eraser, sharpener, and a notebook. Their mobile phone had the Magpi data collection application with the SO tool installed (due to the space constraint on mobile screen, the mobile interface only had the scale items and response categories, not the scenarios corresponding each response category); Google Map application to guide them to their destination; global positioning system (GPS) application to record the location of data collection; internet connection to upload the data and the photos taken before and after each observation; a built-in camera to take geo-tagged and time-tagged photo of the observation setting; Drop Box application folder to access the updated list of doctors, and their daily assignments. The RAs were instructed not to take out the SO tool in front of the doctors. They took notes during the observation and then came out of the room and recorded in their notebook the findings, guided by the hard copy of the SO tool. Then they input the data in their phones, uploaded the data, and sent a message containing the photos taken before and after observation.

The RAs acquired consent from both the doctor and the patients before starting the observation. Since they were working in a team, one of the team members briefed the waiting patients about the study and handed them a consent card. The patients handed the card over to the observing RA inside the room unless they were unwilling to be observed. The observing RA came out of the consultation room if the patient did not hand over the signed (or thumb printed) consent card to the RA, indicating non-consent. Consent from the doctors was obtained earlier, but they were not informed which consultation (11<sup>th</sup> patient) the RA was going to observe. After observing the consultation with the 11<sup>th</sup> patient, the RA came out of the room with the patient and asked the patient for some background information (age, gender, and education). The RA then took out the paper-based SO tool (which consisted the scale items, response categories, and the scenarios to guide each response category) and recorded the findings in their notebook. Then they recorded the findings from the notebook to the mobile phone and uploaded the data later upon availability of Internet network. They also recorded the GIS location in the mobile phone, took two geo-tagged and time-tagged pictures (one before the observation and the other after), and sent them to me. RAs were recommended to observe two consultations per day; but they were

strictly instructed not to observe more than three in a day, as large number of observations in a day might diminish the quality of data.

In order for the observations to be as homogenous as possible, the following inclusion and exclusion criteria were applied:

**Inclusion Criteria:**

1. The observations were done only in outpatient settings and with the general practitioners.
2. Observations were done if the patient came with simple diseases or conditions, such as common gastrointestinal conditions (e.g., diarrheal episodes, peptic ulcer diseases, non-severe gastrointestinal pain of any type), common respiratory conditions (e.g., pneumonia, non-severe bronchial asthma, common respiratory ailments), and other common conditions (e.g., simple skin diseases, viral fever, common cold, allergies, anemia, enteric fever, pyrexia of unknown origin, etc.)

**Exclusion Criteria:**

1. Cases requiring emergency or inpatient care (e.g., assaults, road traffic accidents, poisoning, etc.)
2. Cases requiring additional privacy and confidentiality (e.g., sexually transmitted infections, gynecological conditions, etc.)
3. Children under 18 years.

After each day's data collection, all RAs attended a daily debriefing session individually with me. They had to submit the consent forms, give an update about the field, and resolve the problems or confusions in data collection and entry if any. They also had to attend weekly debriefing sessions in a classroom together with all the RAs. We shared one week's experience and learning and planned for the next week in the weekly debriefing sessions.

For the inter-rater reliability test, I—along with two other RAs—collected the data. The data collection procedure was the same as before, but three of us did the observation simultaneously. Then we recorded the data at our own and uploaded the data in a separate mobile form designed for inter-rater reliability test. We observed 30 consultations—15 in the public sector and 15 in the private sector.

### 3.3.3 Statistical Analysis

Data collected through Magpi software was stored in the cloud and downloaded in .xls format. This data was then imported into statistical software Stata version 12.1 for data management, cleaning, missing value imputation, and basic descriptive analyses (StataCorp, 2011). Before conducting the psychometric analyses, it is important to remove the defective items from the list (Rao et al., 2006) and impute the missing values through an acceptable method. Items with more than 50% non-response or missing values were considered defective. After tabulating the missing values, 19 items were found defective, were dropped from the list (shown in Appendix 12 in italicized font), and Version-5 of the scale was reached. Then I checked if any of the 393 observations had more than 50% non-response. Since the data was collected by trained observers, there was no such observation. Missing values were imputed by ‘hotdeck’ method, using the ‘.hotdeckvar’ command developed by Schonlau (2006). In this procedure, missing values are replaced by random values from the non-missing observations of the same variable, without changing the other data. This method is particularly useful for its simplicity of application, and its ability to preserve the distributional characteristics of the variables (Filosso et al., 2014), which is important for factor analysis.

Factor analysis is a statistical technique used for theory-driven data reduction. This technique is used to explain covariance among observed variables in terms of fewer unobserved latent variables, known as factors (DeVellis, 2011). In my study, since I had no prior assumptions about the structure of the items related to responsiveness, I used exploratory factor analysis (EFA) instead of confirmatory factor analysis. Due to its advanced features for analyzing ordinal variables (Lorenzo-Seva & Ferrando, 2006), I used an open-source factor analysis software FACTOR version 9.3.1.

In EFA, it is important to determine the factor extraction method, then find the number of factors to retain and a factor rotation method. Another important decision to make is what type of correlation matrix will be used for the analysis. Although Pearson correlation matrix is commonly used, the assumptions of level of measurement (i.e., continuous variables) and linearity are frequently breached in ordinal rating scales (Baglin, 2014; Gaskin & Happell, 2014). Use of Pearson correlation method in exploratory factor analysis of ordinal variables substantially undermines the correlation, leading to spurious outcomes (Holgado-Tello, Chacón-Moscoso, Barbero-García, & Vila-Abad, 2009; Olsson, 1979).

Therefore, instead of Pearson correlation, I used polychoric correlation, which is an extension of tetrachoric correlation and is recommended for using in ordinal response category-based scales (Gaskin & Happell, 2014; Olsson, 1979).

Next, an important step was to decide on an extraction method among various options such as unweighted least squares, generalized least squares, maximum likelihood, principal axis factoring, alpha factoring, etc. (Baglin, 2014; Gaskin & Happell, 2014). The software FACTOR allowed only four methods: unweighted least squares, maximum likelihood (ML), minimum rank factor analysis (MRFA), and principle component analysis (PCA) (Lorezo-Seva & Ferrando, 2011). I chose the MRFA extraction method, as this method provides an estimation of the fit of the extracted model by indicating percentage of explained common variance; secondly, it produces a very accurate estimate of loadings on each extracted factor (compared to ML), which is a useful feature for developing a multi-domain scale (Baglin, 2014; Shapiro & Berge, 2002; Sočan, 2003; TenBerge & Kiers, 1991); and third, this is the method of choice of the developers of the software FACTOR (Baglin, 2014).

The next step was to decide the number of factors to be extracted, which also has different options. Traditionally, the eigenvalue greater-than-one rule or Kaiser's criteria, scree test, amount of variance explained by extracted factors, etc. have been used for the purpose (Baglin, 2014; DeVellis, 2011; Gaskin & Happell, 2014; Netemeyer et al., 2003). Since the development of the parallel analysis method (Horn, 1965), this had remained the method of choice by most scale developers (Baglin, 2014; DeVellis, 2011; Garrido, Abad, & Ponsoda, 2012; Gaskin & Happell, 2014). The basic principle of parallel analysis is that a large number (e.g., 500) of parallel datasets are generated with random data with the same number of variables and observations. An extraction method (e.g., PCA) is applied to the parallel datasets along with the original or real dataset. The mean eigenvalues are compared between the parallel dataset and the real dataset. Factors in which the original dataset's eigenvalues are greater than parallel datasets' mean of eigenvalues, are retained (Baglin, 2014; DeVellis, 2011; Timmerman & Lorenzo-Seva, 2011). I adopted the variant of parallel analysis based on MRFA, which is suitable for categorical variables and is reported in simulation studies to outperform the original Horn's (1965) method (Timmerman & Lorenzo-Seva, 2011). In this variant of parallel analysis (i.e., parallel analysis based on MRFA), random permutation of sample data is compared with the original data in terms of common variance extracted by MRFA.

In order to allow the items load on one factor and a better interpretation, I adopted an oblique factor rotation method—Promin rotation. An oblique rotation method is usually suggested unless there is a reasonable argument against potential

correlation among the factors (DeVellis, 2011; Gaskin & Happell, 2014; Netemeyer et al., 2003). There are various oblique rotation methods available, such as Promax, Geomin, Direct Quartimin, CF-Equamax, CF\_Facparsim, Direct Oblimin, etc. I chose Promin, as this is the method of choice of the developers of the factor analysis software I used (Baglin, 2014; Lorenzo-Seva, 1999; Lorenzo-seva, 2013). Lorenzo-Seva (1999) preferred Promin over oblique rotation methods Promax, Promaj, and Simplimax; on the grounds of its simplicity, independence from a previous orthogonal pattern matrix, and better performance in simulation studies.

After factor analysis, I checked the model for internal consistency, using the ordinal alpha coefficient. Cronbach's alpha coefficient, based on Pearson correlation matrices, can be misleading and give deflated estimate in Likert-type categorical variables having less than six categories (Zumbo, Gadermann, & Zeisser, 2007). Since I used 4-point Likert-type response categories, I calculated ordinal alpha based on polychoric correlation matrix, following the procedure described by Gadermann, Guhn, and Zumbo (2012), using statistical software R, version 3.1.3 (R Core Team, 2013). Item test and item rest correlations were also measured using the same software package.

For the sake of optimizing the scale length, I utilized three criteria: 1) items with communality  $< 0.50$ ; 2) loading of  $< 0.32$  of an item on any of the un-rotated factors; and 3) loading of  $< 0.30$  of an item on any of the rotated factors. I found nine such items eligible for being dropped; but before finally dropping them, I added another factor to the model (an interim 6-factor model) to check if these nine items load on the extra factor. Since adding an extra factor could not improve the model in any way (increasing the communality of the items, and/or increasing the loading of items), I dropped the nine items from the model and reached a 36-item model. I ran the analysis again with 36 items and five factors, and checked for model adequacy based on the criteria mentioned above. After iterating the procedure twice, I reached a 34-item model. I also examined a 4-factor model, which was rejected in favor of a 5-factor model, owing to its not optimizing the scale length better (i.e., suggesting a 34-item model), and explaining lower percentage of common variance (i.e., 56.29% as opposed to 61.38% in 5-factor model). Finally, I checked the ordinal alpha coefficient, and assessed if dropping any other item would increase the alpha coefficient and increase the internal consistency of the model consequently. Since no item was suggested to be dropped this way, I finalized the 34-item scale (Version-6), grouped under five factors or subscales. I ran the whole factor analysis again with the retained 34 items and found the model to be optimum and adequate (no item with low communality, each item sufficiently loaded on one factor, high alpha coefficient).

The responsiveness scale score was measured as the mean of the 34 items' scores. Since this is a continuous value, inter-rater reliability was measured using intra-class correlation coefficient (ICC) (Shrout & Fleiss, 1979). There are different methods to measure the inter-rater reliability of continuous scores, such as Pearson's correlation, *t*-tests, coefficient of variation, percent agreement and chi-square, but Rankin and Stokes (1998) reported limitations of these measures and suggested using ICC. I employed three same raters to rate all the consultations (30 consultations each), and ICC (2, 1) and (2, k) was calculated.

Criterion validity (Netemeyer et al., 2003) of the study was assessed using Pearson correlation and two sample *t*-tests in Stata. Correlation between responsiveness score and consultation length was measured for assessing concurrent validity. *T*-test was applied to measure difference between responsiveness of public and private sector physicians to assess known-group validity.

## **3.4 Results**

### **3.4.1 Background Characteristics**

#### ***3.4.1.1 Characteristics of Data***

The SO tool consisted of 64 items, 19 of which were found to be defective and dropped from analysis. All 64 items, along with their source, have been tabulated in Appendix 12. The table also shows the items in italicized font that were dropped for being defective. No observation was dropped on the ground of having more than 50%, i.e.,  $\geq 23$  items not responded or missing in any single observation. The highest non-response in any observation was 14; and the number of observations with more than 10 non-responses was only eight.

Table 3-1 Univariate Analysis Results of Version-5 Scale (45 Items)

Variable	Mean	Confidence Interval (95%)		Variance	Skewness	Kurtosis (Zero centered)
Greetings by doctor	1.855	( 1.78	1.93)	0.373	0.224	0.146
Self identification by doctor	1.929	( 1.84	2.02)	0.483	0.233	-0.479
Asking patient's name	1.524	( 1.43	1.62)	0.570	1.180	0.262
Engaging in social talks	1.341	( 1.26	1.42)	0.403	1.781	2.295
Asking about patient's family	1.402	( 1.31	1.49)	0.454	1.460	0.920
Friendliness	1.486	( 1.39	1.58)	0.514	1.418	1.471
Showing respect explicitly	2.308	( 2.24	2.38)	0.295	0.138	-0.500
Listening to patient's complaints completely	2.954	( 2.88	3.03)	0.319	-0.266	0.947
Listening to patient's complaints attentively	2.847	( 2.77	2.92)	0.353	-0.741	1.560
Examining the patient with care	2.359	( 2.26	2.46)	0.581	-0.086	-0.481
Taking consent in general	2.173	( 2.12	2.23)	0.199	0.901	1.242
Suggestion on disease prev. & health promotion	1.659	( 1.57	1.74)	0.438	0.614	-0.190
Giving courage and reassurance	1.639	( 1.55	1.73)	0.450	0.627	-0.451
Earning trust of patients	2.995	( 2.93	3.06)	0.224	-0.160	2.081
Service oriented not businesslike attitude	2.977	( 2.91	3.05)	0.307	-0.460	1.801
Involving patients in care related decisions	1.107	( 1.06	1.15)	0.136	3.979	18.022
Considering religious & cultural orientation	2.211	( 2.14	2.28)	0.289	0.812	1.349
Considering socio economic status of patient	1.662	( 1.56	1.77)	0.677	0.918	-0.270
Trying to understand SES of patient	1.835	( 1.72	1.95)	0.856	0.547	-1.133
Informing the cost of treatment	1.331	( 1.25	1.41)	0.359	1.779	2.637
Providing financial assistance if needed	1.504	( 1.42	1.59)	0.408	0.897	-0.266
Facilitating follow-up	1.618	( 1.54	1.70)	0.373	0.446	-0.653
Quantity of issues explained & quality of expl	2.168	( 2.08	2.26)	0.491	0.111	-0.279
Quantity of issues explained	2.084	( 2.00	2.17)	0.413	0.211	0.155
Asking patient if s/he understood the expl	1.511	( 1.42	1.60)	0.509	1.202	0.613
Explaining the cause of disease to the patient	1.868	( 1.76	1.97)	0.634	0.515	-0.514
Explaining the diagnosis of disease to patient	1.814	( 1.72	1.91)	0.579	0.465	-0.707
Explaining the prognosis of disease to patient	1.522	( 1.43	1.61)	0.509	1.125	0.319
Explaining the treatment to the patient	2.056	( 1.95	2.16)	0.694	0.292	-0.701
Explaining the preventive aspects to patient	1.695	( 1.60	1.79)	0.594	0.719	-0.529
Allowing patient to ask questions	2.565	( 2.50	2.63)	0.287	-0.161	-1.004
Encouraging patient to ask questions	2.771	( 2.68	2.86)	0.446	-0.315	0.203
Listening attentively to patient's questions	2.603	( 2.52	2.68)	0.397	-0.118	-0.180
Not using jargon	3.761	( 3.68	3.84)	0.386	-2.983	8.892
Closing salutation by doctor	1.631	( 1.55	1.72)	0.431	0.562	-0.678
Legibility of prescription	2.219	( 2.15	2.29)	0.288	0.620	0.866
Not showing hierarchical difference	2.265	( 2.20	2.33)	0.256	0.690	0.234
Gender sensitivity	3.061	( 3.01	3.11)	0.139	0.391	5.590
Interruption during consultation	3.270	( 3.16	3.38)	0.762	-0.898	-0.241
Appearance of doctor	2.954	( 2.91	3.00)	0.140	-1.667	9.555
Non-verbal communication by doctor	2.221	( 2.14	2.30)	0.386	0.127	-0.008
Compassionately touching the patient by doctor	2.117	( 2.01	2.22)	0.673	0.030	-1.013
Not being involved in illegal activities	3.807	( 3.74	3.88)	0.283	-2.786	6.833
Sense of humor	1.567	( 1.48	1.66)	0.480	1.002	0.442
Relaxedness and confidence	2.585	( 2.50	2.67)	0.416	0.422	-0.457

Univariate analysis of Version-5 scale (with 45 variables) revealed that 21 out of 45 items had skewness or kurtosis greater than one in absolute value.

The multivariate test for skewness was not statistically significant, but that for kurtosis was significant with  $p$ -value <0.01.

These suggest using polychoric correlation instead of Pearson's correlation for factor analysis. Bartlett's test was statistically significant (with statistic of 6096.1; df of 990 and  $p$ -value <0.01), and Kaiser-Meyer-Olkin (KMO) statistic was above 0.80 (actual KMO statistic was 0.83), both of which indicate the data is suitable for factor analysis.

### 3.4.1.2 Characteristics of Sample

Half of the observations were done in the consultation room of public-sector physicians and half in the private sector, with an average consultation time of five minutes. The majority of the doctors were below 40 years of age and most of them were male doctors. More than half of them had less than two years of experience of working in rural areas. Almost one third of them belonged to the same upazila where they were observed. Patients were from different age groups, but most

of them were females (60%). Almost half of them had less than or equal to primary education, about one third had up to secondary education and the remaining had more than that.

Table 3-2 Characteristics of the Consultations, Doctors, and Patients

Variable		Value
Observation Setting	Public sector	195 (n)
	Private sector	198 (n)
Self-reported number of patients seen by doctor in that setting (public or private) per day (Mean and Standard Deviation)		30.35 (17.81)
Consultation time in minutes (Mean and Standard Deviation)		5.04 (2.45)
Gender of doctor	Male	78.37 (%)
	Female	21.63 (%)
Age of doctor	Less than 30 Years	33.84 (%)
	30 to less than 40 Years	35.62 (%)
	40 to less than 50 Years	11.45 (%)
	More than or equal to 50 years	19.08 (%)
Origin of doctor (i.e., whether from the same upazila)	Local	33.33 (%)
	Not local	66.67 (%)
Year of graduation of doctor	After 2000	68.18 (%)
	Between 1990 and 2000	11.70 (%)
	Between 1980 and 1990	17.30 (%)
	Before 1980	3.82 (%)
Rural work experience of doctor	2 Years or less	51.91 (%)
	More than 2 to 5 years	16.03 (%)
	More than 5 to 10 years	9.92 (%)
	More than 10 years	22.14 (%)
Type of medical college the doctor passed from	Public	92.62 (%)
	Private	6.62 (%)
	Foreign	0.76 (%)
Gender of patient	Male	39.69 (%)
	Female	60.31 (%)
Age of patient	Less than 30 years	23.16 (%)
	30 to less than 40 years	20.87 (%)
	40 to less than 50 years	24.94 (%)
	More than or equal to 50 years	31.04 (%)
Level of education of patient	Illiterate	21.88 (%)
	Up to primary (5 Years) education	26.72 (%)
	Up to secondary (10 Years) education	32.06 (%)
	More than secondary education	19.34 (%)



### 3.4.2 Factor Analysis

#### 3.4.2.1 Determining the Number of Factors to Retain

Parallel analysis suggested the extraction of a 5-factor model. As shown in the table below, there are five factors whose real data percentage of common variance exceeded the mean or 95 percentile of that of the random datasets generated by the parallel analysis method.

Table 3-3 Parallel Analysis Finding (First 10 Items are Shown)

variable	Real-data % of variance	Mean of random % of variance	95 percentile of random % of variance
1	19.2*	6.1	6.6
2	7.9*	4.6	4.9
3	6.7*	4.3	4.6
4	6.2*	4.1	4.3
5	4.2*	4.0	4.1
6	3.6	3.8	4.0
7	3.2	3.7	3.8
8	3.1	3.6	3.7
9	3.0	3.4	3.6
10	2.9	3.3	3.5

#### 3.4.2.2 Factor Extraction and Rotation

In the first run of factor analysis with a 5-factor model, one item had communality of  $<0.5$ , and seven items had loadings  $<0.32$  (un-rotated loading matrix shown below). In the rotated loading matrix, four items had loadings  $<0.3$  on any factor (rotated loading matrix not shown).

Table 3-4 Unrotated Loading Matrix (45 Items)

variable	F 1	F 2	F 3	F 4	F 5	Communality
Greetings by doctor	0.563	0.301	-0.177	-0.072	-0.039	0.971
Self identification by doctor	0.340	0.011	-0.162	-0.207	0.121	0.610
Asking patient's name	0.530	-0.089	-0.147	-0.222	-0.072	0.796
Engaging in social talks	0.619	0.080	-0.308	-0.189	-0.351	1.000
Asking about patient's family	0.492	0.025	-0.328	-0.240	-0.382	1.000
Friendliness	0.549	0.083	-0.320	-0.333	-0.360	1.000
Showing respect explicitly	0.565	0.292	-0.107	0.063	0.143	0.789
Listening to patient's complaints completely	0.528	0.382	0.052	0.193	0.357	1.000
Listening to patient's complaints attentively	0.620	0.337	0.116	0.224	0.252	1.000
Examining the patient with care	0.407	0.040	-0.070	0.040	0.197	0.563
Taking consent in general	0.114	0.134	0.021	-0.058	0.077	0.468
Suggestion on disease prev. & health promotion	0.389	-0.325	-0.009	0.248	-0.113	1.000
Giving courage and reassurance	0.612	-0.072	-0.277	-0.175	-0.044	1.000
Earning trust of patients	0.208	0.346	0.522	0.143	-0.421	1.000
Service oriented not businesslike attitude	0.207	0.429	0.528	0.106	-0.418	1.000
Involving patients in care related decisions	0.309	-0.552	0.251	-0.402	-0.052	1.000
Considering religious & cultural orientation	0.311	-0.195	0.026	-0.085	0.088	0.909
Considering socio economic status of patient	0.331	-0.023	0.636	-0.525	-0.018	1.000
Trying to understand SES of patient	0.378	0.020	0.542	-0.477	0.163	1.000
Informing the cost of treatment	0.291	-0.467	0.376	-0.394	0.013	1.000
Providing financial assistance if needed	0.172	-0.024	0.666	-0.390	0.081	1.000
Facilitating follow-up	0.461	-0.275	-0.122	-0.051	0.018	1.000
Quantity of issues explained & quality of expl	0.578	-0.396	0.216	0.448	0.059	1.000
Quantity of issues explained	0.640	-0.320	0.209	0.446	0.011	1.000
Asking patient if s/he understood the expl	0.392	-0.272	-0.063	0.021	-0.117	0.912
Explaining the cause of disease to the patient	0.401	-0.384	0.181	0.402	-0.221	1.000
Explaining the diagnosis of disease to patient	0.376	-0.424	0.118	0.328	-0.037	1.000
Explaining the prognosis of disease to patient	0.413	-0.481	0.065	0.172	-0.134	1.000
Explaining the treatment to the patient	0.476	-0.210	-0.055	0.222	-0.018	0.892
Explaining the preventive aspects to patient	0.421	-0.306	0.051	0.351	0.007	0.833
Allowing patient to ask questions	0.264	0.137	0.195	-0.092	0.339	0.885
Encouraging patient to ask questions	0.647	0.406	-0.032	0.159	0.151	1.000
Listening attentively to patient's questions	0.330	0.276	0.171	0.137	0.268	0.629
Not using jargon	-0.019	0.409	0.237	0.197	-0.273	1.000
Closing salutation by doctor	0.556	0.194	-0.236	-0.108	0.051	0.997
Legibility of prescription	0.405	-0.052	-0.010	0.013	0.134	0.634
Not showing hierarchical difference	0.305	0.180	-0.177	-0.089	-0.067	0.597
Gender sensitivity	0.187	0.283	0.152	0.034	0.107	0.729
Interruption during consultation	0.080	0.310	-0.013	0.213	-0.205	1.000
Appearance of doctor	0.065	0.098	0.028	0.069	0.058	0.530
Non-verbal communication by doctor	0.765	0.233	0.003	0.040	0.125	1.000
Compassionately touching the patient by doctor	0.487	-0.062	-0.131	0.038	0.237	0.874
Not being involved in illegal activities	-0.096	0.407	0.314	0.314	-0.389	1.000
Sense of humor	0.640	0.066	-0.219	-0.265	-0.254	1.000
Relaxedness and confidence	0.359	0.193	-0.080	-0.138	-0.026	0.740

Based on these criteria, the following nine items were dropped from the model: Self identification by doctor, taking consent in general, involving patients in care-related decision making, considering religious and cultural orientation of the patient, legibility of prescription, not showing hierarchical difference, gender sensitivity, interruption during consultation, and appearance of doctor. In the subsequent two runs, two more items were dropped: Allowing patient to ask questions, and relaxedness and confidence. In the final factor analysis with 34 items and five factors, the model was found to be sufficiently robust with no item found to be eligible for dropping based on the three criteria mentioned earlier. The items were neatly loaded on five factors, as shown in the table of the rotated matrix of 34 items below.

Table 3-5 Rotated Pattern Matrix (34 Items)

variable	F 1	F 2	F 3	F 4	F 5
Greetings by doctor	0.342		0.491		
Asking patient's name	0.424				
Engaging in social talks	0.861				
Asking about patient's family	0.852				
Friendliness	0.883				
Showing respect explicitly			0.685		
Listening to patient's complaints completely			0.843		
Listening to patient's complaints attentively			0.779		
Examining the patient with care			0.467		
Suggestion on disease prev. & health promotion				0.584	
Giving courage and reassurance	0.542				
Earning trust of patients		0.818			
Service oriented not businesslike attitude		0.873			
Considering socio economic status of patient					0.909
Trying to understand SES of patient					0.818
Informing the cost of treatment				0.312	0.712
Providing financial assistance if needed					0.804
Facilitating follow-up				0.352	
Quantity of issues explained & quality of expl				0.853	
Quantity of issues explained				0.835	
Asking patient if s/he understood the expl				0.367	
Explaining the cause of disease to the patient				0.813	
Explaining the diagnosis of disease to patient				0.729	
Explaining the prognosis of disease to patient				0.693	
Explaining the treatment to the patient				0.448	
Explaining the preventive aspects to patient				0.623	
Encouraging patient to ask questions			0.731		
Listening attentively to patient's questions			0.558		
Not using jargon		0.537			
Closing salutation by doctor	0.329		0.486		
Non-verbal communication by doctor			0.679		
Compassionately touching the patient by doctor		-0.355	0.547		
Not being involved in illegal activities		0.704			
Sense of humor	0.759				

In this model, the KMO statistic also improved further to be 0.84, and it explained 61.38% of common variance. The highest two inter-factor correlations were between factors three and four (Respecting and Informing and guiding) and factors one and three (Friendliness and Respecting). These correlations justify the use of an oblique factor rotation method instead of an orthogonal method.

Table 3-6 Inter-factor Correlation Matrix (34 Items)

INTER-FACTORS CORRELATION MATRIX					
Factor	F 1	F 2	F 3	F 4	F 5
F 1	1.000				
F 2	-0.094	1.000			
F 3	0.424	0.237	1.000		
F 4	0.399	-0.042	0.429	1.000	
F 5	0.247	0.106	0.223	0.253	1.000

### **3.4.3 Naming of the Scale and Factors**

Since the scale is intended to measure the responsiveness of physicians, it has been named as the Responsiveness of Physicians Scale, or in short ROP-Scale. Consideration for naming of the factors, or the subscales, is discussed in subsequent paragraphs.

The first factor is labeled 'Friendliness,' as the items loaded under this factor are about how a doctor communicates with a patient. These items are: Asking patient's name, engaging in social talks, asking about patient's family, friendliness, giving courage and reassurance, and sense of humor.

The second factor is labeled as 'Gaining Trust,' as the items loaded under this factor are about how a provider may gain the trust of the patients or refrain from doing something that may breach trust of the patients. These items are: Earning trust of patients, service oriented, not businesslike attitude, not using jargon, and not being involved in illegal activities.

The third factor is labeled as 'Respecting,' as the items loaded under this factor are about how a doctor explicitly shows respect to a patient. These items are: Greetings by doctor, showing respect explicitly, listening to patient's complaints completely, listening to patient's complaints attentively, examining the patient with care, encouraging patient to ask questions, listening attentively to patient's questions, closing salutation by doctor, non-verbal communication by doctor, and compassionately touching the patient by the doctor.

The fourth factor is labeled as 'Informing and guiding,' as the items loaded under this factor are about how a doctor empowers a patient. These items are: Suggestions on disease prevention and health promotion in general, facilitating follow-up, quantity of issues explained and the quality of explanation, quantity of issues explained, asking patient if s/he understood the explanation, explaining the cause of disease to the patient, explaining the diagnosis of disease to the patient, explaining the prognosis of disease to the patient, explaining the treatment to the patient, and explaining the preventive aspects to the patient.

The fifth factor is labeled as 'Financial Sensitivity,' as the items loaded under this factor are about understanding financial need of the patients and providing support if needed, going beyond the consultation. These items include: Considering socio-economic status of the patient, trying to understand socio-economic status of the patient, informing of the cost of treatment, and providing financial assistance if needed.

The final ROP-Scale, along with the definition of the sub-scales and associated items, has been given below in Table 3-7.

Table 3-7 The Responsiveness of Physicians Scale (ROP-Scale)

<b>Name of Factor</b>	<b>Definition</b>	<b>Items in Domain</b>
Friendliness	How a physician communicates with a patient	<ol style="list-style-type: none"> <li>1. Asking patient's name</li> <li>2. Engaging in social talks</li> <li>3. Asking about patient's family</li> <li>4. Friendliness</li> <li>5. Giving courage and reassurance</li> <li>6. Sense of humor</li> </ol>
Respecting	How a physician explicitly shows respect to a patient	<ol style="list-style-type: none"> <li>1. Greetings by physician</li> <li>2. Showing respect explicitly</li> <li>3. Listening to patient's complaints completely</li> <li>4. Listening to patient's complaints attentively</li> <li>5. Examining the patient with care</li> <li>6. Encouraging patient to ask questions</li> <li>7. Listening attentively to patient's questions</li> <li>8. Closing salutation by physician</li> <li>9. Non-verbal communication by physician</li> <li>10. Compassionately touching the patient by physician</li> </ol>
Informing and guiding	How a physician empowers a patient	<ol style="list-style-type: none"> <li>1. Suggestions on disease prevention and health promotion in general</li> <li>2. Facilitating follow-up</li> <li>3. Quantity of issues explained and the quality of explanation</li> <li>4. Quantity of issues explained</li> <li>5. Asking patient if s/he understood the explanation</li> <li>6. Explaining the cause of disease to the patient</li> <li>7. Explaining the diagnosis of disease to the patient</li> <li>8. Explaining the prognosis of disease to the patient</li> <li>9. Explaining the treatment to the patient</li> <li>10. Explaining the preventive aspects to the patient</li> </ol>
Gaining trust	How a physician may gain trust of the patients, or refrains from doing something that may breach trust of the patients	<ol style="list-style-type: none"> <li>1. Earning trust of patients</li> <li>2. Service oriented, not businesslike attitude</li> <li>3. Not using jargon</li> <li>4. Not being involved in illegal activities</li> </ol>
Financial sensitivity	Understanding financial need of the patients and providing support if needed, going beyond the consultation	<ol style="list-style-type: none"> <li>1. Considering socio-economic status of the patient</li> <li>2. Trying to understand socio-economic status of the patient</li> <li>3. Informing the cost of treatment</li> <li>4. Providing financial assistance if needed</li> </ol>

To measure the aggregated ROP-Scale score, the mean of the 34 items was calculated; that is, for each sampled consultation, all the scores across 34 items were first aggregated and then divided by 34. Subscale scores were calculated in the same way. The mean responsiveness score and subscale scores of the whole sample as well as the sample disaggregated by their sectoral affiliation (i.e., public and private sector) has been shown in Table 3-8.

Table 3-8 Responsiveness score of the sample using ROP-Scale

Scale	Overall Mean Score (n = 393)	Public Sector Mean Score (n = 195)	Private Sector Mean Score (n = 198)
Friendliness	1.49 (0.48)	1.34 (0.43)	1.64 (0.48)
Respecting	2.37 (0.41)	2.22 (0.39)	2.51 (0.38)
Informing and guiding	1.80 (0.45)	1.68 (0.46)	1.91 (0.40)
Gaining trust	3.38 (0.37)	3.45 (0.28)	3.32 (0.43)
Financial sensitivity	1.58 (0.59)	1.65 (0.64)	1.51 (0.53)
ROP-Scale	2.07 (0.31)	1.98 (0.29)	2.16 (0.29)

Note: Standard Deviation is shown in the parenthesis

### 3.4.4 Scale Reliability and Validity

#### 3.4.4.1 Reliability

The internal consistency of the whole scale was high with an alpha value of 0.91. The alpha value for each subscale was also high with the following coefficients:

Table 3-9 Internal Consistency of the Scale

Scale	Ordinal Alpha Coefficient
Subscale 1: Friendliness	0.86
Subscale 2: Gaining Trust	0.77
Subscale 3: Respecting	0.87
Subscale 4: Informing and guiding	0.86
Subscale 5: Financial Sensitivity	0.84
<b>Responsiveness of Physicians Scale</b>	<b>0.91</b>

Item-rest correlations of most of the items were also high in the overall responsiveness scale, ranging from 0.21 to 0.65, with the exception of two items—Not using jargon and Not being involved in illegal activities. However, in respective subscales, these items had high item-rest correlations (0.41 and 0.48 respectively).

In order to measure inter-rater reliability ICC was counted. ICC (2, 1) or individual rater's reliability score was 0.64 (95% confidence interval 0.37, 0.81), while ICC (2, k) or average reliability score for three raters was 0.84 (95% confidence interval 0.64, 0.93).

#### **3.4.4.2 Validity**

Face validity is the extent to which the items in a scale measure the construct it is intended to measure (Netemeyer, Bearden, & Sharma, 2003). Achieving this can be attempted by subjective assessment post hoc, by experts in the relevant field. Scientific committees based in Baltimore and Dhaka assessed the initial scale items for face validity of ROP-Scale. During field testing and training of RAs, the scale items were further refined to improve the face validity.

Content validity is the extent to which the collection of items, from the universe of all items, would represent the domain the items are intended to measure (Netemeyer, Bearden, & Sharma, 2003). To achieve content validity, all items generated through a qualitative research (reported in Chapter 2) were included in the initial scale. This list was supplemented by thorough review of the relevant literature.

Criterion validity is the extent to which the scale score is associated with a relevant criterion variable external to the scale. One of the types of criterion validity is the concurrent validity, which is measured by assessing the correlation between score of the scale under development and the concurrently collected criterion variable (Netemeyer, Bearden, & Sharma, 2003). Correlation between ROP-Scale score and consultation time was assessed under the assumption that, responsiveness would be positively correlated with consultation time. Although there is no study establishing this relationship directly, there are studies showing that patients expect more time from physicians on consultation, and that consultation time is a predictor of satisfaction (Ogden et al., 2004). The qualitative part of my study also supported this notion (Section 2.4.3 in Chapter 2 and Section 4.4.3 in Chapter 4). I found a positive correlation of 0.51 between responsiveness score and consultation time.

Another approach in addressing criterion validity is through known-group validation. Known-group validity is the extent to which the scale score differs as predicted between groups who are expected to show high or low score on the trait in question. One common way of examining this is by showing significant mean differences in scores across independent samples (Netemeyer, Bearden, & Sharma, 2003). In this study the mean responsiveness score of public sector physicians was compared to that of private sector physicians, under the assumption that private sector physicians would have higher mean responsiveness score. Although there is not comparative study of responsiveness between these two sectors, Andaleeb et al. (2000a, 2000b, 2007a& 2000b) compared them in terms of parameters, some of which correspond with the

variables of my study. Items that corresponded were: Doctor was caring (comparable to ‘Service oriented, not businesslike attitude’), the staff were courteous (comparable to ‘Showing respect explicitly’), The doctors were willing to answer any questions (comparable to ‘Encouraging patients to ask questions’), I was given adequate information about my health condition (comparable to ‘Quantity of issues explained and the quality of explanation’), I was given adequate information about my treatment (comparable to ‘Explaining the treatment to the patient’), Doctors listened attentively (comparable to ‘Listening to patients’ complaints attentively’), and Doctor followed up on treatment regularly (compared to ‘Facilitating follow up’). In all of these items, private sector scored higher than public sector. Even in the overall service quality, private sector outperformed public sector. In this study too, the two sample *t*-tests for the difference in mean responsiveness score revealed that the private sector physicians had significantly higher responsiveness of 0.18 points (*p*-value < 0.01) (Table 3-8)—denoting the known-group validity of ROP-Scale.

### **3.5 Discussion and Conclusion**

There had been very few studies (Coulter & Jenkinson, 2005; Lutwama et al., 2012; Pongsupap & Van Lerberghe, 2006; Rodriguez et al., 2012) to measure the responsiveness of HRH, among which only one reported psychometric procedures, but lacked reliability assessment. In this study, first the process of developing the SO tool was described. This was followed by describing the process of developing a psychometric scale and evaluating its validity and reliability. The data gathered for the study was found to be suitable for conducting this type of analysis. Appropriate statistical methods were used to deal with ordinal variables used in data generation. This study found the scale to be highly reliable and valid. The scale demonstrated a very high internal consistency (DeVellis, 2011) with a coefficient alpha of 0.91. Another important feature of this study was the use of the same three raters to evaluate inter-rater reliability. This method of calculating ICC is considered useful not only for the current study, but also for any subsequent study using this scale, as the future studies can report the ICC values (2, 1) if a single rater is employed and (2, k) if multiple raters are employed (Shrout & Fleiss, 1979).

HRH responsiveness has been defined as the social actions that health providers do to meet the legitimate expectations of service seekers. This study identified five domains of HRH responsiveness: Friendliness, Respecting, Informing and guiding, Gaining trust, and Financial sensitivity. The level of attainment of these qualities by a physician can be measured



through the items or indicators aggregated through factor analysis under each of these domains. These domains and most of the items under each domain are consistent with the relevant studies in this regard. For the associated literature on the domains, please refer to Appendix 4, and for sources of each item in the SO tool, please refer to Appendix 12.

All of the items under the domain 'Friendliness' were derived from the qualitative research as well as the literature review. It should be noted that the items 'Greetings by doctor' and 'Closing salutation by doctor' were also loaded somewhat heavily (with loadings of 0.34 and 0.33 respectively) on this factor. Since their loading was slightly higher in the 'Respecting' domain, they are placed under that domain. However, this can be justified, as exchanging greeting words or closing salutation are generally out of therapeutic culture of Bangladeshi doctors. Therefore, if a doctor does these, it is seen by the patients as a display of respect rather than a display of just friendliness.

Some items under the domain 'Respecting' can also be seen as a gesture of friendliness at the same time. This is evident from the inter-factor correlation matrix (Table 3-6) too, where the correlation between these two factors (Respecting and Friendliness) is 0.42. Items like 'Non-verbal communication by doctor' and 'Compassionately touching by doctor' could be easily seen as gestures of friendliness; but patients found these to be modes of showing respect to the patients. Another explanation is that, there is a large power differential, especially in rural areas, between the patients and the doctors (Zaman, 2004). While most of the patients' education falls below the secondary education, the doctors' level of education and social position were very high in comparison. So, there may be a generalized lack of friendliness from doctors (Bloom, Standing, & Lloyd, 2008). As a result, some friendly gestures like head-nodding or touching the patients were perceived by the patients as a respectful demeanor by the doctors.

Most of the items in the 'Informing and guiding' domain are related to providing explanation by the doctors of different aspects related to the disease or condition. Aujoulat, d'Hoore, and Deccache (2007) posited that provision of information should be done in a continuous manner, which can be achieved by regular follow-ups. Their suggestions are congruent with this domain, as this domain consists of an item 'Facilitating follow-up' along with the explanation-related items.

Trust, in the context of this research, was conceived as patients' belief that the doctors would act in the best interest of the patients, not in their own interest (Gilson, 2003). Items loaded in the domain 'Gaining trust' are in alignment with this definition, except one item: 'Not using jargon'. An explanation to this item's loading under 'Gaining trust' domain may be

using too much technical vocabulary by doctors may depict them in an untrustworthy light. Another feature of this domain is the inclusion of the item ‘Not being involved in illegal activities’, which was derived from literatures based on the studies done in Bangladesh only (Andaleeb et al., 2007b; Andaleeb, 2000b, 2001; Cockcroft et al., 2007; Siddiqui & Khandaker, 2007; Zaman, 2004). In countries or settings where vigilance or monitoring of the doctors is more scrupulous, or where accountability mechanisms for doctors are better functioning, this item may not seem as appropriate.

The final domain is ‘Financial sensitivity,’ which entails items related to understanding financial status of the patients by doctors and providing support if necessary. A noteworthy feature of this domain is that, most of the items under this domain were derived from the formative qualitative research, not from the literature review. The only item that is supported by literature is ‘Informing the cost of treatment’ (Walbridge & Delene, 1993; Wolf et al., 1978). But interestingly, according to the formative qualitative research (Please refer to Section 2.4.4.5 in Chapter 2), doctors in Bangladesh do not consider providing this type of information as their responsibility. Another item ‘Providing financial assistance if needed’ may be outside of the responsibility of the doctors in settings, where pre-payment-based health financing mechanism is established and out-of-pocket payment is uncommon.

It is clear from the above discussion that, while some items of the responsiveness scale are replications of relevant studies, few others are completely new — adding to the existing knowledge in this field. However, caution needs to be maintained in generalizing these items to different settings such as western, or advanced industrialized societies. The scale also needs to be carefully validated for measuring responsiveness of other health workers such as the nurses, CHWs, etc.

### **3.5.1 Limitations of the Study**

Despite taking careful measures to ensure psychometric rigor, this research may face some criticisms, which are common for most psychometric scales. Major criticism could fall on the decision rules adopted at different decision points. Using a different decision rule or a different method may bring forth a different model. So, I first tried to ensure face and content validity of the items through repeated consultations with the experts who have reasonable expertise on the subject matter and/or the context of where and among whom the study was conducted. Significant efforts were put in repeated field-tests too. Secondly, I used the appropriate and up-to-date methods for deciding the number of factors, factor extraction, and factor rotation methods, supported by scientific studies. Despite these attempts, some flaws could not be averted.

First, criterion (concurrent) validity could not be ascertained properly due to the lack of a gold standard to compare the findings with. Construct validity could also not been assessed. A multi-method approach could be employed for checking construct validity; for example, a separate exit interview tool could have been developed for this purpose. This was not done due to time and resource limitations. Test-retest reliability could not be tested due to the methodological limitation. As the consultation scenario changes from patient to patient, test-retest reliability was not possible to measure, given the methods adopted for this study (i.e., structured observation method). However, this could be attempted if an exit interview method was used.

Despite some limitations, the scale demonstrated satisfactory level of internal consistency, inter-rater reliability and criterion validity. Therefore, this scale with 34 items grouped under five domains, can be used with confidence to measure the responsiveness of physicians in rural Bangladesh.

### **3.5.2 Future Research**

The known-group validation in this study, involving public and private sector physicians' consultations, indicates that there might be difference in the level of responsiveness in these two settings. It may be useful to examine the differences in responsiveness between public and private sector physicians more in-depth. It can also be seen if they differ in terms of all the domains of responsiveness, or they differ only in certain domains.

This study was limited to the physicians working in the outpatients of rural areas of Bangladesh. Future studies can be carried out in various other relevant settings such as in the urban areas, among other professional groups like the nurses, CHWs, etc., in other professional settings like inpatient services, emergency, etc.

This study focused on developing the responsiveness scale, but this did not take into account many potential determinants of responsiveness, which may aid the physicians to be responsive or deter them from being responsive in practice.

Understanding of these determinants is crucial to improve the responsiveness and resolve the issues around this topic.

### **3.5.3 Policy Implications**

Governments of many countries, including Bangladesh, are trying to improve the quality of their HRH, along with their quantity. Bangladesh is striving for structural reforms in its health system through the Health and Population Sector Program (currently updated as Health, Nutrition, and Population Sector Development Program) since 1998, and has explicitly recounted its intent to transform the HRH into a more client-centered and responsive workforce (Aldana et al., 2001; Cockcroft et al., 2007, 2011). Since measuring the magnitude of a problem is one of the crucial steps of public health problem solving paradigm (Guyer, 1998), this scale can contribute in this regard and assist the policy makers to understand the absolute magnitude (overall responsiveness score), relative magnitude (domain-specific responsiveness score) and distribution (responsiveness score across geographical areas, professional groups, etc.) of the deficiencies in this front.

With the rise of performance based payment mechanisms, the need for evaluating the performance of the HRH has amplified (Meessen, Soucat, & Sekabaraga, 2011). Responsiveness is regarded as one of the components of HRH performance (WHO, 2006). The need for measuring responsiveness in order to augment the performance measurement methods in the interest of performance based payments and other modalities of result based financing mechanisms will eventually increase. This scale for measuring responsiveness can help the program managers to evaluate and also monitor the performance of their employees, which may be integrated into a performance based payment scheme as well.

Cross-national comparison of different parameters of HRH can be useful for both the multilateral organizations and the national governments. International or multilateral organizations take important decisions regarding a country, based on that country's standing on the issue in question. The usefulness of such comparisons for national level policy makers has also been demonstrated (Dubois & McKee, 2006). However, ranking of countries based on cross-national comparisons often faced criticisms due to lack of adequate psychometric rigor of the tools used for the purpose (Navarro, 2000).

Although my study was done in rural Bangladeshi setting, this may provide conceptual and methodological inputs to conduct similar locally relevant studies in other countries. Series of such studies may aid in developing a tool, robust enough to conduct cross-national comparisons, at least in comparable countries.

**4 Chapter 4: Application of Responsiveness of Physicians Scale (ROP-Scale): Measuring and Comparing Responsiveness of Public and Private Sector Physicians in Rural Bangladesh (Manuscript 3)**

## **Abstract**

### **Introduction**

Responsiveness of physicians is defined as the social actions that physicians do to meet the legitimate expectations of service seekers. Some studies suggested that private sector physicians performed better in terms of responsiveness elements such as explaining health condition, and examining patients with care. Since there is no study comparing the overall and domain-specific responsiveness of physicians, this study aimed to compare the responsiveness of physicians working in public sector with those working in private sector in rural Bangladesh, through a mixed-methods approach.

### **Methods**

This study adopted the ‘parallel-database’ variant of ‘convergent parallel’ mixed methods design. Data collection took place in southwestern Bangladesh. The qualitative part included in-depth interviews physicians (n=17 total, seven public, five private) and patients (n=7, 3 male, 4 female); focus group discussions with users (four total, two sessions each with males and females); and participant observations in consultation rooms of public and private sector physicians (one week in each setting). The quantitative part included structured observation 195 public and 198 private sector physicians; using Responsiveness of Physicians Scale (ROP-Scale). Qualitative data was analyzed by framework analysis method; while quantitative data was analyzed by two sample *t*-test, multiple linear regression (MLR), multivariate analysis of variance (MANOVA), and descriptive discriminant analysis (DDA).

### **Results**

Mean responsiveness score of public sector physicians was 1.98 and that of private sector physicians was 2.16; and the difference was statistically significant in *t*-test with *t* statistic of -6.04 (*p*-value <0.01). The difference remained statistically significant in MLR after adjusting for the confounding covariates such as age, gender, and local origin of the physician and age, gender, and level of education of the patient. However, qualitative data suggested that, despite slightly better responsiveness of private sector physicians, none of the sectors were sufficiently responsive. In MANOVA test, public and private sector physicians were different not only in terms of overall ROP-Scale score, but also in terms of all the subscales. Private sector physicians scored higher in Friendliness, Respecting and Informing and guiding; while public

sector physicians scored higher in Gaining trust and Financial sensitivity. Qualitative finding supported the quantitative results. Through DDA, the most important (in terms of distinguishing between public and private sector physicians' responsiveness) subscale was found to be 'Respecting'.

### **Conclusion**

Despite relatively higher level of responsiveness of private sector physicians, according to qualitative findings, neither of the sectors performed optimally. Unlike findings from most other comparative studies in Bangladesh, the private sector was found to have limitations in some aspects of responsiveness. Private sector physicians scored higher in terms of Friendliness, Respecting, and Informing and guiding, while those from public sector scored higher in Gaining trust, and Financial sensitivity.

## 4.1 Introduction

Bangladesh has achieved remarkable success in health outcomes over the last few decades (Chowdhury et al., 2013; Koehlmoos et al., 2011) in the face of high population density, illiteracy, poverty, natural disasters, and political instability in the country. One of the contributors to this success has been argued to be the pluralistic health care milieu, marked by coexistence of formal and informal providers in public and private sectors (Ahmed et al., 2013). However, there are arguments against pluralism too, claiming that it is associated with poor governance (Harding & Preker, 2003; World Bank [WB], 2005); and that unregulated private sector may perform sub-optimally in terms of efficiency, equity, quality and safety (Bennett, McPake, & Anne, 1997; Bloom et al., 2008; Hsiao, 2000; Lim, Yang, Zhang, Feng, & Zhou, 2004). It is also argued that the evidence of success in the private sector from developed countries may not be transferable to developing countries like Bangladesh, due to their different paths of historical development of the health markets and the regulatory context (Bennett, 1992; Bloom, Kanjilal, Lucas, & Peters, 2012; Bloom et al., 2008; Yazbeck & Peters, 2003). Nevertheless, the rapidly expanding private sector is an irrevocable reality in Bangladesh (Rannan-eliya & Somanathan, 2003; WB, 2005) that is increasing its share in health care provision both in urban and rural areas (Ahmed et al., 2013; Bangladesh Health Watch [BHW], 2007; Berendes, Heywood, Oliver, & Garner, 2011; Bloom et al., 2008; Harding & Preker, 2003; Siddiqui & Khandaker, 2007).

The health sector of Bangladesh is organized correspondingly with its administrative hierarchy, including seven divisions, divided into 64 districts, which are again divided into 487 upazilas (sub-districts); and then subsequently into unions and wards (Government of Bangladesh [GoB], 2014). This paper is focused on rural Bangladesh, and the upazila level is considered rural. Upazilas have an average population of 320,444 and the upazila health complexes (UHC) are the nucleus of primary health care (PHC) activities at this level (GoB, 2014; Osman, 2004). Rural areas of Bangladesh are deficient in physician-to-population ratio, with only 1.1 physicians per 10,000 people, while urban areas have 18.2, and national average is 5.4 (Ahmed et al., 2011; BHW, 2007). Only 16% of total physicians cater to the rural population, who constitute 74% of the total population (BHW, 2007; GoB, 2014).

Public sector physicians are those whose primary employer is the government; the rest are considered here private sector physicians (WHO, 2006), including both for-profit and not-for-profit (mostly non-government organization[NGO])



providers (Berendes et al., 2011; WB, 2005). The private sector also involves semi-qualified and informal providers (Ahmed et al., 2009, 2011), who are outside the scope of this study. This study is focused on formal public and private sector physicians who have obtained at least an MBBS degree (or an equivalent degree if passed out from a foreign medical school) from medical colleges accredited by Bangladesh Medical and Dental Council (BM&DC). There are 65,767 such registered physicians, of whom 53,929 are currently available in the country, with 38% in public sector and the rest in private (GoB, 2014).

The Government of Bangladesh has instituted structural reform policies through the Health and Population Sector Program (currently updated as Health, Nutrition, and Population Sector Development Program), which explicitly declared its intent to improve the performance of human resources for health (HRH) along with their quantity (Aldana et al., 2001; Cockcroft et al., 2007, 2011). The realization of this intention of the government of Bangladesh can be aided by understanding the performance of HRH in general and comparing the public and private sector physicians in this regard (Berendes et al., 2011), as the government is the ultimate steward even in a pluralistic health system (Lagomarsino, Nachuk, & Kundra, 2009; Lagomarsino, de Ferranti, et al., 2009; WB, 2005).

The *World Health Report 2006* conceptualized HRH performance based on four domains: availability, competency, productivity, and responsiveness (WHO, 2006). Responsiveness of physicians, in the context of this research, is defined as “the social actions that physicians do to meet the legitimate expectations of service seekers”. Qualitative research (presented in Chapter 2) followed by factor analysis (presented in Chapter 3) revealed five domains of responsiveness: 1) Friendliness, 2) Respecting, 3) Informing and guiding, 4) Gaining trust, and 5) Financial sensitivity (Table 4-1).

Some studies suggested public sector physicians perform better than the private sector in terms of quality of care and patient satisfaction (Lim et al., 2004; Tuan, Dung, Neu, & Dibley, 2005). However, the preponderance of studies suggested that the private sector performs better, especially in terms of responsiveness elements such as communication, politeness, providing information, explaining health condition, taking history in detail, and examining with care (Bennett, 1992; Berendes et al., 2011; Das, Hammer, & Leonard, 2008; Harding & Preker, 2003; Pongsupap & VanLerberghe, 2006; Rannan-Eliya et al., 2014; Rowe, DeSavigny, Lanata, & Victora, 2005; Russell, 2005). Evidence from Bangladesh also overwhelmingly support this notion (Andaleeb et al., 2007a; Andaleeb, 2000a, 2000b; Mendoza Aldana, Piechulek, & Al-Sabir, 2001; Siddiqui & Khandaker, 2007; WB, 2005). This may be due to the fact that private providers are not

subsidized and hence need to gain their share of the market through competition (Das et al., 2008; WB, 2005). Since previous studies did not compare public and private sector physicians' responsiveness by decomposing responsiveness into its constituent sub-domains, it is not known whether the private sector outperforms the public sector in all aspects, or only in certain ones. Therefore, this study can help identify domains of responsiveness, which demand stewardship support in the public sector to get on par with the private sector. This also shows which areas are lagging behind in both sectors and demand attention in general.

The aim of this study was to compare the responsiveness of physicians working in public sector with the ones working in private sector in rural Bangladesh, through a mixed-methods approach.

## **4.2 Research Questions**

### **4.2.1 General Research Question**

What are the differences in responsiveness of physicians<sup>1</sup> between those working in the public sector as opposed to those working in the private sector in rural<sup>2</sup> Bangladesh?

### **4.2.2 Specific Research Questions**

1. What are the levels of responsiveness of public- and private-sector physicians, and how different is the responsiveness score overall?
2. How different are the public and private sector physicians across different domains (e.g., Friendliness, Respecting, Informing and guiding, Gaining trust, and Financial sensitivity) of responsiveness?

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<sup>1</sup>In this study only formal sector (i.e., with minimum MBBS degree) general practitioners working in the outpatient facilities in public or private sector are included.

<sup>2</sup> In the context of this study, upazila or sub-district level is considered as 'rural'

### 4.2.3 Research Hypothesis

$H_0$ : Mean responsiveness score of the public sector physicians = Mean responsiveness score of the private sector physicians

$H_a$ : Mean responsiveness score of the public sector physicians  $\neq$  Mean responsiveness score of the private sector physicians

## 4.3 Methods

Taking a pragmatist ontological position, I followed a mixed method model with a 'convergent parallel' design (Figure 4-1). This design has three different variants, among which the 'parallel-database' (Creswell & Clark, 2011) variant was used in the study described in this paper. Although the qualitative and quantitative data were collected sequentially as part of a larger study, for the purpose of this paper, data was analyzed and interpreted concurrently, placing equal weight on both qualitative and quantitative components. Parallel databases of qualitative and quantitative data were analyzed side by side and the qualitative findings were used to explain or support the quantitative findings (Bryman, 2008; Ozawa & Pongpirul, 2014).

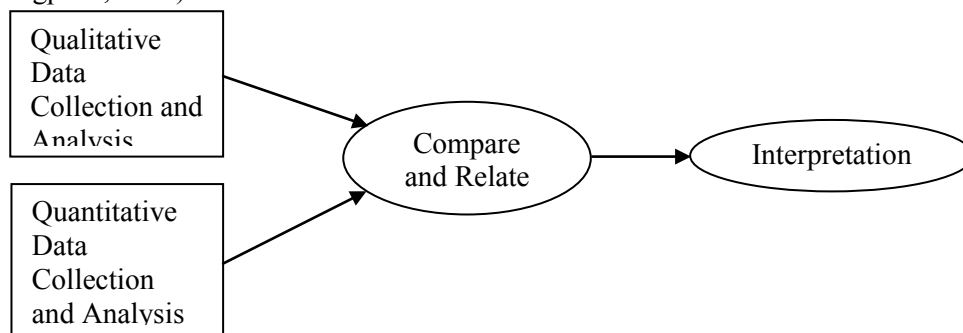


Figure 4-1 The Convergent Parallel Design [Source: Creswell, J.W, and Clark, V.L.P. (2011), *Designing and Conducting Mixed Methods Research*]

### 4.3.1 Qualitative Component

#### 4.3.1.1 Study Site, Population, and Duration

The qualitative part of this study was conducted in the southwestern part of Bangladesh, in all three upazilas (Alamdanga, Damurhuda, and Jibannagar) of the Chuadanga district. Although I started the formal data collection after receiving ethical

approval from the Ethical Review Board of BRAC University (ERB-BRACU) on August 19, 2014, I started contacting the gatekeepers, developing a list of respondents, taking permission for participant observation and building rapport with the respondents as well as the local community in advance. My formal data collection ended on September 14, 2014. Data collection included in-depth interviews (IDI) with seven public sector physicians, five private sector physicians, and seven clients; four focus group discussion (FGD) sessions with clients (two sessions with males and females each); and participant observation in consultation rooms of public and private sector physicians for a period of one week in each setting (Table 4-3). Respondents were added to the list until data saturation (Ritchie et al., 2003) was achieved.

#### ***4.3.1.2 Selection of Respondents and Observation Sites, and Data Collection***

For selecting public sector physicians, first, I visited all three UHCs of the Chuadanga district and sought suggestions and assistance from Upazila Health and Family Planning Officers (UH&FPO), i.e., the chief of the UHC. With their assistance, I generated a list of physicians from all three UHCs. For private sector physicians, I followed the same process involving the President of the Chuadanga branch of Bangladesh Private Medical Practitioners' Association. I finalized the lists following principles of heterogeneous purposive sampling (Ritchie et al., 2003), aiming for maximum variation in gender, age, and experience of physicians.

In selecting the clients for IDIs and FGDs, I generated a list of potential respondents with inputs from local residents (personal contacts) and contacted them myself. The list of respondents was developed based on the following criteria: persons over 18 years of age, who went to a doctor at least twice in their lifetime, and their last visit to a doctor was during the last one year. Finding female respondents for FGDs was difficult in this way, as they did not agree on a common place and time to meet. So, I contacted the principal of a college and the headmaster of a girls' school to allow us to conduct the sessions with their female employees, satisfying the same inclusion criteria. For sampling of in-depth interview respondents, I followed heterogeneous purposive sampling, with maximum variation in their age, gender, level of education, and occupation. However for FGDs, I followed homogenous purposive sampling, which is recommended for FGDs to keep the groups more focused, and to facilitate effective intra-group interactions (Ritchie, 2003). Groups were homogeneous in the sense that the respondents in each session were of the same gender (and profession in case of females).

Observation took place in consultation rooms of the UHC, located in an upazila of the Chuadanga district by the side of a major highway of the region. I chose this location because during my frequent visits in different UHCs, I found the UH&FPO to be friendly, supportive, and interested in assisting in research work. Observation of private sector providers took place in another upazila—in a private clinic and an NGO-clinic, located in an area noted for commercial, cultural, and industrial activities since the British colonial period. I chose this location because many private clinics were located there and I could gain access to the clinic with assistance from the previously mentioned UH&FPO, who worked there part-time. The selection of sites for participant observation was based on principles of convenience sampling (Ritchie et al., 2003), as I chose them in a way conducive for my travel to those locations at different times of the day.

All interviews were digitally recorded with a small recorder, with the permission of the respondent. Duration of the IDIs ranged from 35 minutes to one hour 15 minutes and that of FGDs from 45 minutes to one hour 30 minutes. Most FGD sessions had eight respondents except one, which had seven. Four out of seven public sector physicians gave an interview in their private chamber; three gave an interview in the UHC when there was less patient load. In case of the private sector physicians, all five respondents gave an interview in their private chamber. In case of the patients, two out of the seven interviews were conducted in their homes, two near UHC, one in a shop of a respondent's friend, one in another respondent's home (as they were colleagues), and one in her office. In the case of the FGDs, the two FGDs with the male respondents took place in my ancestral residence. The two FGDs with the females were conducted by a female research assistant (RA) in the office room of a college and a girls' school.

During participant observation in each setting, I spent the first day gaining a grasp over the surroundings and people; the second and third day inside the facilities to observe overall functions and relationships; and the remaining four days for focused observation of consultations.

Before starting the participant observation in the public sector setting, I obtained permission from the UH&FPO of the observed UHC. In the private sector, I obtained permission from the owner of the private clinic. Written consent of all observed and interviewed providers and clients were collected separately. There were no refusals, except for one female patient leaving the UHC, who had to hurry to reach home.

### **4.3.1.3 Data Analysis**

Both inductive and deductive methods were applied for data analysis with Atlas ti version 7.5.2. The analysis process included the following steps: familiarizing with the data, developing coding schema or framework, coding the data, grouping the data, and interpreting the data.

The RAs transcribed all the recordings verbatim. I listened to every single interview and FGD record, and matched with the transcripts to ensure accuracy. In Atlas ti, I created a new hermeneutic unit and added all the files (transcripts, and observation notes) as primary documents (PD). After getting familiar with the data by repeated listening to the recordings and reading the transcripts, I created a codebook containing the name and definition of the code. Initial codes were derived from literature as a priori codes; inductive codes were added along the way during data familiarization, and applying codes to text segments (or ‘quotations’, according to Atlas ti terminology). Examples of a priori codes include greetings, taking consent, explaining to patients etc., while examples of inductive codes include response of doctors if patients greeted, taking consent in particularly necessary conditions, asking patients if they understood the explanation, etc. (codebook with inductive codes demarcated is given in Appendix 10; scale items indicating which are from literature and which from formative qualitative research are indicated in Appendix 12). After applying the codes to the full dataset, I created primary document families of data sources for public sector physicians, private sector physicians, patients, and participant observations. Using the ‘global filter’ option in Atlas ti, I got all the texts under codes, stratified by the data sources. These outputs were used for data interpretation and report writing.

## **4.3.2 Quantitative Component**

### **4.3.2.1 Sample Size Calculation**

The following formula was used to calculate the sample size to test the hypothesis of difference between mean responsiveness scores of public and private sector physicians:

$$n = \frac{(z_{\frac{\alpha}{2}} + z_{\beta})^2 (\sigma_1^2 + \sigma_2^2)}{\Delta^2}$$

$$H_0: \mu_1 - \mu_2 = 0 \quad H_a: \mu_1 - \mu_2 = \Delta$$

Where,

$n$  = Sample size required for each group

$z_{\frac{\alpha}{2}}$  = Two-sided level of significance to detect a type-I error

$z_{\beta}$  = Cut-off to detect a type-II error, i.e., 1 minus power

$\Delta$  = Expected difference in mean

$\sigma$  = Standard deviation of the variance estimated for each group

Consistent with the convention, I considered a 0.05 level of significance (two-sided  $z_{\frac{\alpha}{2}} = 1.96$ ), 80% power ( $z_{\beta} = 0.84$ ).

Due to the absence of studies on responsiveness of physicians, I considered a patient satisfaction study (Andaleeb et al., 2007b) comparing satisfaction of patients with public versus private service providers in Bangladesh. The mean satisfaction score in this study had a standard deviation of 0.96 among respondents from public hospitals and that of 0.73 among respondents from private hospitals. The mean satisfaction score was measured on a 5-point Likert scale. I considered a detectable mean difference of 0.25 on a 5-point Likert scale. Based on these assumptions, the sample size for each group was calculated to be:

$$n = \frac{(1.96 + 0.84)^2 (0.96^2 + 0.73^2)}{0.25^2} = 182.45$$

I targeted 200 samples from each setting anticipating some non-response and refusal rates in survey participation.

#### ***4.3.2.2 Sampling Frame Preparation and Data Collection***

The study was conducted among the physicians working in upazilas of Khulna, a southwestern division of Bangladesh. In order to prepare a sampling frame, an RA visited all the potential upazilas of Khulna division to prepare a list of all the physicians, who were likely to be present during the data collection period of December 12, 2014 until January 3, 2015. Since most of the physicians were concentrated in and around the Khulna district under the Khulna division, I centered in the Khulna district and then expanded the field site around Khulna district until reaching 400 samples of consenting physicians (Appendix 16).

A scale called ‘Responsiveness of Physicians’ or ROP-Scale (for detailed description of the scale please refer to Chapter 3), in the form of a structured observation (SO) tool, was installed in smart-phones to collect the data by observing the consultations. The scale consisted 34 items with 4-point Likert-type response categories. Each response category was anchored with a scenario. Response category ‘1’ was the lowest score, which represented a physician lacking responsiveness at all. The scenario for response categories ‘2’ was representative of a typical physician while scenario for ‘3’ was of a better than average responsive physician. Response category ‘4’ was the best practice or a textbook scenario. Items that could not be observed due to inapplicability in the given context or any other reasons were coded as 'Not Applicable' (Appendix 30).

Responsiveness is shown by service providers and is perceived by service seekers, so data needs to come from both the parties. Observing the actual interaction, instead of interviewing the clients or providers, can achieve this goal more effectively. In similar studies, different approaches—such as review of patients' record, direct observation of provider, interviews of providers, exit interviews with patients and simulated patients methods—have been attempted and compared (Franco et al., 1997; Leonard & Masatu, 2005; Peabody et al., 2000). Franco, Daly, Chilongozi, and Dallabetta (1997) showed the direct observation method to be the method of choice; however, several studies discussed caveats of this method as well. For example service providers may change their behavior when they are aware that they are being observed (Hawthorne effect) (Leonard & Masatu, 2006; Rowe et al., 2002; Rowe et al., 2006). But Leonard and Masatu (2006) showed in their study that the performance of the observed physicians tend to return to the pre-observation state after the tenth observation. Based on these studies, I adopted ‘structured observation’ method (Bernard, 2006), and



allowed the first 10 observations to serve as ‘washout’ consultations. We recorded the eleventh observation in order to avoid or at least minimize the potential Hawthorne effect.

Since dual job holding is allowed in Bangladesh and 80% of public sector physicians purportedly work in the private sector as well (Bergman, 2014; Gruen, Anwar, Begum, Killingsworth, & Normand, 2002), classifying them strictly into such categories as public and private sector physicians could be difficult. However, this problem could be easily avoided in this study, as the unit of data generation was the observation of consultations, not the individual physicians or the patients per se. Thus, a physician was counted in the public sector if s/he was observed in a public sector setting (e.g., UHC); and similarly was counted in private sector if observed in a private sector setting (e.g., clinic, pharmacy, chamber in residence, etc.).

The RAs were sent in teams to cover an upazila at a time. They were given a package, which contained necessary guidelines and tools for data collection. This included a mobile phone, an SO tool (Appendix 30), a route guide for their travel to the assigned upazila, a document enumerating steps of data collection (Appendix 17), an abridged observation checklist (Appendix 18), pencil, eraser, sharpener and a notebook. Their mobile phone had the Magpi data collection application (Magpi, 2014) with the SO tool installed (due to the space constraint on mobile screen, the mobile interface only had the scale items and response categories, not the scenarios corresponding each response category); Google Map application to guide them to their destination; global positioning system (GPS) application to record the location of data collection; internet connection to upload the data and the photos taken before and after each observation; a built-in camera to take geo-tagged and time-tagged photo of the observation setting; Drop Box application folder to access the updated list of doctors, and their daily assignments.

The RAs were instructed not to take out the SO tool in front of the doctors. First they recorded some background and demographic information from physicians by asking them. Then they took notes based on their observation of the 11th consultation. After observing the consultation with the 11th patient, the RA came out of the room with the patient and asked the patient for some background information (age, gender, and education). The RA then took out the paper-based SO tool (which consisted the scale items, response categories, and the scenarios to guide each response category) and recorded the findings in their notebook. Then they recorded the findings from the notebook to the mobile phone and uploaded the data later upon availability of Internet network. They also recorded the geographic information system (GIS)

location in mobile phone, took two geo-tagged and time-tagged pictures (one before the observation and the other after) and sent them to me. Each RA was recommended to observe two consultations per day; but was strictly instructed not to observe more than three in a day, as large number of observations in a day might diminish the quality of data.

In order for the observations to be as homogenous as possible, the following inclusion and exclusion criteria were applied:

**Inclusion Criteria:**

1. The observations were done only in outpatient settings and with the general practitioners.
2. Observations were done if the patient came with simple diseases or conditions, such as common gastrointestinal conditions (e.g., diarrheal episodes, peptic ulcer diseases, non-severe gastrointestinal pain of any type), common respiratory conditions (e.g., pneumonia, non-severe bronchial asthma, common respiratory ailments), and other common conditions (e.g., simple skin diseases, viral fever, common cold, allergies, anemia, enteric fever, pyrexia of unknown origin, etc.)

**Exclusion Criteria:**

1. Cases requiring emergency or inpatient care (e.g., assaults, road traffic accidents, poisoning, etc.)
2. Cases requiring additional privacy and confidentiality (e.g., sexually transmitted infections, gynecological conditions, etc.)
3. Children under 18 years.



Figure 4-2 Map of Sampled Consultations

Conforming to the guideline of ERB-BRACU, RAs took consent from both the doctor and the patients before starting the observation. Since they were working in a team, one of the team members briefed the waiting patients about the study and handed them a consent card. The patients handed the card over to the observing RA inside the room unless they were unwilling to be observed. The observing RA came out of the consultation room if the patient did not hand over the signed (or thumb printed) consent card to the RA, indicating non-consent. Consent from the doctors was obtained earlier, but they were not informed which consultation (11<sup>th</sup> patient) the RA was going to observe.

#### 4.3.2.3 *Statistical analysis*

Data collected through Magpi software was stored in the cloud and downloaded in .xls format. This data was then imported into statistical software Stata version 12.1 for data management, cleaning, missing value imputation and analyses (StataCorp, 2011). Three among 400 physicians consented initially but refused to allow observation at the time of data collection. From the 397 observations, four were discarded as these doctors were mistakenly observed twice. So, 393 observations were considered for analysis. Missing values were imputed by ‘hotdeck’ method, using the ‘.hotdeckvar’ command developed by Schonlau (2006). In this procedure, missing values are replaced by random values from the non-missing observations of the same variable, without changing the other data. This method is particularly useful for its simplicity of application, and its ability to preserve the distributional characteristics of the variables (Filosso et al., 2014).

Since there was a small number of missing values (7 % of total values), computationally intensive procedures such as multiple imputation method were not considered.

To measure the aggregated ROP-Scale score, the mean of the 34 items was calculated; that is, for each sampled consultation, all the scores across 34 items were first aggregated and then divided by 34. The ROP-Scale is composed of five subscales: 1) Friendliness, 2) Respecting, 3) Informing and guiding, 4) Gaining trust, and 5) Financial sensitivity. Subscale scores were also computed similarly. Table 4-1 below provides the definition of the subscales along with the items under each subscale.

Table 4-1 Definition and Items of Subscales of ROP-Scale

<b>Name of Domain</b>	<b>Definition</b>	<b>Items in Domain</b>
Friendliness	How a physician communicates with a patient	<ol style="list-style-type: none"> <li>1. Asking patient's name</li> <li>2. Engaging in social talks</li> <li>3. Asking about patient's family</li> <li>4. Friendliness</li> <li>5. Giving courage and reassurance</li> <li>6. Sense of humor</li> </ol>
Respecting	How a physician explicitly shows respect to a patient	<ol style="list-style-type: none"> <li>1. Greetings by physician</li> <li>2. Showing respect explicitly</li> <li>3. Listening to patient's complaints completely</li> <li>4. Listening to patient's complaints attentively</li> <li>5. Examining the patient with care</li> <li>6. Encouraging patient to ask questions</li> <li>7. Listening attentively to patient's questions</li> <li>8. Closing salutation by physician</li> <li>9. Non-verbal communication by physician</li> <li>10. Compassionately touching the patient by physician</li> </ol>
Informing and guiding	How a physician empowers a patient	<ol style="list-style-type: none"> <li>1. Suggestions on disease prevention and health promotion in general</li> <li>2. Facilitating follow-up</li> <li>3. Quantity of issues explained and the quality of explanation</li> <li>4. Quantity of issues explained</li> <li>5. Asking patient if s/he understood the explanation</li> <li>6. Explaining the cause of disease to the patient</li> <li>7. Explaining the diagnosis of disease to the patient</li> <li>8. Explaining the prognosis of disease to the patient</li> <li>9. Explaining the treatment to the patient</li> <li>10. Explaining the preventive aspects to the patient</li> </ol>
Gaining trust	How a physician may gain trust of the patients, or refrains from doing something that may breach trust of the patients	<ol style="list-style-type: none"> <li>1. Earning trust of patients</li> <li>2. Service oriented, not businesslike attitude</li> <li>3. Not using jargon</li> <li>4. Not being involved in illegal activities</li> </ol>
Financial sensitivity	Understanding financial need of the patients and providing support if needed, going beyond the consultation	<ol style="list-style-type: none"> <li>1. Considering socio-economic status of the patient</li> <li>2. Trying to understand socio-economic status of the patient</li> <li>3. Informing the cost of treatment</li> <li>4. Providing financial assistance if needed</li> </ol>

The score for each subscale was also calculated in the same way as the aggregated ROP-Scale score. The difference between mean responsiveness scores of public and private sector physicians was measured by two-sample *t*-test (unpaired) with significance level of 0.05. The variance ratio test was conducted beforehand in order to verify the equality of the variances (Rosner, 2010); then the appropriate type of *t*-test was conducted.

In order to check the difference between the public and private sector physicians' responsiveness score, controlling for potential confounders, multiple linear regression (MLR) was used. The stepwise regression method is currently being criticized (Dupont, 2009) for subjective critical values, model uncertainty, and parameter estimation bias (Hegyí & Garamszegi, 2011). So, I adopted a model based on the potential confounders (Bloom et al., 2008; Das & Hammer, 2007), as gender and other facets of identity of both the service providers and the service seekers might influence the interactions (Sen, George, & Östlin, 2002). A responsiveness score from the ROP-Scale was used as the outcome variable and practice setting (public or private) as the main explanatory variable of interest. In the initial model I loaded such potential confounders as age of the physician, gender of the physician, years of practice since graduation, tenure of service in that upazila, tenure of total service in rural areas, local origin of physician, age of patient, gender of patient, and level of education of patient. I checked for multicollinearity by evaluating variance inflation factor (VIF) and because of as high VIF value as 7.93, I dropped years of practice since graduation, tenure of service in that upazila, and tenure of total service in rural areas. The remaining variables had a mean VIF of 1.27.

Multivariate analysis of variance (MANOVA) is one of the most common statistical methods to discern the group differences. This is suggested to be used with descriptive discriminant analysis (DDA) if the groups are found to be different in MANOVA (Warne, 2014). Therefore, I performed MANOVA followed by DDA to ascertain the difference between public and private sector providers, to identify the items in which the groups (public and private) did better or worse, and to identify the importance of items in each sub-group and the importance of sub-groups in the overall scale (Huberty & Olejnik, 2006).

## **4.4 Results**

### **4.4.1 Background Characteristics of Quantitative Sample**

Half of the observations were done in the public sector and half in private sector settings. Physicians self-reported that they consulted fewer patients in a private setting than they did in the public setting. Physicians spent more time on their

patients in the private sector. Physicians in the private sector were older, had more work experience and experience of serving in rural areas, and were more likely to be male and of local origin. Patients were similar in age in both sectors, and females outnumbered males in both settings. However, patients visiting the private sector had more years of education than patients visiting the public sector. These findings are shown in Table 4-2.

Table 4-2 Characteristics of Consultations, Physicians and Patients in Structured Observation of Public (n = 195) and Private (n = 198) Sector, 2014

Variable	Public Sector	Private Sector
Mean number of patients seen by physician per day (self-reported by physicians)	34.42 (16.31)	26.34 (18.35)
Mean consultation time in minutes	4.04 (1.91)	6.02 (2.54)
Percentage of male physicians	66.15	90.40
Mean age of physicians in years	32.02 (7.32)	41.81 (11.61)
Percentage of physicians with local origin (i.e. from the same upazila)	24.10	42.42
Mean years of work since graduation	8.61 (7.44)	18.15 (11.23)
Mean years of work in rural setting	3.06 (6.05)	10.45 (9.40)
Percentage of female patients	65.64	55.05
Mean age of patients in years	42.11 (15.90)	42.40 (14.37)
Mean years of education of patients	5.56 (4.43)	7.08 (4.90)

Note: Standard deviation is mentioned in the parenthesis

#### 4.4.2 Background Characteristics of Qualitative Sample

All the physicians I interviewed, both in the public and private sectors, hailed from the Chuadanga district. All of them, except the youngest two, graduated from government medical colleges. The client respondents were also from the same district and majority of them were in their mid 30s to 40s. Almost all of the IDI and FGD respondents were living with their families in rural parts of Chuadanga.

In observation of the public sector, the consultation room was shared by more than one physician, or sometimes even with the semi-qualified providers known as the sub assistant community medical officers (SACMO). Patients queued up inside the room, extending in front of the consultation room as a crowd. Nobody maintained the patient flow, nor was there a way to restrict the non-patient visitors (e.g., the pharmaceutical representatives, dalal<sup>1</sup>, etc.) inside the room. Most of the patients coming to the UHC were females; most belonged to lower socio-economic group, as indicated by their dress.

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<sup>1</sup> Brokers of diagnostic centers and clinics, who roam around there to entice the innocent rural patients to their clinics and diagnostic centers

The consultation rooms were better maintained in private sector; only the next patient in the line, along with the consulting patient, entered the room and waited till her/his turn came. In the NGO-clinic, only the patient and an accompanying attendant entered the room. In both the private clinic and the NGO-clinic, there was a person assigned to maintain the patient flow. Patients coming to the private clinics belonged to the low to middle socio-economic group. Some affluent people came too.

Table 4-3 Characteristics of Respondents and Participant Observation Settings

<b>In-depth Interview with Public Sector Physicians</b>	
Number	7
Gender	2 Females and 5 Males
Range of graduation year	1982 - 2009
<b>In-depth Interview with Private Sector Physicians</b>	
Number	5 (2 of them retired from public sector, 1 was accepted in public sector and waiting to join, and only 2 had no linkage with public sector)
Gender	1 Female and 4 Males
Range of graduation year	1973 - 2013
<b>In-depth Interview with Clients</b>	
Number	7
Gender	4 Females and 3 Males
Range of age in years	25 – 48
Range of level of education	Primary - Masters
Types of occupation	High school teacher, kindergarten school teacher, businessman, homemaker
<b>FGD with Clients</b>	
Number of sessions	4 (2 with Females, 2 with Males)
Number of participants	7 - 8 in each session
Range of age in years	19 - 72
Range of level of education	Primary - Masters
Type of occupation	College teacher, high school teacher, retired government official, businessman, farmer
<b>Participant Observation</b>	
Setting	2 settings: Public sector (consultation rooms in an upazila health complex) and Private sector (consultation rooms in a for-profit private clinic and a not-for-profit NGO-clinic)
Duration	1 week in each setting

#### 4.4.3 Overall Difference between Responsiveness of Public and Private Sector Physicians

The mean responsiveness score of public sector physicians was 1.98 and that of private sector physicians was 2.16; the mean difference was -0.18, which was statistically significant in *t*-test, with *t* statistic of -6.04, and *p*-value <0.01.

The difference remained statistically significant in the MLR models after adjusting for the confounding covariates age, gender, and local origin (i.e., from the same upazila) of physician; and age, gender, and level of education of patient. The  $\beta$  coefficient for practice setting (public or private) was 0.17 with *p*-value <0.01, and 95% confidence interval of (0.10,

0.24). All other potential confounders turned out to be statistically not significant. The result of the MLR is shown in Table 4-4.

Table 4-4 Results of MLR of ROP-Scale Score

Outcome Variable	$\beta$	95% Confidence Interval	<i>p</i> -value
<b>Setting (public or private)</b>	<b>0.17</b>	<b>0.10 – 0.24</b>	<b>0.00</b>
Age of physician (measured in years)	-0.00	-0.00 – 0.00	0.89
Gender of physician (male or female)	-0.46	-0.13 – 0.04	0.27
Local origin of physician (yes or no)	-0.01	-0.08 – 0.05	0.71
Age of patient (measured in years)	-0.00	-0.00 – 0.00	0.51
Gender of patient (male or female)	0.03	-0.04 – 0.09	0.43
Level of education of patient (measured in years)	0.00	-0.01 – 0.01	0.70
Adjusted-R <sup>2</sup> (coefficient of determination)	0.07		

In MANOVA test, all four of test statistics, i.e. Wilks' lambda, Pillai's trace, Lawley-Hotelling trace, and Roy's largest root were significant. This suggests that the null hypothesis of equal group centroid can be rejected. This was the case for both the overall ROP-Scale (34 items in total) and all the subscales namely Friendliness (6 items), Respecting (10 items), Informing and guiding (10 items), Gaining trust (4 items), and Financial sensitivity (4 items). The statistics denoting group difference obtained through MANOVA on overall ROP-Scale is shown in Table 4-5. Results of MANOVA on subscales are shown in Tables 4-8 through Table 4-12.

Table 4-5 Multivariate Tests of Significance for Group Difference

Number of obs = **393**

W = Wilks' lambda      L = Lawley-Hotelling trace  
P = Pillai's trace      R = Roy's largest root

Source	Statistic	df	F(df1, df2) =	F	Prob>F	
setting	W	<b>0.5656</b>	<b>1</b>	<b>34.0</b>	<b>358.0</b>	<b>8.09 0.0000 e</b>
	P	<b>0.4344</b>		<b>34.0</b>	<b>358.0</b>	<b>8.09 0.0000 e</b>
	L	<b>0.7679</b>		<b>34.0</b>	<b>358.0</b>	<b>8.09 0.0000 e</b>
	R	<b>0.7679</b>		<b>34.0</b>	<b>358.0</b>	<b>8.09 0.0000 e</b>
Residual		<b>391</b>				
Total		<b>392</b>				

e = exact, a = approximate, u = upper bound on F



All of the quantitative findings suggested that the public and private sector physicians were differently responsive, and private sector physicians were overall better performers in terms of responsiveness. However, to understand what people perceived about the level of responsiveness overall and public and private sector separately, qualitative findings are helpful.

Patients complained that lack of responsiveness was a general feature of the physicians, irrespective of their practice setting; as one patient said,

*"Interviewer: Are private sector physicians much better than the public sector physicians then?"*

*Respondent: Not 'much better', as they don't live up to my expectations regardless of setting."*

[IDI with a teacher, male, 45 years]

However, when probed further, patients identified private sector physicians to be more responsive overall. One FGD participant said,

*"There [in private sector] politeness of a doctor is bought with money; so there is no reason [for the doctor] to misbehave with me."*

[FGD participant, male]

According to the patients, private sector physicians were more tolerant, polite, and courteous; they were also good with following up with the patients. They gave more time than the public sector physicians, though the time was not sufficient in any sector. However patients identified some shortcomings of private sector physicians too. Patients alleged that private sector physicians prescribed more tests, and were reluctant to refer their patients to another physician for fear of losing business.

When seeking physicians' views, they were divided on their opinion, mostly along the line of their sectoral attachment and service experience. One of the two private sector physicians that solely worked in private sector and had never been attached with public sector, strongly claimed private sector physicians were more responsive, giving examples of how prompt they were in providing services in private sector compared to public sector. Another physician, who was a dual job-holding public sector physician, and was almost at the end of her public service career, said that there was nothing to praise or criticize one sector over the other. She said that the same physicians provided service in both settings, with equal lack of responsiveness. However, the majority of physicians, which included public sector physicians and private sector physicians with links to public sector, denied the better responsiveness of private sector physicians. They refuted the

allegations of the patients in the following ways. Firstly, their treatment was reportedly the same in both the sectors. Whatever difference might be seen in terms of their behavior with patients was due to the higher patient load, lack of amenities, limited human resources, and lack of proper health systems support. Secondly, according to some physicians, the difference in the behavior was due to the personal variations, not due to their different settings. One young public sector physician said,

*"During the morning hours, it is extremely difficult to cover 300-350 patients by two or three physicians in government health centers. I wish I could tell a patient, suppose a patient with typhoid fever, that you have this disease, consequences can be such, you can even become disabled, etc. In government sector, one cannot tell so many things. But in private chambers, the patient is told these in detail. When a patient pays you, of course you would take better care of him."*

[IDI with a public sector physician, male, year of graduation 2004]

My observation corroborated with most of the claims of the patients, such as private sector physicians were more courteous towards patients, spent more time on patients, prescribed more diagnostic tests, and followed up patients better. My observation also supported some of the claims made by physicians, such as public sector physicians faced higher patient load and received less health system support. However, some observations did not match with patients' allegations; for example, I did not find private sector physicians shying away from referring critical patients. Rather, I found public sector physicians to be more reluctant about referring. When probed, public sector physicians said, they were less inclined to refer patients in public sector, as most of them belonged to lower socio-economic group. These physicians feared patients might not be able to bear the financial burden of going to higher health facilities.

#### **4.4.4 Differences between Public and Private Sector Physicians across Domains of Responsiveness**

Although the private sector scored higher than the public sector in overall ROP-Scale score, public sector outperformed private sector in 'Gaining trust' and 'Financial sensitivity'. All differences in mean score were statistically significant at significance level of 0.05 (Table 4-6).

Table 4-6 Mean Values of ROP-Scale and Subscale Scores and their Differences in Public and Private Sector

Scale	Mean Score of Public Sector	Mean Score of Private Sector	Difference of Mean Scores (Public-Private)	p-value
Friendliness	1.34	1.64	-0.30	0.00
Respecting	2.22	2.51	-0.30	0.00
Informing and guiding	1.68	1.91	-0.23	0.00
Gaining trust	3.45	3.32	0.12	0.00
Financial sensitivity	1.65	1.51	0.14	0.02
<b>ROP-Scale</b>	<b>1.98</b>	<b>2.16</b>	<b>-0.18</b>	<b>0.00</b>

Further scrutinizing the regression analyses underlying MANOVA, I identified the specific items where each group did better or worse (MANOVA tables are given in respective sub-sections on domains).

Finally, through discriminant analysis, parallel discriminant ratio coefficients (DRC) were calculated. These coefficients are useful to decide which variable (in this case the subscales) is the most important for distinguishing the groups (in this case public and private sector) (Warne, 2014). The domain ‘Respecting’ yielded the highest DRC of 0.46, making it the most important subscale of ROP-Scale. Similar analyses were done with each subscale as well, to identify the most important item in that particular subscale. The following items came out to be the most important items as these demonstrated the highest DRC in each subscale:

Table 4-7 Items with Highest DRC Coefficients in each Subscale

Name of Subscale	Highest DRC in that Subscale	Item with Highest DRC in the Subscale
Friendliness	0.51	Giving courage and reassurance
Respecting	0.55	Compassionately touching the patient by doctor
Informing and guiding	0.66	Facilitating follow-up
Gaining trust	0.83	Service oriented, not businesslike attitude
Financial sensitivity	0.60	Providing financial assistance if needed

Now that I have identified how each sector performed in each responsiveness domain, the next sub-sections examine more in-depth, which issues in respective domains might have driven the results.

#### 4.4.4.1 *Friendliness*

In the ‘Friendliness’ subscale, the private sector earned higher scores in all items (Table 4-8). Among these items ‘Giving courage and reassurance’ was identified in DDA to be the most important item in this subscale (Table 4-7).

Table 4-8 MANOVA and T Tests of Group Differences (Between Public and Private Sector Physicians) on Subscale Friendliness

Variable	Mean Difference (Private - Public)	F-statistic	t-statistic	p-value
Asking patient's name	0.47	42.02	6.48	0.00
Engaging in social talks	0.23	13.14	3.63	0.00
Asking about patient's family	0.18	6.87	2.62	0.01
Friendliness	0.24	11.45	3.38	0.00
Giving courage and reassurance	0.43	45.51	6.75	0.00
Sense of humor	0.27	15.60	3.95	0.00
Results of Multivariate Tests of Significance for Group Difference: Significant in all four statistics (Wilks' lambda, Pillai's trace, Lawley-Hotelling trace, and Roy's largest root)				

In my qualitative observations, I found private sector physicians asked patients' names and wrote them down on prescription scripts. In the public sector, however, the name was already written on the ticket<sup>1</sup>, so they did not care to ask it again.

Engaging in social talks, including questions like 'who are there in the family', 'how many children do you have', etc. were very uncommon among both public and private sector physicians. However, patients mentioned private sector physicians were slightly better in this respect.

Friendliness of physicians; which could be understood through such gestures as remembering patients' name from a previous encounter, calling the patients in a friendly tone, asking or making comment about an event of the patient's family, praising the patient, and asking for an opinion of the patient about anything; was reported by patients to be uncommon in both settings.

The importance of reassurance, in agreement with the DDA findings in quantitative analysis, was recognized by stakeholders in qualitative part too. According to the patients, giving reassurance was an important aspect of good communication skill of the physicians. They implied that reassurance could be expressed both verbally and non-verbally.

One patient said,

*"Half of the disease is cured only by reassurance."*

[IDI with a teacher, female, 40 years]

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<sup>1</sup>A piece of paper purchased by the patients from the health facility, name and age of the patient is written on it by the person in charge of selling it, and doctors write prescription on this paper only

Physicians in both sectors admitted the importance of this. In my observations too, I found the doctors to be sincere in giving reassurances. Many doctors said at least one phrase to express reassurance, e.g., 'you will be fine'.

In regards to humor, I found some physicians to be quite humorous. In the private sector setting, when a young lady asked for vitamin syrup, the doctor replied jokingly, 'Leave these baby foods, you are a nice grownup young lady now, not a baby.' I heard from outside the consultation room, a female private sector physician telling a female patient after conducting ultra sonogram, 'I see that you had a great lunch, I can see everything in your stomach'. There were such examples of humorous moments in public sector too, but these were relatively infrequent there due to high patient load.

#### 4.4.4.2 Respecting

In the 'Respecting' subscale too, the private sector scored higher except for the item 'Listening attentively to patient's questions.' In this item, the public sector earned a higher mean score, but the difference was not statistically significant (Table 4-9). Among these items, 'Compassionately touching the patient by doctor' was identified in DDA to be the most important item in this subscale (Table 4-7).

Table 4-9 MANOVA and T Tests of Group Differences (Between Public and Private Sector Physicians) on Subscale Respecting

Variable	Mean Difference (Private - Public)	F-statistic	t-statistic	p-value
Greetings by doctor	0.32	29.33	5.42	0.00
Showing respect explicitly	0.16	9.05	3.01	0.00
Listening to patient's complaints completely	0.14	6.40	2.53	0.01
Listening to patient's complaints attentively	0.16	6.76	2.60	0.01
Examining the patient with care	0.47	40.63	6.37	0.00
Encouraging patient to ask questions	0.32	23.64	4.86	0.00
Listening attentively to patient's questions	-0.01	0.05	-0.22	0.82
Taking leave by doctor	0.37	33.10	5.75	0.00
Non-verbal communication by doctor	0.33	29.16	5.40	0.00
Compassionately touching the patient by doctor	0.73	96.80	9.84	0.00
Results of Multivariate Tests of Significance for Group Difference: Significant in all four statistics (Wilks' lambda, Pillai's trace, Lawley-Hotelling trace, and Roy's largest root)				

I did not observe an exchange of greetings in any sector, except for a few instances in private sector. It was mostly done with the educated, wealthy, and socially influential patients visiting private physicians' chamber. A closing salutation was more common than greeting the patients, again mostly in the private sector.

In regards to showing respect to patients explicitly, patients said, physicians in general were not disrespectful in general, but there was no practice of expressing this explicitly. Physicians in both sectors were unanimous about its importance, but one public sector physician pointed to the reciprocity of respect, which was supported by two other public sector physicians.

*"Patients would always speak ill of physicians. Breach of respect happens from both the sides. Physicians should respect, but it needs to come from patients too."*

[IDI with a public sector physician, female, year of graduation 1986]

One public sector physician even admitted, on the condition of not being recorded, that physicians, especially in the public sector often breached the respect of patients. This was more frequent in the public sector due to high patient load there and they often lost their nerves due to the crowd.

Patients said that they expected the physicians to listen to them completely, i.e., physicians should allow the patients to finish what they want to say, and only then physicians should turn to the next steps, such as doing physical examinations, writing prescriptions, etc. I observed private sector physicians in this regard to be better performers. In regards to listening to patients' complaints attentively, which is understood by shaking head by physician while talking, looking at the patient, asking questions to learn more, variation in tone, smiling face, uttering some interest expressing words, I found the physicians in both the sectors to be attentive listeners.

I did not observe physicians in any sector showing patients their care in examining, which may be expressed by asking the patient politely to fold up her sleeves, telling her what he was going to do etc.

I did not observe physicians encouraging patients to ask questions. While probing patients, they also confirmed that physicians never asked about this. Physicians also admitted that they did not particularly encourage their patients through their gestures or verbal cues to ask questions. Patients expressed that physicians should not only be listening to their complaints attentively, but also be listening to their questions. Patients complained that physicians in both sectors did not listen to their questions attentively.

The most important aspect of non-verbal communication, according to patients, was touching compassionately. They said that physicians should touch them for examining and giving reassurance and courage. Patients traditionally hold the belief that even the touch of a doctor might have therapeutic significance. An elderly FGD participant said,

*"I don't know what science says, but we have been hearing since childhood that, half of the disease is cured only by mere touch of the physician."*

[FGD participant, male]

Doctors often touched them for an examination, but in my observations I hardly found them touching for giving reassurance and courage. Some physicians, mostly in private sector, briefly touched patients' hand or held their wrist as a part of showing empathy.

#### 4.4.4.3 Informing and guiding

In the 'Informing and guiding' subscale, the difference in mean scores was not significant in two items: 'Asking patient if s/he understood the explanation', and 'Explaining the cause of disease to the patient'. In other items, the private sector scored higher (Table 4-10). Among the items under this domain, 'Facilitating follow-up' was identified in DDA to be the most important item in this subscale (Table 4-7).

Table 4-10 MANOVA and T Tests of Group Differences (Between Public and Private Sector Physicians) on Subscale Informing and guiding

Variable	Mean Difference (Private - Public)	F-statistic	t-statistic	p-value
Suggestions on disease prevention and health promotion in general	0.30	21.21	4.61	0.00
Facilitating follow-up	0.42	53.26	7.30	0.00
Quantity of issues explained and the quality of explanation	0.28	16.56	4.07	0.00
Quantity of issues explained	0.22	11.54	3.40	0.00
Asking patient if s/he understood the explanation	0.09	1.52	1.23	0.22
Explaining the cause of disease to the patient	0.13	2.80	1.67	0.10
Explaining the diagnosis of disease to the patient	0.23	9.30	3.05	0.00
Explaining the prognosis of disease to the patient	0.16	4.98	2.23	0.03
Explaining the treatment to the patient	0.22	7.14	2.67	0.01
Explaining the preventive aspects to the patient	0.25	10.48	3.24	0.00
Results of Multivariate Tests of Significance for Group Difference: Significant in all four statistics (Wilks' lambda, Pillai's trace, Lawley-Hotelling trace, and Roy's largest root)				

Physicians should provide general health promotion and disease prevention-related information to the patients, in addition to explanations and advices particularly related to their health condition. In my observations I found doctors usually told about some disease prevention and health promotion measures related to the disease of the patient, but they did not give general health promotion advice in either the public or private sector.

In terms of follow-up, there was hardly any such mechanism in the public sector, as the physicians came to the health centers by rotation, and the patients would not know when the same doctor would come again. I observed that there was no functional record-keeping in public sector, so patients had to preserve the flimsy piece of prescription paper if they wanted to follow-up. In the private sector, however, I found physicians suggesting a follow-up visit quite frequently; but this would cost half of the regular consultation fees. A senior private sector physician said that, it is important to assure the patient that the follow-up would not incur further expenses.

In regards to the explanation, patients blamed physicians in both sectors for not providing any sort of explanation. However, one female client mentioned the poorer and less educated people who usually visited public health centers received even less explanation. According to her, these people needed more explanation as they lacked the basic knowledge on health and wellbeing. She said,

*"This [not receiving proper explanation] is more common with rural poor people. In educated society, patients get to learn things from their doctor by asking. But the uneducated poor patients there [public sector health facilities] cannot talk like this with a doctor [hence do not get explanation]."*

[IDI with a teacher, female, 45 years]

Despite receiving relatively better explanation in the private sector, patients accused private sector physicians of delegating the task of explaining the treatment protocol to their assistants or the pharmacists. Patients were not happy about this arrangement and they wanted to hear from physicians themselves about the cause, seriousness, prognosis, treatment and preventive aspects of the disease. One female FGD respondent shared her story about a private sector physician,

*"They [physicians] just prescribe. If I ask what is the problem, they say, 'you won't understand'. Another problem with explanation is that, most of the times doctors give the prescription in the hands of their assistants to explain. This assistant only says, 'you have to buy these and these medicines', with a rough tone."*

[FGD participant, female]

Most physicians in both sectors acknowledged the importance of explanation, but they said that they usually failed to give an explanation due to patient load, especially when they were working in the public sector. One young public sector physician attributed this tendency to the fact that patients pay them in private sector. Another young public sector physician, confessing their lacking in explaining properly, related it with the deficiency in the medical curriculum, and



demanded more training on these issues both in the medical colleges and in in-service training. In observation, I found the consultation rooms, especially in public health centers, were too crowded to allow time for explanation.

Patients also demanded that the doctors should make sure patients had understood the explanation, as many patients were illiterate or were simply unfamiliar with the basic anatomy and physiology of the body. So, the doctor should ask the patient if s/he has understood. My observation findings were congruent with patients' complaints that physicians never confirmed this. In my interview with the physicians too, they frankly admitted this allegation. I never saw any physician, either in public or private sector, asking the patients if they understood the explanation.

#### 4.4.4.4 *Gaining Trust*

In the 'Gaining trust' subscale, the public sector performed significantly better in all items, except in the item 'Not using jargon'. In this item, the difference was not statistically significant (Table 4-11). Among the items under this domain, 'Service oriented, not businesslike attitude' was identified in DDA to be the most important item in this subscale (Table 4-7).

Table 4-11 MANOVA and T Tests of Group Differences (Between Public and Private Sector Physicians) on Subscale Gaining Trust

Variable	Mean Difference (Private - Public)	F-statistic	t-statistic	p-value
Earning trust of patients	-0.11	5.54	-2.35	0.02
Service oriented, not businesslike attitude	-0.21	14.30	-3.78	0.00
Not using jargon	-0.05	0.57	-0.75	0.45
Not being involved in illegal activities	-0.13	5.86	-2.42	0.02
Results of Multivariate Tests of Significance for Group Difference: Significant in all four statistics (Wilks' lambda, Pillai's trace, Lawley-Hotelling trace, and Roy's largest root)				

Patients demanded that the physicians not do anything that may breach trust, or which may render them as business oriented, not care oriented. Example of such behaviors, according to them, may be: asking the patient to do tests from specific diagnostic centers, encouraging purchasing medicines of a specific pharmaceutical company, asking the patient (in the public sector) to come to visit him in a private clinic, and moonlighting. Patients alleged frequent breach of trust, especially by private sector physicians. Patients most despised being advised to conduct diagnostic tests from specific centers. This, according to patients, was practiced by many private sector physicians. Such behavior of physicians, according to patients, ranged from giving tacit insinuation to forcing them by intimidation of refusal to treat in future emergency. In my observation, however, I did not see such practices; but I found pieces of papers from some local

diagnostic centers on the table of some private sector physicians. These were reportedly used to direct the patients to particular diagnostic centers. Doctors allegedly received commission on the profit thus earned by the diagnostic centers.

Another aspect of the 'Gaining trust' domain is that physicians would not use technical language or jargon while talking to the patients. In their interviews, physicians from both public and private sector gave various examples of how they used household languages to explain the disease or condition to the patient. One female physician, who was almost at the end of her public service career said,

*"I absolutely talk in local tongue as I hail from here, I am not from outside. I know their local language and I use that, as they will not understand otherwise. For example, if I say 'you have urine infection', they will not understand'. Rather I say there is 'puj' (local term for pus) passing through your urine".*

[IDI with a public sector physician, female, year of graduation 1986]

My observation conformed to her remarks in that I did not see any physician in any setting using any jargon or technical language. They explained little, but whatever they did, they did in local language. They used innovative terms to make patients understand the disease or condition, e.g., 'puj' to mean pus cell, 'hojom hoa' to mean absorb, 'gas dea' to mean nebulization, 'jor chumka' to mean febrile convulsion, etc.

Another aspect of this domain is, 'not being involved in illegal activities', examples of which may be: taking money from patients against free services (public sector), bringing patients in own private clinics with the help of dalals<sup>1</sup>, collusion with diagnostic centers, accepting gift from medical representative and prescribing substandard medicine, and taking advantage from dalals in various ways. I observed representatives of local diagnostic centers frequently visited the chambers of both public and private sector physicians. Many patients vehemently objected to the intimacy between the physicians and pharmaceutical representatives. Although I did not observe any illegal exchanges between them, I found physicians in both public and private sectors using pharmaceutical representatives' bikes for rides, asking for free samples of medicines for personal use, and having prolonged friendly conversations in their consultation rooms with the pharmaceutical representatives. These were often frowned upon by the patients. Although patients complained of many such illegal activities, I did not observe physicians visibly involved in illegal or unethical activities. However, some attitudes might seem as tacit approval of some questionable activities. For example, in private sector, I saw a dalal

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<sup>1</sup> Brokers of diagnostic centers and clinics, who roam around there to entice the innocent rural patients to their clinics and diagnostic centers

receiving money in exchange of enticing away a patient from another clinic. Physicians' involvement in this incident was out of the scope of my observation, nevertheless these types of issues contributed to the suspicion and mistrust of patients against physicians, especially in the private sector.

#### 4.4.4.5 Financial Sensitivity

In the 'Financial sensitivity' subscale, the public sector performed significantly better, except in the following two items, where the difference was not statistically significant: 'Trying to understand socio-economic status of the patient', and 'Informing the cost of treatment' (Table 4-12). Among the items under this domain, 'Providing financial assistance if needed' was identified in DDA to be the most important item in this subscale (Table 4-7).

Table 4-12 MANOVA and T Tests of Group Differences (Between Public and Private Sector Physicians) on Subscale Financial Sensitivity

Variable	Mean Difference (Private - Public)	F-statistic	t-statistic	p-value
Considering socio-economic status of the patient	-0.22	7.37	-2.72	0.01
Trying to understand socio-economic status of the patient	-0.13	2.09	-1.45	0.15
Informing the cost of treatment/ financial counseling	0.02	0.06	0.25	0.80
Providing financial assistance if needed	-0.21	11.00	-3.32	0.00
Results of Multivariate Tests of Significance for Group Difference: Significant in all four statistics (Wilks' lambda, Pillai's trace, Lawley-Hotelling trace, and Roy's largest root)				

Patients shared various stories, mostly from the private sector, about being financially harassed by the physicians. A patient complained,

*"Our doctors often prescribe an injection costing TK2100 (approximately \$27) to a day laborer who hardly earns TK150 (approximately \$2) per day. Is it possible for him to buy this injection? Our doctors never see these."*  
 [IDI with a teacher, female, 45 years]

It was very commonly observed in the public sector that physicians were asking the patients directly about their ability to buy some medicines. In the private sector, I did not observe physicians inquiring about patients' financial abilities. Rather, a private sector physician expressed his skepticism over patients' inability to pay:

*"Not everyone pays; they don't pay even if they can pay. In this country, patients spend much more money talking over mobile phones than the amount of money they pay to rural based doctors."*  
 [IDI with a private sector physician, male, year of graduation 1989]

In regards to informing patients about the costs of treatment, physicians in both public and private sectors performed rather poorly, as understood from both my observation and my interview with the patients. Patients alleged that sometimes

doctors even misbehaved if patients asked about the price of a medicine. I observed some patients in both the sectors being very confused with receiving the treatment, as they did not have any idea about the price of the medicine. Doctors suggested they learn it from the pharmacy, but they needed to make the decision right away. They waited the whole day to visit the doctor; now they were at a loss as to whether to leave the queue and return after learning the cost from nearby pharmacy. This would make them wait for the physician for another long spell. Physicians in general did not consider financial counseling to be their responsibility. They also confessed losing temperament while being asked about the price of medicine by a patient.

As a way of providing financial assistance in need, I found public sector physicians providing free medicines from the government health centers upon availability. A public sector doctor said, they often could not provide financial support due to absence of such mechanism, but they allowed patients some time to arrange some money and come again. They also avoided expensive diagnostic tests; I hardly saw any physician prescribing a test in public sector. A young doctor said,

*"Yes, of course we consider patients' financial capabilities. Most of the people coming to government hospitals are poor. We know that and we feel for them too. So, a prescription with unnecessary tests for them will never come out of my hand".*

[IDI with a public sector physician, male, year of graduation 2004]

On the other hand, in the private sector, a patient described how he saw an elderly person being refused by a physician to receive concession on treatment:

*"Last week I saw an elderly man requesting a [private sector] doctor to take TK100 (approximately \$1.3) as fee, instead of TK150 (approximately \$2). Doctor replied, 'when you go to police station you don't mind paying [bribe], it is only with the doctors when you become a miser".*

[IDI with a teacher, male, 46 years]

#### **4.5 Discussion and Conclusion**

In this study, first, I described the characteristics of my samples. Secondly, I applied the ROP-Scale to the sample of both public and private sector physicians and compared their overall responsiveness score. At the same time, I utilized qualitative findings to understand the perception of stakeholders regarding the overall level of responsiveness across public and private sectors. Thirdly, I decomposed the findings across five responsiveness domains, namely Friendliness,

Respecting, Informing and guiding, Gaining trust, and Financial sensitivity. I again utilized the qualitative findings to explain and better understand the quantitative findings in each of the responsiveness domains. The utilization of a mixed methods design enriched this study by allowing the interpretation of quantitative findings through in-depth qualitative interviews and observations of multi-stakeholders (Ozawa & Pongpirul, 2014).

The study sample was fairly similar to general Bangladeshi characteristics in terms of most of the descriptive variables. Although not much different, mean consultation time (4.04 minutes in public and 6.02 minutes in private) in sampled physicians was little higher than that in previous studies, which recorded two to three minutes of consultation time (Andaleeb et al., 2007a; Mendoza Aldana et al., 2001). The gender distribution in public sector was also similar with 66.15% males, compared to distribution in government sector of Bangladesh with 70.49% male physicians (GoB, 2014) (data on gender distribution of physicians in private sector is unavailable). Gender distribution of patients visiting the outpatient department was also very close (63% according to the Health Bulletin 2014, compared to 66% in this study sample). Their level of education was also low, similar to the previous studies (Mendoza Aldana et al., 2001).

Unlike findings from most other comparative studies in Bangladesh, the private sector was also found to have limitations in some aspects of responsiveness. A domain-specific comparison of public and private sector revealed that, despite overall low score, the public sector fared well in domains of ‘Gaining trust’ and ‘Financial sensitivity’. This underpins the arguments of Bloom et al. (2008) that absence of strong regulatory mechanism (Bennett et al., 1997) and mediatory mechanism in developing countries may create the grounds for decreased trust in private sector. Quantitative finding in this regard was also supported by qualitative findings. Patients blamed the private sector physicians for breaching trust by various means such as collusion of physicians with diagnostic centers, and pharmaceutical representatives. These allegations were elaborately discussed and ratified in the *Bangladesh Health Watch Report 2009: How Healthy is Health Sector Governance*. A study commissioned by the secretariat of Bangladesh Health Watch revealed that the codes of pharmaceutical marketing clearly mentions that, “no gifts or financial inducement shall be offered or given to members of the medical profession for the purposes of sales and promotion” (p. 36). Their study found the exchange of as expensive gifts as TV, fridges, laptop computers, air conditioners, interior decoration of chambers, remuneration of staffs of the physician, cars, foreign trips, and even apartments for the sake of pharmaceutical promotion (BHW, 2009).

The quantitative findings from the domain ‘Financial sensitivity’ also corroborated the qualitative findings. In keeping with the scale scores, the qualitative observation also painted the public sector physicians in a more positive light as they were observed to ask patients about their financial ability to purchase medication; and also provided them with free medicines from government stock. On the contrary, a private sector physician was found not only to be skeptical about patients’ ability to pay, but also to be somewhat contemptuous. However, one should be careful in generalizing the findings from this domain to western, industrialized, or developed countries, as the importance of providing financial assistance may not be pronounced in settings with a prepayment-based progressive health financing mechanism. In Bangladesh, where out-of-pocket payment for health expenditure exceeds 60% (BHW, 2012), it is not surprising that the scale item ‘Providing financial assistance if needed’ would be a determining factor of responsiveness. Another item in the same domain ‘Informing the cost of treatment’ came out to be not statistically significantly different across the sectors. Qualitative interviews supported this finding too, as physicians in general denied financial counseling to patients to be their responsibility.

While few studies measured HRH responsiveness (Coulter & Jenkinson, 2005; Lutwama et al., 2012; Pongsupap & Van Lerberghe, 2006; Rodriguez et al., 2012), none compared the responsiveness of public and private sector physicians. In this study I found, although the private sector outperformed public sector in most responsiveness domains, public sector is also not so far behind. Qualitative findings also indicate that, none of these sectors are performing optimally in terms of HRH responsiveness. This sub-optimal performance may be attributed to the limitations of health systems support to the HRH (Ali et al., 2013; Cockcroft et al., 2011; Rowe et al., 2005; Yazbeck & Peters, 2003) and also to the unregulated nature of the health markets in Bangladesh (Bennett et al., 1997; Bloom et al., 2008; Rowe et al., 2005). Since the contribution of the private sector can neither be ignored nor be replaced, it is therefore incumbent on the stakeholders, specially the government of Bangladesh to present itself with better stewardship roles (Berendes et al., 2011; Lagomarsino, Nachuk, et al., 2009; Lagomarsino, de Ferranti, et al., 2009; Rowe et al., 2005).

#### **4.5.1 Limitations of the Study**

One of the limitations of this study could be the application of a structured observation method, as this method has been criticized for invoking Hawthorne effect, i.e., service providers might change their behavior when they were aware of being observed (Leonard & Masatu, 2006; Rowe et al., 2002; Rowe et al., 2006). In similar studies, different approaches

such as review of patients' record, direct observation of providers, interviews of providers, exit interviews with patients and simulated patients methods had been attempted and compared before (Franco et al., 1997; Leonard & Masatu, 2005; Peabody et al., 2000). Despite availability of such other methods, I deliberately chose structured observation method as Franco, Daly, Chilongozi, and Dallabetta (1997) showed this method to be the optimum performer. However, I took measures to overcome or at least minimize the potential Hawthorne effect by allowing 10 observations as 'washouts', and observing only the eleventh one (Leonard & Masatu, 2006; Rannan-Eliya et al., 2014).

The second limitation is that the MLR model demonstrated coefficient of determination as low as 0.07, meaning only seven percent of the variability could be explained by this model. This is to note that, the purpose of this study was not to identify the determinants of responsiveness or the lack thereof. The MLR model was fitted only to control potential confounders while comparing the public and private sectors. So, this pitfall may not be too harmful in the context of this research.

Thirdly, this study was conducted in rural Bangladesh, which may not be an ideal setting for comprehending the formal private sector. Therefore, one needs to be cautious before generalizing different aspects of HRH responsiveness, as identified in this study, to an urban setting. Even in the rural setting, the responsiveness of for-profit private sector may be different than the not-for-profit (or NGO) private sector. This study took an aggregated view of the different types of private sector providers.

Finally, background characteristics of the quantitative sample (Table 4-2) revealed that, characteristics of both the physicians and patients differed in public and private sector consultations. Private sector physicians attended lower number of patients than private sector physicians, had higher work experience, and were more likely to be from the same upazila. Patients were also different, as those coming to visit private sector physician had higher level of education. Although I found significant difference in responsiveness score between public and private sector physicians, this research could not verify adequately if these differences are attributable to the different nature of the sample in public versus private sector. However a multivariable model showed no difference in responsiveness score even after adjusting for potential confounders, this model explained only seven percent variability in the data—indicating existence of many other unexplored potential confounders.

#### **4.5.2 Future Research**

This study was limited to the physicians working in the outpatients of rural areas of Bangladesh. Understanding and measuring the responsiveness of HRH in various other relevant settings; such as in the urban areas; among other professional groups like the nurses, CHWs, informal providers, semi qualified providers, etc.; and in other professional settings like the inpatient, emergency, maternity care, etc., can also be useful.

This study did not take into account many potential determinants of responsiveness, which may aid the physicians to be responsive or deter them from being responsive in practice. Understanding of these determinants is crucial to improve the responsiveness and resolve the issues around this topic.

We found many physicians holding a dual job. There were allegations from patients that physicians often treated them differently in these settings. The effect of dual practice can be seen by observing the same physician in both public and private settings.

#### **4.5.3 Policy Implications**

Performance based financing schemes are gaining popularity in many countries. If Bangladesh follows suite, a measurement scale for performance will be needed. Responsiveness is regarded as one of the components of HRH performance (WHO, 2006). This study can be an example of how to use a scale, e.g., ROP-Scale to measure and compare responsiveness across settings and domains. This approach can be integrated into a performance based financing scheme, using such reporting variable.

This study can provide a direction about how the physicians are performing across different domains. This understanding can help the policy makers to allocate their emphasis based on the domains or settings. Physicians can reshape their consultation process accordingly in order to be more responsive physicians. Managers can guide their employees based on this and achieve satisfaction of patients visiting their health center. Educators may use this to develop physicians to be more responsive from the beginning.



## **5 Chapter 5: Conclusion**

The overall goal of this dissertation is to examine HRH<sup>1</sup> responsiveness in rural<sup>2</sup> Bangladesh, to develop a scale to measure the responsiveness, and finally to demonstrate the application of the measurement method. In the process of addressing this goal, I reviewed the earlier work on health systems as well as HRH responsiveness, defined the HRH responsiveness, discussed caveats in different aspects of understanding and measuring responsiveness, proposed a conceptual framework to examine HRH responsiveness, identified five domains of HRH responsiveness, presented the findings across the domains of responsiveness, and compared the responsiveness of public and private sector physicians' responsiveness. The first manuscript (Chapter 2) qualitatively explored the perceptions of clients and physicians in regards to the constituent elements of responsiveness of physicians. This paper also explored the general consultation process, complaints against the physicians regarding responsiveness, perceptions of physicians on what should not be expected from them given their context, and the constraints the physicians face in providing care with responsiveness. The second manuscript (Chapter 3) applied the psychometric methods to develop a scale for measuring responsiveness of physicians. This paper also evaluated the reliability and validity of the scale. Finally, the third manuscript (Chapter 4) adopted a mixed-methods approach to compare the responsiveness of physicians working in public sector with the ones working in private sector.

This chapter summarizes the results of each manuscript, elucidates the strengths and limitations of the study, provides directions on future research in this area, and discusses the policy implications of this study.

## **5.1 Summary of Findings**

The formative qualitative research in manuscript-1 (Chapter 2) led to the understanding that physicians and patients often differ on their perspectives on what social actions physicians should perform to meet the legitimate expectations of the clients. It was also found that the perceptions of responsiveness in a low-income rural setting in Bangladesh may vary from those in an industrialized western setting. This part of the research also explored the perceptions of stakeholders—i.e., the clients, formal sector physicians, and informal providers—regarding responsiveness across the five domains of

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<sup>1</sup>Formal (MBBS doctors) and informal (village doctors) providers from both public and private sector are in qualitative part, but only formal (MBBS doctors) providers are included in the quantitative part. Henceforth, 'physician', 'doctor' and 'provider' will be used as applicable instead of 'HRH' in this dissertation.

<sup>2</sup>In the context of this study, upazila or sub-district level has been considered as 'rural'.

Friendliness, Respecting, Informing and guiding, Gaining trust (later replaced by 'Gaining trust', based on factor analysis findings), and Optimizing benefit (later replaced by 'Financial sensitivity' based on factor analysis findings). Not only that, there are many findings that are unique to this study and can be regarded as new inclusions to the existing items on responsiveness, especially human resources for health (HRH) responsiveness. For example, communicating limitations, writing legible and understandable prescriptions, taking help from colleagues in confusion, refraining from illegal activities, considering individual needs of patients, facilitating utilization of local resources, and social and financial counseling are either absent or very rarely mentioned in earlier literature. The whole domain of 'Optimizing benefit', i.e., expectation that doctors would satisfy some specific expectations even beyond their consultation period, is an entirely new inclusion.

The psychometric analyses in manuscript-2 (Chapter 3) helped to further refine the domains of responsiveness in the interest of quantitative measurement of responsiveness. The scale—named as responsiveness of physicians scale or in short ROP-Scale—developed through this part of the study and has 34 items grouped under five domains such as Friendliness, Respecting, Informing and guiding, Gaining trust, and Financial sensitivity. The ROP-Scale was found in tests of reliability and validity to have high internal consistency, reliability, and validity. One important feature of the study was the use of the same three raters to evaluate inter-rater reliability by calculating Intra-class correlation coefficient (ICC). This measure will allow this study's reliability coefficients to be used in subsequent studies using ROP-Scale in similar settings—ICC (2,1) can be reported if a single rater is employed and (2, k) can be reported if multiple raters are employed (Shrout & Fleiss, 1979). This part of the study also identified some items to denote responsiveness, many of which are entirely new or rarely discussed in previous studies on responsiveness. Examples of this include: asking about patients family, examining the patient with care, refraining from businesslike attitude, considering socio economic status of the patient, trying to understand socio economic status of the patient, providing financial assistance if needed, explaining the cause of disease to patient, explaining the preventive aspects to patient, listening attentively to patient's questions, and not being involved in illegal activities.

The mixed methods approach in manuscript-3 (Chapter 4) demonstrated the application of ROP-Scale with an associated explanation of the quantitative findings through qualitative data. Mean responsiveness score of public sector physicians was 1.98 and that of private sector physicians was 2.16; and the difference was statistically significant in *t*-test with *t*

statistic of -6.04 ( $p$ -value <0.01). The difference remained statistically significant in the multiple linear regression (MLR) models after adjusting for the confounding covariates such as age, gender, and local origin (i.e., from the same upazila) of the physician and age, gender, and level of education of the patient. However, qualitative data added value to this finding by suggesting that, despite slightly better responsiveness of private sector physicians, none of the sectors were sufficiently responsive. This study did not limit itself in comparing the overall responsiveness of public and private sectors, but rather went on to comparing them across domains of responsiveness, and exploring qualitatively the potential reasons behind the findings. In the multivariate analysis of variance (MANOVA) test, based on all four test statistics (i.e., Wilks' lambda, Pillai's trace, Lawley-Hotelling trace, and Roy's largest root) being significant, it was deduced that public and private sector physicians were different not only in terms of overall ROP-Scale, but also in terms of all the subscales. Based on significant mean differences in  $t$ -test (with 0.05 level of significance) across five subscales of responsiveness, private sector scored higher in Friendliness, Respecting and Informing and guiding; while public sector scored higher in Gaining trust and Financial sensitivity. Through descriptive discriminant analysis (DDA), the most important subscale in ROP-Scale was found out to be 'Respecting,' and most important item in each subscale was identified in the subscales Friendliness, Respecting, Informing and guiding, Gaining trust and Financial sensitivity; these items were, respectively: Giving courage and reassurance, compassionately touching the patient by doctor, facilitating follow-up, not acting businesslike, and providing financial assistance if needed. The mixed methods approach was highly beneficial to get the most out of this study. Qualitative part lent itself into understanding, in which way (i.e., positive or negative) public and private sector physicians were not statistically significantly different. It also helped in verifying the quantitative findings based on qualitative in-depth interviews (IDI), focus group discussions (FGD), and participant observations.

## **5.2 Strengths of the Study**

In the qualitative part of the research, it is of paramount importance to ensure the trustworthiness of the researcher, as well as the data s/he analyses and interprets (Gilson et al., 2011; Lincoln & Guba, 1985). Four dimensions of trustworthiness, such as credibility, transferability, dependability, and confirmability was suggested in the famous book 'Naturalistic Inquiry' by (Lincoln & Guba, 1985). However in this section, the ten approaches to ensure research rigor, suggested by Gilson et al. (2011), have been applied to evaluate the strength of the qualitative part of this study. Gilson et al.'s (2011) framework is used because it is more relevant to the context of Health policy and systems research (HPSR), and also

because their evaluation criteria satisfy Lincoln and Guba's (1985) propositions as well. Every aspect of Gilson et al.'s (2011) evaluation criteria was satisfied in the qualitative part of the research. These criteria are: prolonged engagement, use of theory, case selection, sampling, multiple methods, triangulation, negative case analysis, peer debriefing and support, respondent validation, and audit trail.

I stayed for a prolonged period of almost two months in the field—from July 19 to September 14, 2015—for qualitative fieldwork. During my stay, I gained more in-depth understanding of the overall local culture of the people of Chuadanga district. I also understood the therapeutic culture of both the formal and informal care providers. For example, in the formal sector I learned how they used the innovative terms to make clients understand various health issues (e.g., 'gas dea' or to give gas in literal translation to mean 'nebulization', 'jor chumka' to mean 'febrile convulsion, etc.), which I myself did not know before, even being a native speaker of Bengali language. In the informal sector I realized how 'home visits' were socially expected, but the role was gradually being taken up by the informal providers from the formal sector physicians. My prolonged stay also helped me to test misinformation, either generated from my own preconceptions or from the respondents' side. For example, my preconception was that physicians would not listen to the clients attentively, but I found them to be attentive listeners. Few patients (particularly in one FGD session with males) wanted to please me by speaking ill of informal providers; wrongly perceiving me as a representative of formal sector physicians. Due to my prolonged stay in the field, I was already aware that the relationship between formal and informal providers was not smooth in many areas, and patients were also aware of this. So, I strived on convincing them about my role as a neutral researcher, not a representative of formal sector physicians. Only then genuine perceptions started to come up. Prolonged engagement also helped in building trust, especially among the service providers. Many physicians provided some information, which they rectified later in informal conversations during my participant observations.

My research was driven by a conceptual framework adopted through the review of literature in the fields of health systems responsiveness, HRH responsiveness, quality of care, patient satisfaction, and doctor patient relationship. A priori codes were generated from the eight domains of health systems responsiveness suggested in the *World Health Report 2000* (World Health Organization [WHO], 2000) and the Multi-country Survey Study (Letkovicova et al., 2005). Relevant domains and items were added to this framework based on further literature review. Finally, a framework with five

domains of HRH responsiveness (Table 1-1) was developed based on the suggestions from experts based in Baltimore and Dhaka and then used for data analysis and interpretation.

Purposive selection of cases might cause biases if not justified by good reasons. I selected the respondents without my prior acquaintance with them. They were not known to be different than other respondents in that area. The observation sites were also very typical of rural Bangladeshi settings, not known for any particular difference with other upazilas. For sampling, maximum variation was attempted in IDIs, in terms of gender, age, tenure of service (for service providers) and occupation (for clients). However, homogeneous purposive sampling was done in case of FGDs, with a purpose to keep the groups more focused and to facilitate effective intra-group interactions. Homogeneity was attempted in terms of gender (and occupation in case of females).

I employed multiple methods, such as IDIs, FGDs, and participant observations to explore the local perceptions around HRH responsiveness. I looked for patterns in the responses if they matched with or varied from each other, then verified during participant observations. I attained source triangulation through collecting data on same issue from different types of respondents (patients, physicians, and informal providers). Through these exercises, interpretations could be verified and refined. For example, patients blamed private sector physicians for not referring patients to higher health facilities if they failed to treat them. In my observation, I found private sector physicians were rather quick and sincere in referring, so that they themselves or the clinic they worked in were not made accountable for an adverse outcome of the patient. Public sector physicians were in fact found to be reluctant to refer their patients, suspecting their inability to bear the cost of transport and getting treatment in higher health facilities.

Negative case analysis is the process of scrutinizing the findings that may contradict the assumptions or theory, and refining the theory based on further inquiry into the matter. This process was applied several times and in various ways in this research. One such example is the issue of 'maintaining confidentiality of data'. It was assumed that patients might be concerned about the privacy of their health related data. While probing the patients, they expressed that they were not worried about this issue. When asked about this, physicians said they found patients to be rather satisfied if their health data was shared. They gave examples from the acute flaccid paralysis surveillance, where physicians had to share patients' data with higher authorities in government sector as well as several other related agencies. Although it had nothing to do

with patients' treatment, patients were pleased that their data were being shared, as patients believed, this would eventually improve the quality of care. I later verified this information through interviews with patients. It made me understand that; some concepts that are highly valued in western context may not be similarly applied in rural Bangladeshi context. Few other similar issues were- taking consent (patients said they did not think consent was necessary except for very few situations, which are described in relevant sections), and involving patients in therapeutic decision making (patients though physicians were the best to decide about the therapy).

Peer debriefing and support was attained regularly, both from the local scientific committee based in Dhaka and the thesis committee based in Baltimore. Being a doctoral dissertation, this research was benefitted from the inputs from expert reviews starting from the phase of proposal development and literature review to tool development, framework refinement, codebook preparation, data collection, data analysis and interpretation, and even during report writing.

Respondent validation was done in two different ways during the data collection. An abstract, based on this research, was selected for oral presentation in National Public Health Conference, 2014 in Bangladesh. Many physicians with experience of working in rural Bangladesh attended the session. A presentation was prepared and presented before them, based on partial analysis of the qualitative data. They largely agreed to the interpreted data and gave inputs to further refine the interpretations. Secondly, the qualitative part of the research was followed by quantitative data collection, which allowed me to revisit some of the sites of qualitative data collection. During this visit, five respondents were contacted to check, if their views were properly and adequately reflected in the data interpretation. There was no detailed report to show, but they were shown a presentation based on the partial analysis of the data. Their suggestions and inputs were taken into account during further data analysis, interpretation, and report writing.

Finally, I kept a recorded audit trail of all the steps. All the raw data (both records and transcripts and photographic evidence), data reduction and analytic products, data reconstruction and synthetic products, memos, and research instruments are stored in a cloud-based application.

For the quantitative component, since many research assistants (RA) were involved in data collection, I conducted a series of field-tests (please refer to Section 3.3.1 and Appendix 15 for details) and strictly maintained data quality protocols. I employed qualified applicants through a competitive process and trained them for a period of 10 days; four to six hours a

day (please refer to Appendix 14). I allowed them to collect data from the field only when they demonstrated at least 90% agreement with my observations during the training. I paid random and surprise visit to different field locations, and also randomly called the observed physicians. Advanced mobile-based techniques such as capturing geo and time-tagged photos, and recording geographic information system (GIS) locations were also applied. The RAs had to attend daily (one to one with me) and weekly (in group) debriefing sessions in order to qualify for the next day's data collection. The data gathered thus, was found to be of adequate quality for advanced psychometric analyses (please refer to Section 3.4.1.1 for details). Appropriate statistical methods were used to deal with ordinal variables used in data generation. Another important feature of this study was the use of the same three raters to evaluate inter-rater reliability for calculating intra-class correlation coefficient (ICC). It is considered useful not only for the current study, but also for any subsequent study using this scale in similar settings, as the researcher of future study can report ICC (2, 1) if a single rater is employed and ICC (2, k) if multiple raters are employed (Shrout & Fleiss, 1979).

The mixed method design of this whole project contributed more than either qualitative or quantitative component would be able to contribute alone. The 'multiphase combination timing' (Creswell & Clark, 2011) of the mixed method design was particularly useful at different stages of research design, data collection and data interpretation. For example, at the initial stage a 'sequential' approach was adopted, where the qualitative data collection and analysis contributed in designing the quantitative research tool. At the advanced stage of the research, a 'concurrent' approach was adopted in order to interpret the findings of quantitative findings simultaneously by qualitative findings.

### **5.3 Limitations of the Study**

Despite careful designing, some limitations could not be avoided. For example, in order to interview physicians, I intended to interview ones involved exclusively in the public or private sector. Since dual job holding is allowed and common in Bangladesh, finding such physicians became difficult. I found only eight such physicians in rural Chuadanga and interviewed five of them. However in the public sector, no such physician was found. So, I interviewed dual job holding physicians, requesting them to reflect on their perceptions and experiences drawn from the public sector only.

Another change in plan in the sampling occurred in recruiting clients. I initially planned to recruit them from outside consultation rooms, when they were leaving. After repeated attempts I succeeded in recruiting only two patients, but



during interviewing I realized that they were hurrying to return to their homes. Besides, these interviews were interrupted by the curious onlookers, as there was no suitable place to hold the interviews. So, the plan was changed and with the assistance from local residents (personal contacts) of rural parts of Chuadanga, a list of potential respondents was developed based on inclusion and exclusion criteria (mentioned in the respective chapters). This method worked well for IDIs, but did not work so well in one of the FGDs.

The respondents in that FGD had come with a wrong expectation that they would receive clinical consultations (having my identity been revealed as a physician); some of them even came with X-ray films, reports of diagnostic tests, and old prescriptions. Also, they considered me a representative of formal sector physicians, and 'social desirability' bias came into play. They started to falsely paint informal providers in a bad light, in an attempt to gain my support and sympathy. I had to explain my position again, spent a long time to clarify the research purpose, and had to start the FGD over. Their level of trust in me and the honesty of their expressed opinions continue to be debatable.

Another problem was finding female respondents for FGD. I found it difficult to convince them to meet at a specific time in a specific place. Firstly, the concept of appointments was uncommon in rural community, and secondly, the purpose and concept of such a research where the voice of women might be important was difficult for them to conceive.

Therefore, I contacted the heads of two female educational institutions in order to find FGD respondents meeting the inclusion criteria. This could give rise to yet other problems. Since these respondents were all teachers, they had better educational and social backgrounds than the common rural women. Male respondents, especially those in FGD, were drawn from all walks of rural Chuadanga district; but the sample of female respondents were skewed towards more educated and higher socio-economic groups.

My being a local to the qualitative research setting and being a physician had a mixed effect on the data. Although these factors allowed me to gain entry easily and conduct the study with the advantage of knowing local culture, language, and norms, these factors might have obscured my required inquisitiveness by causing certain important observables as taken for granted. My being a physician might have deterred the village doctors from being frank due to the professional and social hierarchical differences prevailing in Bangladeshi society (Zaman, 2009). Finally, my being a native might not

preclude the local respondents from adequately opening up due to the inherent class structure, gender norms, and age differentials.

Limitations related to the psychometric techniques pertaining to manuscript-2 (Chapter 3) could be the decision rules adopted at different decision points. Using a different decision rule, or a different method might bring forth a different model. For example, I chose polychoric correlation based correlation matrix instead of more commonly used Pearson's correlation matrix (which is more applicable to continuous data), I used Minimum Rank Factor Analysis (MRFA) instead of more commonly used Maximum Likelihood and Unweighted Least Square methods for factor extraction, I decided the number of factors based on parallel analysis instead of Kaiser's criteria and Scree Plot methods, etc. However, I tried to use appropriate and most up-to-date methods, with sufficient literature support.

Another limitation was that criterion (concurrent) validity could not be ascertained properly due to the lack of a gold standard to compare the findings with. Construct validity could also not been measured. However, in order to overcome this limitation, alternative methods of scale validation were applied. For example, face and content validity were ensured by consulting with experts before finalizing the initial item pools (which was again derived from a well designed qualitative research).

Another limitation regarding the data collection for the quantitative part could be the use of structured observation method, which has been criticized for invoking the Hawthorne effect (Leonard & Masatu, 2006; Rowe et al., 2002; Rowe et al., 2006). To overcome this, however, I allowed 10 observations as 'washouts', and observed only the 11<sup>th</sup> consultation (Leonard & Masatu, 2006; Rannan-Eliya et al., 2014).

A limitation, as revealed in the quantitative analysis of manuscript-3, was that the sample characteristics varied in the public sector from private sector. Private sector physicians attended lower number of patients than private sector physicians, had higher work experience, and were more likely to be from the same upazila. Patients were also different, as those coming to visit private sector physician had higher level of education. Although I found significant difference in responsiveness score between public and private sector physicians, this research could not verify adequately if these differences are attributable to the different nature of the sample in public versus private sector. However a multivariable

model showed no difference in responsiveness score even after adjusting for potential confounders, this model explained only seven percent variability in the data—indicating existence of many other unexplored potential confounders.

One limitation regarding the overall study was that, it was conducted in rural Bangladesh. The urban settings are very different with different power structure between service seekers and providers; different level of educational, financial, and social status of the clients; and very different health systems support structures for the service providers. Also, the private sector of Bangladesh in urban settings have prominent presence of formal sector, whereas the rural settings have a more prominent informal sector; which remained unexplored in the quantitative part of this study. Therefore, one needs to be cautious before generalizing different aspects of HRH responsiveness, as identified in this study, to an urban setting, or to a different group of HRH (e.g., informal providers, nurses, community health workers [CHW], sub-assistant community medical officers [SACMO], etc.).

Even within the rural setting, the responsiveness of for-profit private sector may be different than the not-for-profit (or non-government organizations [NGO]) private sector. This study did not look at them as separate entities, rather took an aggregated view of the different types of private sector providers. This study also did not examine how the same provider performed, or how their perceptions regarding responsiveness varied when they served in a public sector versus when they did in private sector. This is an important and interesting issue to revisit in the context of permitted dual job holdings in Bangladeshi health systems regulation.

#### **5.4 Future Research**

We do not know what factors will improve responsiveness of physicians and which factors may hold them back.

Understanding the determinants of responsiveness is important. For example, we do not know if educational interventions may render physicians more responsive. If affirmative, education at what level: general education at the schools, professional education at medical institutions, or continuing education or in-service training? Can regulations with guidelines improve responsiveness? It is also possible that physicians are not responsive simply because they are not held accountable for their responsiveness. Can empowerment of clients at societal level or demand-side interventions improve responsiveness of physicians? Or is it the lack of health systems support? A thorough research on determinants of responsiveness may answer these questions.

It is not known whether improved responsiveness would add value to some outcomes. Research can evaluate whether improved responsiveness can improve uptake of health services, decrease discrimination (e.g., against elderly, females, lesbian-gay-bisexual-transgender [LGBT], poor) and inequity, and improve the health of the population.

This study identified five domains of responsiveness in rural areas, where most of the service seekers belonged to a lower socio-economic and educational group. Perceptions around responsiveness may be different in an urban setting. Validation studies are natural sequel of any scale developed through psychometric methods. Since this study was limited to the physicians working in the outpatients of rural areas, further validation studies can be done in other relevant settings; such as in the urban areas; among other professional groups like the nurses, CHWs, informal providers, SACMOs, etc.; in other professional settings like the inpatient, emergency, obstetric care, maternity clinics, etc.

I compared the responsiveness of physicians between public and private sector, decomposing the scores across five constituent domains. Such comparative analyses can be performed between various other groups. Since gender plays an important role in service provision and service uptake (Sen et al., 2002), comparison of responsiveness between male and female providers, or comparison of responsiveness towards male and female clients can be useful. Decomposing the responsiveness scores across different domains can elucidate if scores of males and females vary across certain domains.

This study found that people consider informal providers as their first resort for therapy; which is supported by several studies in Bangladesh and neighboring countries (Ahmed et al., 2013; George & Iyer, 2013; Mahmood et al., 2010; Wahed et al., 2012). They are also the providers of the lion's share of total health care provided to the Bangladeshi population (Ahmed et al., 2013, 2011; Bangladesh Health Watch [BHW], 2007). It is claimed that some characteristics of the informal providers may render them more trustworthy in the eyes of rural-based service seekers (George & Iyer, 2013). These features pertaining to the informal providers may contribute to our understanding of responsiveness and learning from them through further studies can be useful.

Finally, we found many physicians holding a dual job, which is allowed in Bangladesh. It is estimated that almost 80% of the physicians in Bangladesh hold multiple jobs (Bergman, 2014; Gruen et al., 2002). There were allegations from patients, as found in qualitative part, that physicians often treated them differently in these settings. Effect of dual practice

can be evaluated both qualitatively and quantitatively in further studies. It can be done, among many other methods, by observing the same physician in both public and private settings.

## **5.5 Policy Implications**

Governments of many countries, including Bangladesh, are trying to improve the quality of their HRH, along with their quantity. Bangladesh is striving for structural reforms in its health system through Health and Population Sector Program (currently updated as Health, Nutrition, and Population Sector Development Program) since 1998 and has explicitly recounted its intent to transform the HRH into a more client-centered and responsive workforce (Aldana et al., 2001; Cockcroft et al., 2007, 2011). This study can provide in-depth understanding of expectations of the people in this regard, measure the current status, and provide directions to the policy makers to improve the responsiveness of HRH.

This study indicated that, despite different levels of responsiveness in the public and private sector, the overall responsiveness is not up to the expectations of people. In order to improve the responsiveness, I am recommending the following approaches: through education, through regulations, by providing incentives and supports, by generating community ownership through empowerment, and above all, through overarching policy provisions. These recommendations are elaborated further, with their linkage to specific findings.

In the findings related to the 'Friendliness' domain, I realized the lack of understanding of physicians regarding the expectations of people. For example, physicians perceived greeting to be out of culture, which contradicted patients' expectations in this regard. This type of general lack of understanding of or disregard for people's perceptions and expectations were explored in other domains of responsiveness too. Even some physicians themselves mentioned that they did not receive training on how to explain health-related issues to their patients. So, these issues may be incorporated in the professional curriculum, where doctor patient communication is discussed. If curriculum modification is seen as a long procedure, at least in-service training or continuing education programs can be arranged to address the issues related to responsiveness. Some of the findings from other domains found that, there was a hierarchical difference between physicians and patients, and this difference was clearly portrayed by the gestures of physicians, the sitting arrangements, etc. There are such greater social issues related to patients' side as well. For example, some patients abused the services (e.g., fake patients coming for free medicines), some influential persons demanded immediate attention by physicians

breaking the queue, etc. These issues, though out of the scope of this study, may be resolved through improvement of general education.

Regulatory interventions may target both the physicians and clients. There are no clear guidelines for physicians regarding responsiveness. This study found that patients expected to be greeted, or at least responded by physicians to patient's greetings. In 'Friendliness' domain, I found that patients expected social talks; especially they valued few talks about their families. In 'Respecting' domain, I found that patients expected that doctors would seek consent in some specific situations, such as before auscultating the chest of female patients by male physicians. In the 'Informing and guiding' domain, this study identified the minimum explanations that patients demanded from physicians, such as diagnosis, seriousness, treatment protocol, and preventive aspects. In 'Gaining trust' domain, patients expected that physicians would identify their name and designation in absence of a nametag or signboard. In the 'Optimizing benefit' domain (this domain was used in the qualitative part of research, which was later replaced by 'Financial sensitivity' based on factor analysis results), a physician suggested they should handle the cases of violence against women with greater sensitivity by involving the local leaders or other relevant authorities. All these, along with various other findings, can lend itself to the guideline for the physicians' responsiveness. There should be regulations for placing a signboard for all service providers, wearing white-coats or at least some formal attire, etc. There should also be strict regulations and implementation of regulations if existed, regarding gift taking from pharmaceutical representatives, sending patients to specific diagnostic centers, moonlighting, allowing brokers in the health facilities, etc. Many patients and physicians attributed the lack of responsiveness to high patient load. There can be a regulation on the highest number of patients, both in public and private sector; a physician may attend per day. There should be regulations targeted for clients too, regarding what they or their attendants can or cannot do while in a health facility.

Many physicians pointed to the lack of amenities and health systems support, especially in public sector. Patients, along with physicians, expressed their concerns about the lack of adequate human resources. Lack of privacy, mechanism to ensure confidentiality of patient data, lack of follow-up mechanism, security of physicians, etc. were also mentioned by stakeholders to constrain responsiveness. These broader health systems issues need to be resolved in order for physicians to be responsive. There can also be incentives for being responsive. Result based financing schemes, with consideration of

responsiveness of physicians, should be introduced. The ROP-Scale can be used for evaluating physicians' responsiveness, which can reward them for responsiveness.

In many findings of this research, the lack of empowerment of patients was evident. According to Narayan-Parker (2002), there are four aspects of empowerment: access to information, inclusion and participation, ability to hold the decision makers accountable, and capacity to organize themselves to solve problems. Patients did not receive sufficient explanations from physicians about their health condition. It was found that there was no way of getting involved in therapeutic decision making. The hierarchical difference with physicians deterred patients from holding physicians accountable for their actions. There is also lack of a functioning procedure in Bangladesh to lodge complaints against physicians (BHW, 2010). Patients' abuse of the services indicates their lack of ownership over the health centers. All these denote the general lack of empowerment of the patients. Based on these findings, I recommend a greater involvement of the patients in affairs of the health service delivery and local level policies regarding health issues (Joarder, Uddin, & Islam, 2013).

A separate policy addressing responsiveness of physicians may not be appropriate, but some overarching policy responses may go a long way in improving the responsiveness of physicians. This research indicated how patients demanded financial assistance from service providers. Adoption of Universal Health Coverage through a national health insurance scheme, in keeping with the pluralistic HRH context, may resolve this issue. This study also found that there is hardly any mechanism to store the patient information and follow-up. An interoperable electronic health information system that includes electronic health records should be implemented to address this issue. Unregulated health markets may result in decreased trust in health providers (Bloom et al., 2008). This was reflected in this study too, as private sector was outperformed by public sector in the domain of 'Gaining trust'. Better monitoring of the private sector providers with more robust regulatory reforms should be attempted to restore trust of the people. There should also be a mechanism through which clients can pursue their complaints against the mistreatments and lack of responsiveness of physicians. Incidents of tensions and altercations between providers and clients were reported by both physicians and clients. There should be laws to protect the rights of the clients as well as the security of the physicians, so that these tensions and altercations do not arrest the service provision for all the patients. Finally, I recommend a long-term national HRH policy (Adams et al., 2013), which would take the issue of responsiveness of HRH into serious consideration.

This study can be useful for the international policy makers as well. International or multilateral organizations take important decisions regarding a country, based on that country's standing on the issue in question. Ranking of countries based on cross-national comparisons often faced criticisms due to lack of adequate psychometric rigor of the used tools (Navarro, 2000), however, the usefulness of such comparisons has also been demonstrated (Dubois & McKee, 2006). Although my study was done in rural Bangladeshi setting, this may provide conceptual and methodological inputs to conduct similar locally relevant studies in other countries. Series of such studies may aid in developing a tool, robust enough to conduct cross-national comparisons, at least in comparable countries.

## **5.6 Conclusion**

This study demonstrated the detailed process of development and application of a psychometrically validated scale, named as responsiveness of physicians scale or in short ROP-Scale. In order to generate the initial item pool for the scale, many such studies depend entirely on available literature from the studies done in similar or even grossly dissimilar settings. Contrastingly, I conducted in-depth qualitative research as the formative stage for gaining in-depth understanding of the perceptions of the stakeholders in regards to responsiveness of physicians. This formative component not only helped to gain context specific understanding of the issue, but also yielded items for the ROP-Scale. At the second stage, the most appropriate and up-to-date methods were used to optimize the scale length. This study went another step forward to apply the ROP-Scale to measure the responsiveness of physicians as a whole and compare the public and private sector physicians in terms of their responsiveness.

This research contributed greater understanding of HRH responsiveness, developing a measurement method, and applying the method; however, this initiative can be taken even further. As discussed in earlier sections of this chapter, this study can pave the way for further research work. This study can also contribute in the national and international policy decision-making. Importantly, this research can open up further avenues in the health policy and system research, concerning the HRH both at local and global level.



## Appendices

### Appendix 1: Domains of Responsiveness as per the Earlier Studies

Domains	Sub-domains	Source
Respect for dignity	The safeguarding of human rights such as the liberty to free movements even for individuals who have leprosy, tuberculosis or are HIV+	Darby et al., 2000; DeSilva, 1999; Murray et al., 2001; N Rice, Robone, & Smith, 2008; Sirven et al., 2008; Valentine et al., 2007; WHO, 2000
	Treatment with respect by health care staff	Darby et al., 2000; DeSilva, 1999; Letkovicova et al., 2005
	The right to ask questions and provide information during consultations and treatment	DeSilva, 1999
	Privacy during examination and treatment	DeSilva, 1999; Letkovicova et al., 2005
Confidentiality	Conducting consultations with the patients in a manner that protects their privacy	Darby et al., 2000; DeSilva, 1999; Letkovicova et al., 2005; Murray et al., 2001; Nigel Rice et al., 2008; Sirven et al., 2008; Valentine et al., 2007; WHO, 2000
	Safeguarding the confidentiality of information provided by the patient, and information relating to an individual's illness, except in cases where such information needs to be given to a health care provider, or where explicit consent has been gained	DeSilva, 1999; Letkovicova et al., 2005
Autonomy	The right of an individual to information on his/her disease and alternative treatment options (facilitating informed choice)	DeSilva, 1999; Letkovicova et al., 2005; Murray et al., 2001; Nigel Rice et al., 2008; Sirven et al., 2008; Valentine et al., 2007; WHO, 2000
	The right to be consulted about treatment	DeSilva, 1999
	Informed consent in the context of testing and treatment	DeSilva, 1999; Letkovicova et al., 2005
	The right of patients of sound mind to refuse treatment	DeSilva, 1999
Prompt attention	Patients should be entitled to rapid care in emergencies *Clinician should immediately start attending the patient, should spend time otherwise to keep her/him waiting	Darby et al., 2000; DeSilva, 1999; Murray et al., 2001; Nigel Rice et al., 2008; Sirven et al., 2008; Valentine et al., 2007; WHO, 2000
	Patients should be entitled to care within reasonable time periods even in the case of non-emergency health care problems or surgery so waiting lists should not cover long periods	DeSilva, 1999; Letkovicova et al., 2005
	Patients seeking care at healthcare units should not face long waiting times for consultations and treatment	DeSilva, 1999; Letkovicova et al., 2005
Quality of amenities	Clean surroundings *Cleanliness of the staff, wearing clean cloth,	Darby et al., 2000; DeSilva, 1999; Letkovicova et al., 2005; Murray et al., 2001;

	washing hand, using hygienic instruments, etc.	Rice et al., 2008a; Sirven et al., 2008; Valentine et al., 2007
	Regular procedures for cleaning and maintenance of hospital buildings and premises	DeSilva, 1999)
	Adequate furniture	DeSilva, 1999; Letkovicova et al., 2005
	Sufficient ventilation	DeSilva, 1999; Letkovicova et al., 2005
	Clean water	DeSilva, 1999; Letkovicova et al., 2005
	Clean toilets	DeSilva, 1999; Letkovicova et al., 2005
	Clean linen	DeSilva, 1999; Letkovicova et al., 2005
	Healthy and edible food	DeSilva, 1999; Letkovicova et al., 2005
Access to social support network	Regular visits by relatives and friends	DeSilva, 1999; Letkovicova et al., 2005; Murray et al., 2001; Nigel Rice et al., 2008; Sirven et al., 2008; Valentine et al., 2007; WHO, 2000
	Provision of food and other consumables by relatives and friends, if not provided by the hospital	Darby et al., 2000; DeSilva, 1999; Letkovicova et al., 2005
	Religious practices that do not prove a hindrance to hospital activities or hurt the sensibilities of other individuals	DeSilva, 1999; Letkovicova et al., 2005
	Access to newspaper and TV	Letkovicova et al., 2005
Choice of provider	Patient's right to choose a care provider based on preferred criteria (e.g., male or female physician) *The clinician may ask if the patient is fine with him treating	Darby et al., 2000; DeSilva, 1999; Letkovicova et al., 2005; Murray et al., 2001; Nigel Rice et al., 2008; Valentine et al., 2007; WHO, 2000
	Patient's right to consult a Specialist if he or she wishes to do so	DeSilva, 1999
	Being able to choose the institution to provide health care	Letkovicova et al., 2005
Clear Communication	Information on a healthy lifestyle [this was later decided to be included under 'Autonomy'; but I consider this to be different than the first sub-domain under 'Autonomy. According to our understanding 'communication', in this context, refers to overall communication of care providers on preventive aspects of health care, rather than just informing the patients about different treatment options or health risks]	Darby et al., 2000; Rice et al., 2008a; Sirven et al., 2008; Valentine et al., 2007
	Having health care providers listen to you carefully	Letkovicova et al., 2005
	Having health care providers explain things so you can understand	Letkovicova et al., 2005
	Giving patients and family time to ask health care providers questions	Letkovicova et al., 2005

**Appendix 2: Additional Domains and Sub-domains Derived from Local Studies, Reflecting Perspectives of Specific Professional Settings or Groups**

<b>Domains</b>	<b>Sub-domains</b>	<b>Source</b>
Attention	Close relationship	Forouzan et al., 2011; Lutwama, Roos, & Dolamo, 2012
	Insightful listening	Forouzan et al., 2011; Coulter & Jenkinson, 2005; Hsu et al., 2006
	Enough time	Forouzan et al., 2011; Coulter & Jenkinson, 2005
	Thoughtful care	Forouzan et al., 2011
	Empathy	Forouzan et al., 2011
Dignity	Respectful care	Forouzan et al., 2011; Hsu et al., 2006
	Non-stigmatizing treatment	Forouzan et al., 2011
	Taking patients seriously	Forouzan et al., 2011
	Maintaining individuality	Forouzan et al., 2011
Clear Communication	Informative counseling	Forouzan et al., 2011; Coulter & Jenkinson, 2005
	Comprehensibility of information	Forouzan et al., 2011; Coulter & Jenkinson, 2005
	The patient and family should have the right to access the patients' medical file	Rodriguez et al., 2012
Autonomy	Choice of care	Forouzan et al., 2011; Coulter & Jenkinson, 2005
	Participation in care process	Forouzan et al., 2011; Coulter & Jenkinson, 2005
	Feeling equal power	Forouzan et al., 2011
Effective Care	Practicality	Forouzan et al., 2011
	Continuous care	Forouzan et al., 2011; Bramesfeld et al., 2007; Njeru et al., 2009
	Appropriate use of resources	Forouzan et al., 2011
Access to Care	Convenient access to acceptable care	Forouzan et al., 2011, Hsu et al., 2006
Confidentiality		Forouzan et al., 2011; Hsu et al., 2006
Quality of Basic Amenities		Forouzan et al., 2011; Hsu et al., 2006
Access to Social Support		Forouzan et al., 2011; Hsu et al., 2006
Medical Ethics	Providers' honest behavior and treating patients without discrimination	Hsu et al., 2006
Health Problem Solution	Satisfactory health care provider skills, availability	Peltzer, 2009; Njeru et al., 2009
	Adequate equipment	Peltzer, 2009
	Adequate availability of medicines	Peltzer, 2009; Joarder, 2008
	Correctness of the pathological tests	Joarder, 2008
Care: Interpersonal Aspects	The patient should be identified by name while hospitalized	Rodriguez et al., 2012
	The patient should be able to identify the	Rodriguez et al., 2012

	nursing staff through an identification badge, which should be visible, legible and contain the employee's picture	
Care: Social Support	The legal right to have a companion (elderly, child, adolescent, pregnant women/ just gave birth) should be ensured for patients, as long as the unit's structure's (or health facility's ) permits	Rodriguez et al., 2012
Work process	The nursing staff should identify themselves (name and profession) to patient during the first contact	Rodriguez et al., 2012
	The nurse's role/function (educational, care, managerial, supervision) should be clear and apparent to patients	Rodriguez et al., 2012
	The health facility's routines should be flexible to permit patients to adapt so that humanized care is ensured (bath time, visits, companions, etc.)	Rodriguez et al., 2012
	Care actions should be continuous, that is, health promotion/ recovery actions should not be interrupted between shifts or weekends	Rodriguez et al., 2012
HRH Responsiveness (Likert type scale without mention of psychometric procedures or properties)	Clients are satisfied with the quality of services that the service providers provide	Lutwama et al., 2012
	Clients are satisfied with the timeliness of the service	Lutwama et al., 2012
	Complaints from stakeholders towards individual health workers are rare	Lutwama et al., 2012
	Stakeholders are satisfied with the health workers' cooperation	Lutwama et al., 2012
	Health workers clearly know who they serve	Lutwama et al., 2012
	Health workers are always willing to address the clinical and emotional demands of the patients	Lutwama et al., 2012

### Appendix 3: Additional Sub-domains Derived from Relevant Studies

Item	Source
Gender sensitivity	Berlan & Shiffman, 2012; Haaland & Vlassoff, 2001
Use of household/ indigenous language'	Bernhart, Wiadnyana, Wihardjo, & Pohan, 1999; Fernandez et al., 2004
Clarity of signs and directions	Sitzia & Wood, 1997
Clean appearance of the staff	Andaleeb, 2001
Disciplined staff	Andaleeb, 2001
Strict maintenance of rules and regulations (of health facility)	Andaleeb, 2001; Joarder, 2008
Service provision without under the table costs (Baksheesh)	Andaleeb, 2001
Proper referral in case of failure to handle the case	Joarder, 2008
Explaining how the drugs should be taken	Mashego & Peltzer, 2005
Consultation time	Pongsupap & Van Lerberghe, 2006
Patient were asked to return for a follow-up consultation	Pongsupap & Van Lerberghe, 2006
Explore context of the patient	Levinson et al., 2008
Patient had diagnosis explained	Morphet et al., 2012

#### Appendix 4: Domains of Responsiveness Applicable to HRH

Domains	Sub-domains	Source
Respect for dignity	The safeguarding of human rights such as the liberty to free movements even for individuals who have leprosy, tuberculosis or are HIV+	Darby et al., 2000; DeSilva, 1999; Murray et al., 2001; Rice et al., 2008a; Sirven et al., 2008; Valentine et al., 2007; World Health Organization, 2000
	Treatment with respect by health care staff	Darby et al., 2000; DeSilva, 1999; Letkovicova et al., 2005
	The right to ask questions and provide information during consultations and treatment	DeSilva, 1999
	Privacy during examination and treatment	DeSilva, 1999; Letkovicova et al., 2005
Confidentiality	Conducting consultations with the patients in a manner that protects their privacy	Darby et al., 2000; DeSilva, 1999; Letkovicova et al., 2005; Murray et al., 2001; Nigel Rice et al., 2008; Sirven et al., 2008; Valentine et al., 2007; WHO, 2000
	Safeguarding the confidentiality of information provided by the patient, and information relating to an individual's illness, except in cases where such information needs to be given to a health care provider, or where explicit consent has been gained	DeSilva, 1999; Letkovicova et al., 2005
Autonomy	The right of an individual to information on his/her disease and alternative treatment options (facilitating informed choice)	Letkovicova et al., 2005; Murray et al., 2001; Nigel Rice et al., 2008; DeSilva, 1999; Sirven et al., 2008; Valentine et al., 2007; WHO, 2000
	The right to be consulted about treatment	DeSilva, 1999
	Informed consent in the context of testing and treatment	DeSilva, 1999; Letkovicova et al., 2005
Choice of provider	Patient's right to choose a care provider based on preferred criteria (male/female, etc.) *The clinician may ask if the patient is fine with him treating	Darby et al., 2000; Letkovicova et al., 2005; Murray et al., 2001; Nigel Rice et al., 2008; DeSilva, 1999; Valentine et al., 2007; WHO, 2000
	Patient's right to consult a Specialist if he or she wishes to do so	DeSilva, 1999
	Being able to choose the institution to provide health care	Letkovicova et al., 2005
Clear Communication	Information on a healthy lifestyle [this was later decided to be included under 'Autonomy'; but I consider this to be different than the first sub-domain under 'Autonomy. According to our understanding 'communication', in this context, refers to overall communication of care providers on preventive aspects of health care, rather than just informing the patients about different treatment options or health risks]	Darby et al., 2000; Nigel Rice et al., 2008; Sirven et al., 2008; Valentine et al., 2007
	Having health care providers listen to you carefully	Letkovicova et al., 2005
	Having health care providers explain things so you can understand	Letkovicova et al., 2005
	Giving patients and family time to ask health care providers questions	Letkovicova et al., 2005
Attention	Close relationship	Forouzan et al., 2011; Lutwama

		et al., 2012
	Insightful listening	Forouzan et al., 2011; Coulter & Jenkinson, 2005; Hsu et al., 2006
	Enough time	Forouzan et al., 2011; Coulter & Jenkinson, 2005
	Thoughtful care	Forouzan et al., 2011
	Empathy	Forouzan et al., 2011
Dignity	Respectful care	Forouzan et al., 2011; Hsu et al., 2006
	Non-stigmatizing treatment	Forouzan et al., 2011
	Taking patients seriously	Forouzan et al., 2011
	Maintaining individuality	Forouzan et al., 2011
Clear Communication	Informative counseling	Forouzan et al., 2011; Coulter & Jenkinson, 2005
	Comprehensibility of information	Forouzan et al., 2011; Coulter & Jenkinson, 2005
	The patient and family should have the right to access the patients' medical file	Rodriguez et al., 2012
Autonomy	Choice of care	Forouzan et al., 2011; Coulter & Jenkinson, 2005
	Participation in care process	Forouzan et al., 2011; Coulter & Jenkinson, 2005
	Feeling equal power	Forouzan et al., 2011
Effective care	Practicality	Forouzan et al., 2011
	Continuous care	Forouzan et al., 2011; Bramesfeld et al., 2007; Njeru et al., 2009
	Appropriate use of resources	Forouzan et al., 2011
Access to care	Convenient access to acceptable care	Forouzan et al., 2011; Hsu et al., 2006
Medical Ethics	Providers' honest behavior and treating patients without discrimination	Hsu et al., 2006
Care: Interpersonal aspects	The patient should be identified by name while hospitalized	Rodriguez et al., 2012
	The patient should be able to identify the nursing staff through an identification badge, which should be visible, legible and contain the employee's picture	Rodriguez et al., 2012
Work process	The nursing staff should identify themselves (name and profession) to patient during the first contact	Rodriguez et al., 2012
	The nurse's role/function (educational, care, managerial, supervision) should be clear and apparent to patients	Rodriguez et al., 2012
Other/ Uncategorized sub-domains	Clients are satisfied with the timeliness of the service	Lutwama et al., 2012
	Gender sensitivity	Berlan & Shiffman, 2012; Haaland & Vlassoff, 2001
	Use of household/ indigenous language'	Bernhart et al., 1999; Fernandez et al., 2004
	Clean appearance of the staff	Andaleeb, 2001
	Disciplined staff	Andaleeb, 2001
	Service provision without under the table costs (Baksheesh)	Andaleeb, 2001
	Proper referral in case of failure to handle the case	Joarder, 2008
	Maintaining aseptic precautions during therapeutic procedures	Joarder, 2008
	Explaining how the drugs should be taken	Mashego & Peltzer, 2005
	Consultation time	Pongsupap & Van Lerberghe,

		2006
	Patient were asked to return for a follow-up consultation	Pongsupap & Van Lerberghe, 2006
	Explore context of the patient	Levinson et al., 2008
	Patient had diagnosis explained	Morphet et al., 2012



**Appendix 5: Approval letters from Ethical Review Board of BRAC University, Dhaka, Bangladesh**



## **BRAC UNIVERSITY**

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19 August 2014

Dr. Taufique Joarder

Doctoral Student (DrPH),  
Department of International Health,  
Johns Hopkins Bloomberg School of Public Health,  
Baltimore, Maryland, USA

and

Lecturer (on study leave)  
James P Grant School of Public Health,  
BRAC University,  
Dhaka

Dear Dr. Joarder

In response to your request for an ethical review of your doctoral research proposal on Understanding and Measuring Responsiveness of Human Resources for Health in Rural Bangladesh, the ethical review board of BRAC University has reviewed your proposal.

The board members found your proposal ethically satisfactory. However you are asked to incorporate the following points in conducting your research:

1. Use the simulated patient method for conducting interviews.
2. Refrain from asking the doctor to be interviewed about his or her family.

We wish you success in your research.

A handwritten signature in blue ink, appearing to read "Fuad H Mallick".

Fuad H Mallick PhD  
Pro VC  
and  
Convener  
Ethical Review Committee (IRB Registration No. 00009094)  
BRAC University

# BRAC UNIVERSITY



12 December 2014

Dr. Taufique Joarder

Doctoral Student (DrPH)  
Department of International Health  
John Hopkins Bloomsburg School of Public Health  
Baltimore, Maryland, USA  
And  
Lecturer (on study leave)  
James P Grant School of Public Health  
BRAC University  
Dhaka, Bangladesh

Dear Dr. Joarder,

In response to your request to review the decisions of the previous ethical review of your proposal and amend to use real patients for conducting interviews instead of simulated patient method, the Ethical Review Committee agreed with your request and gave permission to move ahead.

However, the Committee suggested taking necessary precaution while preparing the questionnaire.

We wish you success in your research.

A handwritten signature in black ink, appearing to read "Fuad H Mallick".

Fuad H Mallick PhD

Pro VC




And

Convener

Ethical Review Committee (IRB Registration No. 00009094)

BRAC University

**Appendix 6: Permission letter from Directorate General of Health Services, Ministry of Health and Family Welfare, Government of Bangladesh**



UHFPOS  
Pl. extend necessary support to conduct the study.

10-7-14  
Prof. Dr. Abul Kalam Azad  
Additional Director General  
(Planning & Development)  
& Line Director, LHS  
DGHS, Mohakhali, Dhaka.

July 3, 2014

Professor Dr. Abul Kalam Azad  
Additional Director General (Planning and Development) and Director MIS,  
Directorate General of Health Services,  
Ministry of Health and Family Welfare,  
Government of Bangladesh,  
Mohakhali, Dhaka

**Subject:** Permission for conducting doctoral research on 'Understanding and Measuring Responsiveness of Human Resources for Health in Rural Bangladesh' in selected Upazilas (list attached)

Sir,


It is my pleasure to inform you that one of our colleagues, Dr. Taufique Joarder, is conducting his doctoral study at the Department of International Health in Johns Hopkins Bloomberg School of Public Health, Maryland, USA. He is also a Lecturer at James P Grant School of Public Health, BRAC Institute of Global Health. His thesis is on 'Understanding and Measuring Responsiveness of Human Resources for Health in Rural Bangladesh'. He is intending to conduct his fieldwork in selected upazilas (list attached with the application) in Khulna and Sylhet divisions.

The study aims to understand the perspectives of both the service providers and the clients on responsiveness of human resources for health. In the second part of the project, the study aims at measuring the responsiveness by a psychometric scale. This scale can be used in measuring and comparing responsiveness among different groups, in different geographical settings, both in Bangladesh and internationally.

This study has been thoroughly reviewed by a group of scientists based both in Baltimore and Dhaka. The following persons are involved in supervising Dr. Joarder:

Dr. Asha George (Adviser from Johns Hopkins Bloomberg School of Public Health)  
Dr. Sadia Afroze Chowdhury (Adviser from BRAC Institute of Global Health)  
Dr. Malabika Sarker and Dr. Syed Masud Ahmed (Local Supervisors from James P Grant School of Public Health, BRAC Institute of Global Health, BRAC University)

The study will be conducted at upazila level of Khulna and Sylhet divisions. The study will involve in-depth interviews with physicians from both public and private sectors. It will also involve participant observation in physicians' consultation rooms including those in Alamdanga Upazila Health Complex. In



BRAC Institute of Global Health  
68, Shahid Tajuddin Ahmed Sherani, (old) Building (Level-6), Mohakhali, Dhaka-1212 BANGLADESH  
Phone: +880-2-9627501-4; Fax: 8810383; Email: [high@bracu.ac.bd](mailto:high@bracu.ac.bd); URL: <http://high.bracu.ac.bd>

the later part of the study (quantitative part), Dr. Joarder will be conducting structured observation of interaction between physicians and patients, involving both public and private sectors. At least half of these observations will take place in Upazila Health Complexes of the enlisted upazilas under Khulna and Sylhet divisions.

Participation in the study will be entirely voluntary. The name and identities of all participants will be kept confidential according to the Ethical Guideline approved by the Ethical Review Board of BRAC University. We hope that results of this study will be helpful in improving performance of human resources for health in Bangladesh. This study can also contribute in developing the physician and patient protection laws. Once completed, a copy of the report will be shared with you.

May I request you to permit Dr. Joarder to conduct the study in the selected upazilas, involving public sector physicians? Your approval would be greatly appreciated.

Thanks for your anticipated cooperation and support.

Sincerely,



Dr. Sadia Afroze Chowdhury  
Executive Director,  
BRAC Institute of Global Health,  
BRAC University,  
Dhaka, Bangladesh

Appendix 7: Permission letter from Bangladesh Private Medical Practitioners' Association



**BPMPA**

**বাংলাদেশ প্রাইভেট মেডিকেল প্রাক্টিশনার্স এসোসিয়েশন**  
**BANGLADESH PRIVATE MEDICAL PRACTITIONERS ASSOCIATION**

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**IMMEDIATE PAST PRESIDENT**

Dr. Md. Mostafique Hossain Binus Durrhel  
 Cell : +88-01711029433

**IMMEDIATE PAST SECRETARY GENERAL**

Dr. Harun - Al - Rashid

July 8, 2014

Dear Members of BPMPA and relevant fellow physicians:

Dr. Taufique Joarder is a doctoral candidate at Johns Hopkins Bloomberg School of Public Health, Maryland, USA; and also a Lecturer at James P Grant School of Public Health, BRAC Institute of Global Health, Bangladesh. He is conducting his doctoral fieldwork in selected upazilas under Khulna and Sylhet divisions. The title of his research is "Understanding and Measuring Responsiveness of Human Resources for Health in Rural Bangladesh". This study involves 'structured observation' in the consultation room of physicians both from public and private sectors. A trained data collector will collect data from the interaction between the physician and patient.

This study has been thoroughly reviewed by a group of scientists based both in USA and Bangladesh. I am convinced that participation in the study will be entirely voluntary. The name and identities of all participants will be kept confidential according to the Ethical Guideline approved by the Ethical Review Board of BRAC University. Results of this study will be helpful in improving performance of human resources for health in Bangladesh and beyond.

I support these planned activities in the pursuit of understanding the physician's perspective on service provision, improving our physicians' performance and also in contributing to the development of a physician (and also patient) protection law, as envisioned by the current policy of the government of Bangladesh.

I like to request the BPMPA members and relevant fellow professional colleagues to provide necessary support to Dr. Joarder and the persons assigned by him (Research Assistants with a copy of this letter), as per the rules and regulations of your respective institution, and of course, ethical principles.

Sincerely,

Professor Dr. Md. Maniruzzaman Bhuiyan  
 President,  
 Bangladesh Private Medical Practitioners Association

## Appendix 8: Qualitative Research Tools

### Participant Observation Guideline

Date of Observation:	Start Time:	End Time:
Observer's Name:	Location: UHC / Private Clinic / Village Doctor's Room	
Type of Observation: Grand Tour / Mini Tour / Focused		Day: 1 / 2 / 3 / 4 / 5 / 6 / 7

#### **Grand Tour Observation (Day 1)**

1. Location and surrounding areas of the UHC  
উপজেলাস্বাস্থ্যকেন্দ্রের অবস্থান এবং পারিপার্শ্বিকতা
2. General condition inside the UHC (general cleanliness, crowding, waiting areas for patients, separate toilets for males and females, cleanliness of toilets, condition of other amenities and facilities, visibility of instructions, etc.)  
উপজেলাস্বাস্থ্যকেন্দ্রের ভেতরের অবস্থা (পরিচ্ছন্নতা, ভীড়, অপেক্ষাকরার জায়গা, নারী-পুরুষের আলাদা টয়লেট, টয়লেটের পরিচ্ছন্নতা, স্বাস্থ্যকেন্দ্রের অন্যান্য সুবিধাদির অবস্থা, নির্দেশিকাসমূহের দৃষ্টিগ্রাহ্যতা ইত্যাদি)
3. Type of people visiting UHC (service providers, clients, others)  
স্বাস্থ্যকেন্দ্রে আসমানুষের প্রকারভেদ (সেবা প্রদানকারী, সেবা গ্রহণকারী, অন্যান্য)
4. Basic operations of UHC (e.g., how patients enroll for treatment, where do they wait, how they are called in, where they are sent for diagnostic tests, etc.)  
স্বাস্থ্যকেন্দ্রের মৌলিক কার্যাবলী (উদা: রোগীদেরকে কিভাবে চিকিৎসার জন্য নিযুক্ত করা হয়, তারাকোথায় অপেক্ষাকরে, তাদেরকে কিভাবে চিকিৎসকের চেম্বেরে ডাকা হয়, পরীক্ষার জন্য তাদেরকে কোথায় পাঠানো হয় ইত্যাদি)
5. Functions of different stakeholders at UHC (e.g., medical officers, consultants, administrative officers, UH&FPO, other people visiting UHC for different purposes, e.g., medical representatives, government officials, family planning staffs, brokers)  
স্বাস্থ্যকেন্দ্রের বিভিন্ন স্টেকহোল্ডারের কাজ (যেমন: মেডিকেল অফিসার, কনসাল্টেন্ট, প্রশাসনিক কর্মকর্তা, উপজেলাস্বাস্থ্য ও পরিবার পরিকল্পনা কর্মকর্তা, স্বাস্থ্যকেন্দ্রে বিভিন্ন উদ্দেশ্যে আসা অন্যান্য মানুষজন, যেমন: মেডিকেল রিপ্রেজেন্টেটিভ, সরকারী কর্মকর্তা, পরিবার পরিকল্পনা কর্মী, দালাল)
6. Pattern of services (starting of consultation, break, break duration, end of office, evening hour services, etc.)  
সেবা প্রদানের নমুনা (চিকিৎসাপরামর্শ শুরু, বিরতি, বিরতির ব্যাপ্তিকাল, অফিস চুটির সময়, চুটির পরবর্তী সময় ইত্যাদি)
7. General interactions between people at UHC (between service providers and clients, between different service providers, between patients)  
স্বাস্থ্যকেন্দ্রে আসমানুষদের মিথস্ক্রিয়া (সেবা প্রদানকারী এবং গ্রহণকারীর মাঝে, বিভিন্ন সেবা প্রদানকারীর মাঝে, রোগীদের মাঝে)
8. Flow of patients (tentative number of patients, tentative demographic profile, e.g., gender, SES, level of education, occupation, etc.)  
রোগীর প্রবাহ (আনুমানিক রোগীর সংখ্যা, তাদের সম্ভাব্য জনতাত্ত্বিক অবস্থা, যেমন: লিঙ্গ, আর্থসামাজিক অবস্থা, শিক্ষা, পেশা ইত্যাদি)
9. Any tension between service providers and clients (quarrels, fights, etc.)  
সেবা প্রদানকারী এবং গ্রহীতার মধ্যে কোন উত্তেজনা (বচসা, হাতাহাতি, ইত্যাদি)

#### **Mini Tour Observation (Day 2 - 3)**

10. Transport of patients (on foot, van/rickshaw, car, other)  
রোগী পরিবহন (পায়ে হাঁটা, ভ্যান/রিকশা, গাড়ি, অন্যান্য)
11. Types of diseases (chief complaints, history, severity)  
রোগের প্রকারভেদ (প্রধান সমস্যা, রোগের ইতিহাস, তীব্রতা)
12. General interaction between physicians and clients  
ডাক্তার ও রোগীর মধ্যে সাধারণ মিথস্ক্রিয়া
13. General observation of physicians (how they greet the patients, how they explain the disease and treatment, etc.)  
ডাক্তারকে সাধারণ পর্যবেক্ষণ (তারাকিভাবে রোগীকে সম্বাধন করে, কিভাবে রোগ ও চিকিৎসা ব্যাখ্যা করে ইত্যাদি)
14. General observation of patients (types of disease, severity, how they provide information, general demographics)  
রোগীকে সাধারণ পর্যবেক্ষণ (রোগের প্রকারভেদ, তীব্রতা, তারাকিভাবে রোগ সংক্রান্ত তথ্য জানায়, তাদের সাধারণ জনতত্ত্ব)
15. If there is any tension between physicians and the patients (quarrels, fights, expression of dissatisfactions, etc.)  
ডাক্তার ও রোগীর মাঝে কোন উত্তেজনা আছে কিনা (বচসা, হাতাহাতি, অসন্তোষের বহিঃপ্রকাশ ইত্যাদি)



16. General reaction (satisfaction or dissatisfaction) of physicians (if expressed after diagnosing a disease, treating an ailing patient, etc.)  
ডাক্তারদেরসাধারণপ্রতিক্রিয়ার (সন্তুষ্টিঅথবাঅসন্তুষ্টি) বহিঃপ্রকাশ (কোনরোগনির্ণয়েরপর, সীড়িতরোগীরচিকিৎসারপরইত্যাদিতারাবাদিপ্রকাশকরেন)
17. General reaction (satisfaction or dissatisfaction) of patients and its observed causes (expressed after consultation, being cured, being given medication, etc.)  
রোগীদেরসাধারণপ্রতিক্রিয়ারবহিঃপ্রকাশ (সন্তুষ্টিঅথবাসন্তুষ্টি) এবংতারদৃশ্যমানকারণ (চিকিৎসাপরামর্শলাভেরপর, সুস্থহবারপর, অসুস্থপ্রাপ্তিরপরইত্যাদি)
18. Is there any difference between doctors in providing services?  
স্বাস্থ্যসেবাদেয়ারব্যাপারেডাক্তারদেরমধ্যেকোনপার্থক্যআছে?
19. Is there any difference in services provided at different times (morning, evening, earlier in consultation hours, later in consultation hours, etc.)  
দিনেরবিভিন্নসময়েদেয়াস্বাস্থ্যসেবারমধ্যেকোনপার্থক্যআছে? (সকাল, রাত, কনসালটেশনেরপ্রথমদিকে, শেষদিকেইত্যাদি)

### Focused Observation (Day 4 - 7)

20. How did the physician greet the patient? What words and gestures were used? What was patient's reaction to it?  
ডাক্তাররোগীকেকিভাবেসম্বাষণজানাল?কিভাষাএবংআচরণদেখাল?এরবিপরীতেরোগীরপ্রতিক্রিয়াকিছিল?
21. What were included in the whole consultation process (history taking, general physical examination, systemic examination, consultation with colleagues, diagnostic investigation, etc.)?  
পরামর্শপ্রক্রিয়াকিঅন্তর্ভুক্তছিল (রোগেরইতিহাসশুনতেচাওয়া, সাধারণশারীরিকপরীক্ষা, নির্দিষ্টরোগেরপরীক্ষা, সহকর্মীদেরসাথেপরামর্শ, রোগনির্ণায়কইনভেস্টিগেশনইত্যাদি)?
22. Did physicians ask patients for their names?  
ডাক্তারকিরোগীরনামজিজ্ঞেসকরেছিল?
23. Did physicians introduce themselves and provide their own names?  
ডাক্তারকিনিজেরপরিচয়দিয়েছিলএবংনিজেরনামবলেছিল?
24. Did the physician ask for consent before performing any procedure?  
চিকিৎসাসংক্রান্তপ্রক্রিয়াসম্পাদনেরআগেডাক্তারকিরোগীরসম্মতিনিয়েছিল?
25. Did physician explain procedures undertaken?  
ডাক্তারকিরোগীকেচিকিৎসাপ্রক্রিয়াব্যাখ্যাকরেছিল?
26. Did physician ask permission before doing procedures?  
চিকিৎসাপ্রক্রিয়াশুরুরআগেডাক্তারকিঅনুমতিনিয়েছিল?
27. Did the physician maintain privacy where required (especially female patients)? How was this addressed?  
ডাক্তারকিপ্রয়োজনীয়ক্ষেত্রে (বিশেষকরেনারীরোগীদেরক্ষেত্রে) রোগীরগোপনীয়তারক্ষাকরেছিল?এটাকিভাবেকরাহয়েছিল?
28. Did the physician explain the disease, diagnosis, treatment options, side effects, prognosis, medication, etc.?  
ডাক্তারকিরোগীকেরোগ, ডায়াগনসিস, বিকল্পচিকিৎসা, পার্শ্বপ্রতিক্রিয়া, আরোগ্যসম্ভাবনা, চিকিৎসাইত্যাদিব্যাখ্যাকরেছিল?
29. Did the physician allow the patient to ask questions? What was the reaction and response of the physician if the patient asked any question?  
ডাক্তারকিরোগীকেপ্রশ্নকরারসুযোগদিয়েছিল?যদিরোগীনিজেইপ্রশ্নকরেথাকে, সেক্ষেত্রেডাক্তারেরপ্রতিক্রিয়াএবংউত্তরকেমনছিল?
30. How did the physician deal with patients with different types of conditions (e.g., tuberculosis, STI, leprosy, etc.)? Was there any discrimination?  
বিভিন্নধরণেরঅসুথেরোগীরপ্রতিডাক্তারেরব্যবহারকেমনছিল (যেমন: যক্ষ্মা, যৌনরোগ, কুষ্ঠইত্যাদি)?কোনবৈষম্যমূলকআচরণছিলকি?
31. If the patient wanted consultation from a different physician, was this allowed? How is the view of physicians about referring the patients to another colleague?  
রোগীযদিঅন্যকোনডাক্তারেরকাছথেকেপরামর্শনেয়ারইচ্ছাপ্রকাশকরেথাকে, তাকেসেইসুযোগদেয়াহয়েছিলকি?অন্যডাক্তারেরকাছেরোগীরেফারকরারক্ষেত্রেডাক্তারেরমনোভঙ্গিকি?
32. How respectful was the physician in dealing with the patients? Was there any instance of breaching the respect of the patient? What was the reason?  
রোগীরসাথেব্যবহারেডাক্তারকেমনশ্রদ্ধাশীলছিল?শ্রদ্ধাভঙ্গেরকোনঘটনাকিচোখেপড়েছে?কেনএমনটিঘটেছে?

33. Was there is any disrespectful attitude by the patients? If so, what were the reasons?  
রোগীরপক্ষথেকেকোনঅশ্রদ্ধামূলকআচরণদেখাগিয়েছে?যদিহয়থাকবে, তারকারণকিছিল?
34. How the confidentiality of the patient information was maintained? Was the patient concerned about this issue at all?  
রোগীরতথ্যেরগোপনীয়তারক্ষাকিভাবেরক্ষিতহয়েছে?রোগীরকাছেকিএরকোনগুরুত্বআছেবলেমনেহয়?
35. Did any patient ask to choose a provider based on preferred criteria (e.g., male or female physician)? What was the consequence? কোনরোগীকিকোনবিশেষবৈশিষ্ট্যেরউপরভিত্তিকরেতারডাক্তারকেহবেতানির্ধারণকরতেচেয়েছিল (যেমন: মহিলাবাপুরুষডাক্তার)? এরপরিণতিকিহয়েছিল?
36. Did the physician inform the patient about the preventive aspect of her/his disease/ condition?  
ডাক্তারকিরোগপ্রতিরোধবিষয়েরোগীকেকোনপরামর্শদিয়েছিল?
37. Did the physician listen carefully and patiently to the complaints of the patients?  
ডাক্তারকিরোগীরঅভিযোগগুলোমনযোগএবংধৈর্যেরসাথেশুনিয়েছিল?
38. Was there any display of empathy by the physician (e.g., using words or phrases denoting empathy for patient's health issues)?  
ডাক্তারকিরোগীরপ্রতিসহানুভূতিপ্রকাশকিছুকরেছিল (যেমন: বিশেষকোনশব্দবাক্যাসহানুভূতিপ্রকাশকরে)?
39. Did the physician maintain the individuality of the patient (e.g., calling the patient by their first of full name, not calling the patient by their disease condition or any other attribute, etc.)  
ডাক্তারকিরোগীরব্যক্তিগতস্বতন্ত্ররক্ষায়সচেতনছিল (যেমন: রোগীকেতারমূলনামধরেডাকা, তাদেররোগবাঅন্যকোনবৈশিষ্ট্যধরেনাডাকাইত্যাদি)?
40. Could the patient access the medical record for future reference/use?  
রোগীরপক্ষেভবিষ্যতপ্রয়োজনেচিকিৎসারেকর্ডবানখিঅধিগতকরারকোনব্যবস্থাছিলকি?
41. How was the power differential between the physician and the patient (use of language, body language, gaze etc.)?  
ডাক্তারওরোগীরমধ্যেকর্তৃত্বগতপ্রভেদেরমাত্রা (ভাষারব্যবহার, শরীরেরভাষা, দৃষ্টিইত্যাদি) কেমনছিল?
42. Was there any way of getting the patient or her/his family members to participate in the care process?  
রোগীরপরিবারেরসদস্যদেরকেওচিকিৎসাপ্রক্রিয়ারসাথেসংশ্লিষ্টকরারমতোকোনব্যবস্থাছিলকি?
43. Was the physician mindful/ considerate about the SES of the patient before prescribing any drug or diagnostic test?  
ডাক্তারকিরোগীরআর্থসামাজিকঅবস্থাবিবেচনাকরেঅশুধ, ডায়াগনস্টিকপরীক্ষাইত্যাদিপারামর্শদিয়েছিল?
44. Assess if the doctor provides services similarly to all the patients (i.e she/he does not discriminate based on gender, ethnicity, religion, caste, SES, etc.)?  
ডাক্তারসবরোগীকেসমানভাবেচিকিৎসাদিচ্ছেকিনাযাচাইকরুন (অর্থালিঙ্গ, জাতি, ধর্ম, বর্ণ, আর্থসামাজিকঅবস্থাএসবেরভিত্তিককোনবৈষম্যমূলকআচরণকরেছিলকিনা)?
45. How satisfied were the patients about the consultation? How did they express it?  
চিকিৎসকেরপরামর্শবিষয়েরোগীদেরসন্তুষ্টিকেমনছিল?তারাএটাকিভাবেপ্রকাশকরেছিল?
46. Was the physician gender sensitive in asking questions, making comments, etc.? Did she/he make any gender insensitive comments?  
প্রশ্নজিজ্ঞেসকরা, মন্তব্যকরাএসববিষয়েডাক্তারকিলিঙ্গসংবেদনশীলতারপরিচয়দিয়েছিল?তিনিকিলিঙ্গঅসংবেদনশীলকোনমন্তব্যকরেছিলেন?
47. Did the physician use household or common words to talk with the patients and explaining things?  
রোগীরসাথেকথাবলারকিন্মতাকোকোনকিছুব্যাখ্যাকরারক্ষেত্রেডাক্তারকিপ্রচলিতবাঘরোয়াভাষাব্যবহারকরেছিল?
48. Was the appearance of the physicians clean? Did they provide services in a professional manner (e.g., with proper dress up)?  
দৃশ্যতডাক্তারপরিষ্কারপরিচ্ছন্নছিলেনকি?তিনিকিপেশাদারিধ্বেরসাথেসেবাদি়েছিলেন (যেমন: রীতিগতপোশাকপরিধানকরে)?
49. How discipline was maintained in the consultation room? What was the physician's role if any? What was patient's role?  
পরামর্শরুমেকিভাবেশৃঙ্খলারক্ষাকরাহয়েছিল?এক্ষেত্রেডাক্তারেরযদিকোনভূমিকাথেকেথাকেতবেতাকিছিল?রোগীরভূমিকাইবাকিছিল?
50. Was there any under the table cost involved (involving either physician or anyone else)?  
অবৈধভাবেঅর্থবিনিময়েরমতোকোনঘটনাঘটেছিলকি (ডাক্তারবাঅন্যকারোদ্বারা)?



51. Did the physician refer the patient to appropriate provider if she/he failed to handle the case (due either to lack of proficiency or equipment or any other reason)? Please also explain the reasons why the physician might have to refer the patient.  
ডাক্তার যদি রোগীকে উপযুক্ত চিকিৎসাদিতে অপারগ হয়ে থাকেন (ডাক্তারের কুশলতার অভাবে, সরঞ্জামের অভাবে, বা অন্য কোন কারণে), তিনি কি রোগীকে উপযুক্ত সেবা প্রদানকারীর কাছে রেফার/ অর্পণ করেছিলেন?  
রোগীকে কেন রেফার করা উচিত মনে করেছেন তা ব্যাখ্যা করুন।
52. Was the patient asked whether they understood instructions?  
রোগী সব পরামর্শ বুঝতে পেরেছে কিনা ডাক্তার কি তা জিজ্ঞেস করেছিল?
53. Was the patient asked and instructed about follow-up consultation? Did the physician inform and reassure the patient about costs related to follow-up visits?  
রোগীকে ফলোআপ/ অনুবর্তনের জন্য পরামর্শ দেয়া হয়েছিল কি? ডাক্তার কি ফলোআপের খরচ সম্পর্কে রোগীকে অবগত এবং আশ্বস্ত করেছিল?
54. Did the patient complain about anything (in addition to disease/ health condition) during or after the consultation?  
কনসালটেশনের সময় বা তার পরে রোগী কি কোন বিষয়ে কোন অভিযোগ তুলেছিল (রোগ বা স্বাস্থ্য সংক্রান্ত বিষয় বাদে)?
55. How long did the consultation continue? How much time was spent per patient in general?  
পরামর্শ কতক্ষণ ধরে চলেছিল? প্রতি রোগীর পেছনে সাধারণভাবে কত সময় ব্যয় হয়েছিল?
56. Overall reaction or reflection of the observer regarding the whole consultation process.  
সামগ্রিকভাবে পুরো কনসালটেশন সম্পর্কে পর্যবেক্ষণকারীর প্রতিক্রিয়া বা মতামত কি?

### General Reflective Notes

- Observation setting: How private was it? How “neutral” was it? How comfortable was it? Were there interruptions?  
পর্যবেক্ষণের স্থান: এটাকতটুকু একান্ত ছিল? এটাকি ‘পক্ষপাতশূণ্য’ ছিল? এটাকতটা আরামদায়ক ছিল? কোন প্রতিবন্ধকতা ছিল কি?
- About the subjects: What did they look like? Did they seem comfortable? Was there anything note-worthy about them (something that will help you remember them later)?  
তথ্যদাতা: তাদেরকে কেমন দেখাচ্ছিল? তারা কি আরামে ছিল? তাদের সম্পর্কে উল্লেখযোগ্য কি কিছু ছিল (যা তাদেরকে ভবিষ্যতে মনে করতে সহায়তাকরবে)?
- Observation summary points: What were the main points observed?  
পর্যবেক্ষণের সাংক্ষিপ্তসার: পর্যবেক্ষণের মূল বিষয়গুলো কি ছিল?
- Reflection on quality of the observation: What were the challenges? Successes?  
পর্যবেক্ষণের গুণগত মান নিয়ে ভাবনা: চ্যালেঞ্জগুলো কি ছিল? সাফল্য?
- What would you like to follow up on if you could conduct another participant observation in this setting?  
এখানে আবারো পর্যবেক্ষণের সুযোগ দিলে আপনি কি কি বিষয়ে ফলোআপ করবেন?

### In-depth Interview Guideline for Providers

Date of Interview:	Start Time:	End Time:
Interviewer’s Name:	Location: Alamdanga / Damurhuda / Jibannagar	
Type of Respondent: Public Sector / Private Sector / Village Doctor	Number: 1 / 2 / 3 / 4 / 5	
Gender of Respondent: Male / Female	Year of Graduation:	Position/Rank:

### Note to IDI Facilitator

Before beginning the interview, make sure the physician has provided written informed consent. Thank the physician for agreeing to participate. Introduce yourself as a doctoral student of Johns Hopkins Bloomberg School of Public Health. Provide additional information if requested by the respondent. Take the interviews in private setting; avoid interviewing in the presence of another colleague or a patient, as these may bias the responses.

সাক্ষাতকার শুরু করার আগে চিকিৎসক লিখিত ও যাকি বহাল সম্মতি দিয়েছেন কিনা নিশ্চিত হয়ে নিন। অংশগ্রহণে সম্মত হওয়ায় চিকিৎসককে ধন্যবাদ দিন। নিজে কে জন্ম পকি স্ক্রমবার্গ স্কুল অফ পাবলিক হেলথের ডক্টরেট ছাত্র হিসেবে পরিচয় দিন। উত্তরদাতার আনন্দের সাথে জিজ্ঞাসা করুন। একান্ত অবস্থানে সাক্ষাতকার নিন, অন্য সহকর্মী কি স্বাভাবিক রোগীর উপস্থিতিতে সাক্ষাতকার পরিহার করুন, কেননা তা উত্তরকে বিরূপভাবে প্রভাবিত করতে পারে।

### Introduction

Good morning/afternoon/evening. My name is \_\_\_\_\_ and I am a doctoral student at Department of International Health in Johns Hopkins Bloomberg School of Public Health in the United States. I am here today to learn more about

your perspective on the responsiveness of the physicians towards their patients. I will also be interested to learn about your valuable suggestions in this regard. If you are ready we may proceed.

আসসালামুআলাইকুম।আমারনাম

\_\_\_\_\_।আমিমাঝিনযুক্তরাষ্ট্রেরজন্মহপকিন্সরুমবার্গস্কুলঅফপাবলিকহেলথেরআল্টিম্যাটিকস্বাস্থ্যবিভাগেরএকজনপিএইচডিশিক্ষার্থী।আমি এখানেএসেছিযাতেআমিস্বাস্থ্যখাতেরমানবসম্পদেরসংবেদনশীলতা,বিশেষকরেচিকিৎসকদেরসংবেদনশীলতাসম্পর্কেআপনারদৃষ্টিভঙ্গিকেশিখতেপারি।এবিষয়েআপনারমূল্যবানপরামর্শজানতেওআমিআগ্রহী।আপনিপ্রস্তুতহলেআমরাশুরুকরতেপারি।

## Background Information

1. Tell me about yourself, your education, medical life, career, family.  
আপনারনিজেরসম্পর্কেবলুন, আপনারপড়াশুনা, মেডিকেলজীবন, পেশা, পরিবারইত্যাদি।
2. Why did you choose to come to medical profession?  
আপনিকেনচিকিৎসাপেশায়এলেন।
3. How is your experience about working in this profession?  
এপেশায়কাজকরারক্ষেত্রেআপনারঅভিজ্ঞতাকেমন?

## General Questions

4. Could you describe your consultation process in detail? For example, history taking, general physical examination, systemic examination, consultation with colleagues, prescription for lab diagnosis, etc.).Do you greet the patient in any way?  
আপনিকিডয়াকরেআপনারপুরোকনসালটেশনপ্রক্রিয়াটিবর্ণনাকরতেপারবেন? যেমন: রোগেরইতিহাসশুনতেচাওয়া, সাধারণশারীরিকপরীক্ষা, নির্দিষ্টরোগেরপরীক্ষা, সহকর্মীদেরসাথেপরামর্শ, রোগনির্ণায়কইনভেস্টিগেশনইত্যাদি?  
আপনিকিতাকেকোনরকমসম্ভাষণজানান?
5. Do you think it is necessary for a physician to be responsive, or do you think only clinical competency is enough? How do you compare these?[By responsiveness I mean“the social actions that health service providers do to meet the ‘legitimate expectations’ of service seekers”. For example, when a patient comes to you she/he may expect that you would allow her/him to ask questions regarding disease/ health condition; or she/he may expect that you would maintain privacy while examining her/him, etc.]  
আপনিকিমনেকরেএকজনডাক্তারেরজন্যসংবেদনশীলহওয়াটাঅপরিহার্য, নাকিআপনিমনেকরেনক্লিনিকালপারদর্শিতাইএক্ষেত্রেযথেষ্ট? এদুটোবিষয়কে (সংবেদনশীলতাএবংক্লিনিকালপারদর্শিতা) আপনিকিভাবেতুলনাকরেন?[সংবেদনশীলতাবলতেআমিবোঝাচ্ছি, “স্বাস্থ্যব্যতিরেক” ক্রিয়াকলাপসমূহেরনূনতমমানস্বাস্থ্যসেবাগহীতার ‘ন্যায়প্রত্যাশা’ পূরণেস্বাস্থ্যসেবাপ্রদানকারীরকরণীয়”। উদাহরণস্বরূপযখনএকজনরোগীআপনারকাছেআসে, সেপ্রত্যাশাকরতেপারেযেআপনিতাকেতঁাররোগবাস্থ্যসম্পর্কেপ্রশ্নকরারসুযোগদেবেন। অথবা, সেপ্রত্যাশাকরতেপারেযেতঁাকেপরীক্ষাকরারসময়আপনিগোপনীয়তাবজায়রাখবেন; ইত্যাদি]
6. What according to you should be the non-medical expectations of the patients? What things a patient may expect from you, which are not directly related to her/his therapy?  
আপনারমতে ‘স্বাস্থ্যব্যতিরেক’ ক্রিয়াকলাপসমূহকিহতেপারে?চিকিৎসারবাইরে (অর্থাৎচিকিৎসারসাথেসরাসরিজড়িতনয়এমন) এমনকিকিবিষয়একজনরোগীআপনারকাছেপ্রত্যাশাকরতেপারে?
7. Many of these expectations may be considered legitimate expectations; but are there any such expectations from patients that you don’t consider legitimate? Please explain.  
এসবপ্রত্যাশারঅনেকগুলোইন্যায়মেনকরাতেপারে; কিন্তুরোগীদেরএমনকিছুপ্রত্যাশাকিআছেযেগুলোকেআপিনিয়ামেনকরেননা? ব্যাখ্যাকরুন।
8. In an ideal situation, what would you add to your consultation process, which you do not perform presently?  
একটিআদর্শপ্রেক্ষাপটেআপনিআপনারকনসালটেশনেআরকিকিযোগ্যকরবেনযাবর্তমানেআপনিকরেননা?
9. We all want to provide services to patients with responsiveness; but this is not often possible due to certain barriers? What according to you are those constraints (e.g., insufficient number of HRH, unavailability of infrastructure, unavailability of equipment, lack of administrative support, anything else)?  
আমরাসবাইসংবেদনশীলতারসাথেরোগীকেসেবাদিতেচাই;  
কিন্তুনানাপ্রতিবন্ধকতার কারণেতাসম্ভবহয়না। আপনারমতেএসবপ্রতিবন্ধকতাগুলোকিহতেপারে (উদাহরণস্বরূপজনবলেরঅপর্যাপ্ততা, পরিকাঠামোরঅভাব, উপকরণেরদুস্প্রাপ্যতা, প্রশাসনিকসমর্থনেরঅভাব, বাঅন্যকিছু)?

10. Is there a difference in service provision between public sector, private sector, and informal sector?  
সরকারী, বেসরকারী এবং অপ্রতিষ্ঠানিক সেবা প্রদানের ক্ষেত্রে কোন পার্থক্য আছে কি?

### Specific Questions on Prompted Aspects of Responsiveness

11. Do you think asking for consent of the patient before performing any procedure is necessary? Why do you think so? If you do not take consent, what are the constraints?  
আপনিকি মনে করেন চিকিৎসা সংক্রান্ত কোন প্রক্রিয়া সম্পাদনের আগে রোগীর সম্মতি নেয়াটা অপরিহার্য? আপনি কেন এটা মনে করছেন? আপনি নিজে যদি এটানা করে থাকেন, এক্ষেত্রে প্রতিবন্ধকতা সমূহ কি কি?
12. Tell me about your views regarding the privacy of the patients? Do the patients ever ask for it? What do you do if they ask? In what type of situations do you maintain it? Where do you think it is not necessary? Is it possible for you to maintain it in every instance that you think it is important? What are the constraints in maintaining it?  
রোগীর গোপনীয়তার ক্ষা ক করার ব্যাপারে আপনার অভিমত কি? রোগীর কখনো এ ব্যাপারে অনুরোধ করে থাকে? এক্ষেত্রে আপনি কি করেন? কি ধরনের ক্ষেত্রে আপনি গোপনীয়তার ক্ষা করে থাকেন? কোন কোন ক্ষেত্রে এটি অপরিহার্য? যেই সব ক্ষেত্রে আপনি এটি অপরিহার্য মনে করেন, সেই সব ক্ষেত্রে এটির ক্ষা করা কি সম্ভবপর হয়? এক্ষেত্রে প্রতিবন্ধকতা সমূহ কি কি?
13. Do you think it is important to explain to the patients their disease, diagnosis, treatment options, side effects, prognosis, medication, etc.? Please explain your response. What are the constraints of doing so?  
আপনিকি মনে করেন রোগীকে রোগ, ডায়াগনসিস, বিকল্প চিকিৎসা, পার্শ্বপ্রতিক্রিয়া, আরোগ্য সম্ভাবনা, চিকিৎসাইত্যাদি ব্যাখ্যা করাটা জরুরী? ব্যাখ্যা করুন। এক্ষেত্রে প্রতিবন্ধকতা সমূহ কি কি?
14. Do you think it is essential to allow the patients to ask questions? How do you feel when someone asks questions? To what extent do you feel comfortable in answering their questions? What types of questions do you expect from the patients? Do you (or your colleagues) ever get annoyed with the patients' questions? Why, or in what situations?  
আপনার কি মনে হয় রোগীকে প্রশ্ন করার সুযোগ দেয়াটা জরুরী? রোগীরা প্রশ্ন করলে আপনার কেমন লাগে? এসব প্রশ্নের উত্তর দিতে আপনি কতটুকু স্বাচ্ছন্দ্য বোধ করেন? রোগীদের কাছে থেকে আপনি কি ধরনের প্রশ্ন আশা করেন? আপনি (বা আপনার অন্য সহকর্মীরা) কি কখনো রোগীদের প্রশ্ন শুনে বিরক্ত হন? কেন, কি ধরনের ক্ষেত্রে?
15. How does the physician react to a patient if she/he wants to consult a different physician? Do you think it is alright, or not, for a patient to refuse to consult one physician and want to consult a different physician? Do you think patients have right to consult the physicians of their choice (male/female or other considerations)?  
যদি কোন রোগী আরেকজন ডাক্তারের কাছে পরামর্শ নিতে চায় তখন একজন ডাক্তার কি প্রতিক্রিয়া দেখায়?  
আপনিকি মনে করেন একজন ডাক্তারের পক্ষে রোগীর এ ধরনের অনুরোধ প্রত্যাখ্যান করা সঙ্গত নাকি অসঙ্গত? আপনার কি মনে হয় রোগীদের তাদের পছন্দমত ডাক্তার দেখানোর অধিকার আছে (নারী/পুরুষ চিকিৎসক, বা অন্য কোন বিবেচনায়)?
16. When do you (or physicians in general) refer a patient to a different doctor? Do you consult with other physicians in conditions that you are not comfortable in treating?  
আপনি (অথবা চিকিৎসকের সাধারণভাবে)  
কখন একজন রোগীকে আরেকজন ডাক্তারের কাছে রেফার করেন? যে সব রোগ নিরাময় করতে আপনি স্বাচ্ছন্দ্য নন সেই সব ক্ষেত্রে আপনি কি অন্য চিকিৎসকের পরামর্শ নেন? আপনার কি মনে হয়
17. What is your opinion regarding respecting the patients? Do you think the physicians respect patients? How do you think respect towards the patient is commonly breached? রোগীদের প্রতি সম্মান দেখানোর ব্যাপারে আপনার মতামত কি?  
আপনার কি মনে হয় ডাক্তাররা রোগীদেরকে সম্মান দেখিয়ে থাকে? আপনার মনে কি ভাবে সচরাচর রোগীদের প্রতি সম্মান লঙ্ঘিত হয়ে থাকে?
18. Are patients concerned about maintaining the confidentiality of patient information? Is there any way to maintain the confidentiality of the patients? What happens if you are asked by some other person or organization (drug company, hospital, insurance company, research organization, etc.) to reveal patient information?  
রোগীরা কি তাদের চিকিৎসা সংক্রান্ত তথ্যাদি গোপন রাখার বিষয়ে কোন খবর রাখে? রোগীদের তথ্যের গোপনীয়তার ক্ষা করার কোন উপায় কি আছে? কোন ব্যক্তি বা প্রতিষ্ঠান (অশুধ কোম্পানি, হাসপাতাল, ইন্স্যুরেন্স কোম্পানি, গবেষণা প্রতিষ্ঠান ইত্যাদি) আপনার কাছে রোগীর তথ্য চাইলে আপনি কি করেন?
19. Do you ever inform the patients about the preventive aspects of the disease? Or do you think it is beyond your responsibility? Please share your views about this.  
আপনিকি রোগীদেরকে রোগের প্রতিরোধমূলক দিক সম্পর্কে কিছু বলেন? নাকি আপনি মনে করেন এটা আপনার দায়ীত্বের বাইরে পড়ে? এ বিষয়ে আপনার মতামত জানান।

20. How much time do you give per patient in general? How much time would be ideal?  
সাধারণভাবে একজন রোগীকে আপনি কতটা সময় দেন? কতটুকু সময় দেয়া গেলে ভাল হত?
21. Do you display empathy to the patients regarding their ailments? How do you do this? Is it important?  
রোগীদের পীড়াসম্পর্কে আপনি কি কখনো সহানুভূতি দেখান? কিভাবে? এটাকি জরুরী?
22. How easily/ frequently are providers misunderstood by patients? Why and how?  
কতটা সহজে/ নিয়মিত রোগীরা ডাক্তার বা সেবা প্রদাকারীদেরকে ভুল বুঝে থাকে? কেন? কিভাবে?
23. Is there any way of engaging the patients or their family members in the care process? Do you do this? Why, why not?  
রোগী এবং রোগীর পরিবারের সদস্যদেরকে ওচিকিৎসা প্রক্রিয়ার সাথে সংশ্লিষ্ট করার মতো কোন ব্যবস্থা আছে কি? আপনি কি এমনটিক রেখা কেন? কেন, কেন নয়?
24. Is there any way to maintain the continuity of care by the same physician (i.e., you)? How do you follow-up your patients?  
একই ডাক্তারের কাছ থেকে (তথা আপনার কাছ থেকে) রোগীর ধারাবাহিক চিকিৎসা পাবার কোন ব্যবস্থা আছে কি? আপনি কিভাবে আপনার রোগীদেরকে ফলো আপ করছেন?
25. Do you consider the SES of the patient before prescribing drugs or diagnostic tests?  
আপনি কি রোগীর আর্থসামাজিক অবস্থা বিবেচনা করে অশুধ, ডায়াগনস্টিক পরীক্ষা ইত্যাদি পরামর্শ দিয়ে থাকেন?
26. What are your views regarding gender sensitivity, cultural sensitivity etc.? Is it important to talk to the patient in a familiar language?  
লিঙ্গসংবেদনশীলতা, সাংস্কৃতিক সংবেদনশীলতা এসব বিষয়ে আপনার মনোভাব কি? রোগীর সাথে প্রচলিত ভাষায় কথা বলাটাকি জরুরী?

### Finishing Questions

27. We have talked about different aspects of taking consent, maintaining privacy, explaining things, allowing for questions, allowing to consult a different physician, referring to a different physician, respecting the patients, maintaining confidentiality, advising on preventive aspects of a disease, listening carefully, displaying empathy, engaging the patients or their family members in therapy, ensuring continuity of care, considering the SES of patient, being gender sensitive, being culturally sensitive, etc.; considering these as potential components of HRH responsiveness. Is there anything else that you want to add?  
আমরা নিম্নলিখিত বিষয়গুলোর নানা দিক নিয়ে কথা বলেছি: সম্মতি গ্রহণ, গোপনীয়তার রক্ষা, ব্যাখ্যা প্রদান, প্রশ্ন করার সুযোগ দেয়া, অন্য চিকিৎসকের শরণাপন্ন হতে চাইলে তাকে অনুমোদন করা, প্রয়োজনে অন্য ডাক্তারের কাছে রেফার করা, রোগীর সম্মান, তথ্যের গোপনীয়তা, রোগ প্রতিরোধ সংক্রান্ত তথ্য দেয়া, মনযোগের সাথে রোগীর অভিযোগ শোনা, সহানুভূতি প্রকাশ, রোগী এবং পরিবারের সদস্যদের সম্পৃক্তকরণ, চিকিৎসাধারাবাহিকতার রক্ষা, আর্থসামাজিক অবস্থা বিবেচনা করা, লিঙ্গসংবেদনশীলতা, সাংস্কৃতিক সংবেদনশীলতা ইত্যাদি। কারণ আমরা ধরে নিয়েছি এসব স্বাস্থ্যখাতের মানব সম্পদের সংবেদনশীলতার অবিচ্ছেদ্য অংশ। এর বাইরে আপনি আর কি কিছু যোগ করতে চান?
28. Is there anything among these that you want to disagree? Why?  
এগুলোর মধ্যে এমন কিছু কি আছে যার বিষয়ে আপনি দ্বিমত পোষণ করেন? কেন?
29. Do you have any suggestion to improve the responsiveness of the physicians? [You may remind the definition and example of responsiveness from question 7]  
রোগীদের প্রতি ডাক্তারদের সংবেদনশীলতা বৃদ্ধিতে আপনার কি কোন পরামর্শ আছে?  
[সংবেদনশীলতার সংজ্ঞা এবং উদাহরণ প্রদান থেকে মনে করিয়ে দিতে পারেন]

### General Reflective Notes

- Interview setting: How private was it? How “neutral” was it? How comfortable was it? Were there interruptions?  
সাক্ষাৎকারের স্থান: এটাকতটুকু একান্ত ছিল? এটাকি ‘পক্ষপাতশূণ্য’ ছিল? এটাকতটা আরামদায়ক ছিল? কোন প্রতিবন্ধকতা ছিল কি?
- About the interviewee: What did she/he look like? Did she/he seem comfortable? Was there anything note-worthy about this interviewee (something that will help you remember him/her later)?  
সাক্ষাৎকারদাতাসম্পর্কে: তাকে কেমন দেখাচ্ছিল?  
তিনি কি আরামে ছিলেন? তার সম্পর্কে উল্লেখযোগ্য এমন কিছু কি ছিল যাতাকে ভবিষ্যতে মনে করতে সহায়তাকরবে?
- Interview summary points: What were the main points discussed?  
সাক্ষাৎকারের সাংক্ষিপ্তসার: সাক্ষাৎকারের মূল বিষয়গুলো কি ছিল?

- Reflection on quality of the IDI: What were the challenges? Successes?  
সাফল্যকারেরগুণগতমাননিয়ন্ত্রণ: চ্যালেঞ্জলোকিছিল? সাফল্য?
- What would you like to follow up on if you could conduct another IDI with this person?  
এইসাফল্যকারদাতারসাথেআবারোসাফল্যকারেরসুযোগথাকলেআপনিকিকিবিষয়েফলোআপকরতেন?

### **In-depth Interview Guideline for Clients**

Date of Interview:	Start Time:	End Time:
Interviewer's Name:	Location: Alamdanga / Damurhuda / Jibannagar	
Age:	Gender: Male / Female	Occupation:
Education:	Religion:	Number: 1 / 2 / 3 / 4 / 5

#### **Note to IDI Facilitator**

Before beginning the interview, make sure the client has provided written informed consent. Thank her/ him for agreeing to participate. Introduce yourself as a doctoral student of Johns Hopkins Bloomberg School of Public Health. Provide additional information if requested by the respondent. Take the interviews in private setting; avoid interviewing in the presence of another person, as these may bias the responses.

সাফল্যকারশুরুআগেসাফল্যকারদাতারলিখিতওয়াকিবহালসম্মতিদিয়েছেনকিনানিশ্চিতহয়নি। অংশগ্রহণসম্মতহওয়ায়তাকেধন্যবাদদিন। নিজেজেজন্মহপকিন্সরুমবার্গস্কুলঅফপাবলিকহেলথেরডক্টরেটছাত্রহিসেবেপরিচয়দিন। উত্তরদাতারআরোকিছুজানতেচাইলেতাজান। একান্তঅবস্থানেসাফল্যকারনিন, অন্যকারোউপস্থিতিতেসাফল্যকারপরিহারকরুন, কেননাতাউত্তরকেবিরূপভাবেপ্রভাবিতকরতেপারে।

#### **Introduction**

Good morning/afternoon/evening. My name is \_\_\_\_\_ and I am a doctoral student at Department of International Health in Johns Hopkins Bloomberg School of Public Health in the United States. I am here today to learn more about your perspective on the responsiveness of the physicians towards their patients. If you are ready we may proceed.

আসসালামুআলাইকুম। আমারনাম

\_\_\_\_\_। আমিআমেরিকায়ুক্তরাষ্ট্রেরজন্মহপকিন্সরুমবার্গস্কুলঅফপাবলিকহেলথেরআন্তর্জাতিকস্বাস্থ্যবিভাগেরএকজনপিএইচডিশিক্ষার্থী। আমি এখানেএসেছিযাতেআমিরোগীদেরপ্রতিচিকিৎসকদেরসংবেদনশীলতাসম্পর্কেআপনাদেরদৃষ্টিভঙ্গিকেশিখতেপারি। আপনারাপ্রস্তুতহলেআমরাশুরুকরতেপারি।

#### **Background Information**

30. Tell me about yourself, your family, your work, how much did you study, etc.

আপনারনিজেরসম্পর্কেবলুন, পরিবার, পেশা, আপনারপড়াশুনাহিত্যাদি।

31. Who are there in your household? Where do you go for seeking care if you or someone in the family is sick?

আপনারবাসায়কেকেথাকে?আপনিবাসারকেউঅসুস্থহলেসেবানিতেআপনারাকোথায়যান?

32. What types of service providers are available within your reach (distance, cost, etc.)? How do you decide which provider to consult (public, private, informal, any other)? Which providers do you consult for what types of conditions?

আপনারসীমার (দূরত্ব, মূল্য) মধ্যেকিকিধরণেরস্বাস্থ্যসেবাপ্রদানকারীআছে?কারকাছেযাবেন (সরকারী, বেসরকারী, অপ্রাতিষ্ঠানিক) তাকিসেবানিতেনির্ধারণকরেন?কোনধরণেরসমস্যাকারণেকোনসেবাপ্রদানকারীরকাছেযান?

33. What entitlements do you think you have in seeking services from a service provider?

স্বাস্থ্যসেবাদাবিকরারবিষয়েসেবাপ্রদানকারীরকাছেআপনাদেরকিধরণেরঅধিকারআছেবলেমনেকরেন?

#### **General Questions**

34. You have accessed health care several times. Please share your experience about interacting with physicians? Start with your entry into the doctor's chamber and describe one by one until you leave.

আপনারানানাসময়চিকিৎসাসেবানিয়েছেন। ডাক্তারদেরসাথেআপনাদেরমিথস্ক্রিয়ারঅভিজ্ঞতাবলুন। রুমটোকাথেকেশুরুকরবেহয়ে যাওয়াপর্বতসবগুলোধাপএকেএকেবলুন।

35. Tell me if you noticed any difference in the care provided by public sector physician, private sector physician, and village doctor?

সরকারী, বেসরকারীকিগ্রাম্যডাক্তারদেরমধ্যেএবিষয়েকিকোনপার্থক্যচোখেপড়েছে?

36. I understand you go to physicians for health issues. Apart from the technical care provided (diagnosis, advice, treatment), do you have any other expectations from the physicians, e.g., being treated with respect, privacy, confidentiality, etc.? What are your expectations apart from treatment?  
 আমরাজানিয়েআপনারামূলত: চিকিৎসাসেবাপেতেইডাক্তারেরকাছেযান। চিকিৎসাসেবারটেকনিকালদিক (ডায়াগনসিস, উপদেশ, চিকিৎসা) বাইরেও কি ডাক্তারেরকাছে থেকে আর কিছু প্রত্যাশা থাকে? যেমন: ডাক্তার আপনাকে সম্মানের সাথে কথা বলবে, আক্রমণ করে পরীক্ষা করবে, গোপনীয়তা বজায় রাখবে ইত্যাদি? চিকিৎসা ছাড়া ডাক্তারেরকাছে থেকে আপনার আর কি প্রত্যাশা থাকে?
37. Are these expectation met in the consultations? How? Why, why not?  
 ডাক্তারের পরামর্শের সময় এসব প্রত্যাশা কি পূরণ হয়? কিভাবে? কেন, কেন নয়?
38. Who is a good doctor and who is a bad doctor? Why  
 একজন ভাল ডাক্তার এবং একজন খারাপ ডাক্তার কাকে বলবেন? কেন?

### Specific Questions

39. When you consult with a physician, how usually she/he greets you? Does the physician greet you with respect?  
 আপনি যখন একজন ডাক্তারের সাথে সাক্ষাত করেন, তিনি সাধারণত কিভাবে আপনাকে সম্ভাষণ জানান? তিনি কি সম্মানের সাথে তাক করেন?
40. Doctors should ask you before starting any clinical procedure. Do they ask for your consent before performing any procedure? Do you think it is important? How important is it to you?  
 ডাক্তারের উচিত কোন প্রক্রিয়া শুরু করার আগে আপনাদেরকে জিজ্ঞেস করে নেয়া। তিনি কি কোন চিকিৎসা প্রক্রিয়া শুরু করার আগে আপনাদের সম্মতি নেন? আপনার কি মনে হয় এটা জরুরী? কতটা জরুরী?
41. Do they maintain privacy? Do you think it is an issue? In which cases do you think this is important, and where this is not so important? Have you ever asked for it? What happened if you have asked?  
 তাঁরা কি আপনাদের আক্রমণ করেন? আপনাদের কি মনে হয় এটা জরুরী কোন বিষয়? কোন কোন ক্ষেত্রে এটি বেশি জরুরী এবং কোন ক্ষেত্রে এটিবে শি জরুরী নয়? আপনি কি কখনো এ বিষয়ে ডাক্তারকে অনুরোধ করেছিলেন? এর পর কি হয়েছিল?
42. How do you feel about being explained to your disease, diagnosis, treatment, prognosis, etc.? Do the physicians explain these properly? What are your experiences in this regard?  
 রোগীকে রোগ, ডায়াগনসিস, বিকল্প চিকিৎসা, পার্শ্বপ্রতিক্রিয়া, আরোগ্য সম্ভাবনা, চিকিৎসাইত্যাদি ব্যাখ্যাকরার বিষয়টা সম্পর্কে আপনার মনোভাব কি? ডাক্তাররা কি তাক রেখে? এ বিষয়ে আপনাদের অভিজ্ঞতা কি?
43. Do the doctors allow you to ask questions? What types to questions do you like to ask to your doctors? Can you give some examples? What do they do if you ask questions? Are they usually annoyed or comfortable answering your questions?  
 ডাক্তাররা কি আপনাদেরকে প্রশ্ন করার সুযোগ দেয়? আপনারা কি ধরনের প্রশ্ন করতে চান? কিছু উদাহরণ দিন। আপনারা কোন প্রশ্ন করলে তাঁরা কি করেন? তারা কি বিরক্ত হন নাকি সুন্দর ভাবে উত্তর দেন?
44. How does the physician react to a patient if she/he wants to consult a different physician? Do you think patients have right to consult the physicians of their choice (male/female or other considerations)? Do you think it is alright, or not, for a patient to refuse to consult one physician and want to consult a different physician?  
 কোন রোগী যদি আরেকজন ডাক্তারের কাছে পরামর্শ নিতে চায়, এবং তা যদি সে ডাক্তারের কাছে প্রকাশ করে, তখন তিনি (ডাক্তার) কি প্রতিক্রিয়া দেখান? আপনার কি মনে হয় রোগীদের তাদের পছন্দমত ডাক্তার দেখানোর অধিকার আছে (নারী/পুরুষ চিকিৎসক, বা অন্য কোন বিবেচনায়)? আপনি কি মনে করেন একজন রোগীর একজন ডাক্তারকে প্রত্যাক্ষান করে অন্য ডাক্তারের কাছে যাওয়াটা সম্ভত?
45. What does a doctor do when she/he fails to handle a patient? Does she/he readily refer the patient to another doctor or does she/he try to treat by herself/himself as referring to another doctor might be bad for her/his practice? What is your perception about this issue?  
 কোন রোগীকে ম্যানেজ করতে না পারলে ডাক্তার কি করেন? তিনি কি অবিলম্বে আরেকজন ডাক্তারের কাছে রেফার করেন, নাকি নিজেই সমাধানের চেষ্টা করেন এই ভেবে যে অন্যের কাছে পাঠালে নিজের প্র্যাকটিসের ক্ষতি হতে পারে? এ বিষয়ে আপনার উল্লেখ কি?
46. How do you think respect towards the patient is commonly breached? Share your experiences in this regard.  
 আপনার মনে হয় কি কিভাবে সম্ভার চর রোগীদের প্রতি ডাক্তারের সম্মান লঙ্ঘিত হয়েছে? আপনার অভিজ্ঞতা বলা।
47. Is there any way to maintain the confidentiality of your data? Are you concerned about this?  
 আপনার তথ্যের গোপনীয়তার রক্ষার কোন উপায় কি আছে? আপনি কি এ বিষয়ে ভেবেছেন?
48. Do the physicians inform you about the preventive aspects of your disease, or do they limit the discussion to the curative aspect only?  
 ডাক্তাররা কি রোগ প্রতিরোধ বিষয়ে আপনাদেরকে কিছু বলেন, নাকি শুধু প্রতিকার বিষয়েই তাদের পরামর্শ সীমাবদ্ধ থাকে?

49. How much time do the physicians spend per patient in general? What is the difference in public, private and informal sector in this regard? Do you think the time they spend for each patient is sufficient? How much time would be sufficient?  
সাধারণভাবে একজন রোগীর পেছনে ডাক্তার কতটা সময় ব্যয় করেন? এ বিষয়ে সরকারী, বেসরকারী এবং গ্রাম্যাডাক্তারদের মধ্যে কি পার্থক্য আছে? এসময় টাকি যথেষ্ট মনে করেন? কতটা সময় দিলে যথেষ্ট হতো?
50. Do they display empathy to the patients regarding their ailments? How do they do this? Is it important? রোগীদের পীড়াসম্পর্কে ডাক্তার কি খনো সহানুভূতি দেখান? কিভাবে? এটাকি জরুরী?
51. Do doctors maintain the continuity of care? Please tell us how the doctor usually follows up with her/his patients? ডাক্তার কি ধারাবাহিক চিকিৎসা দেয়? অনুগ্রহ করে বলুন ডাক্তার কিভাবে ফলো আপ করেন?
52. Do the doctors consider the SES of the patient before prescribing drugs or diagnostic tests? ডাক্তার কি রোগীর আর্থসামাজিক অবস্থাবিবেচনা করে অশুধ, ডায়াগনস্টিক পরীক্ষাইত্যাদি পরামর্শ দিয়ে থাকেন?
53. Do physicians discriminate based on gender, religion, cast, ethnicity, SES, etc.? For example, treating the rich patient better, or neglecting the female patients ect.?  
তারাকি ধর্ম, বর্ণ, লিঙ্গ, সামাজিক অবস্থান এসব বিষয়ে রোগীদের সাথে বৈষম্যমূলক আচরণ করেন? যেমন: ধনী রোগীকে ভাল করে দেখা, অথবা নারী রোগীকে অবহেলা করা ইত্যাদি।

### Finishing Questions

54. We have talked about different aspects of taking consent, maintaining privacy, explaining things, allowing for questions, allowing to consult a different physician, referring to a different physician, respecting the patients, maintaining confidentiality, advising on preventive aspects of a disease, listening carefully, displaying empathy, addressing power differential, engaging the patients or their family members in therapy, ensuring continuity of care, considering the SES of patient, being gender sensitive, being culturally sensitive, etc.; considering these as potential components of HRH responsiveness. Is there anything else that you want to add?  
আমরা নিম্নলিখিত বিষয়গুলোর নানা দিক নিয়ে কথা বলেছি: সম্মতি গ্রহণ, গোপনীয়তার রক্ষা, ব্যাখ্যা প্রদান, প্রস্তুত করার সুযোগ দেয়া, অন্য চিকিৎসকের শরণাপন্ন হতে চাইলে তা অনুমোদন করা, প্রয়োজনে অন্য ডাক্তারের কাছে রেফার করা, রোগীর সম্মান, তথ্যের গোপনীয়তা, রোগ প্রতিরোধ সংক্রান্ত তথ্য দেয়া, মনযোগের সাথে রোগীর অভিযোগ শোনা, সহানুভূতি প্রকাশ, কর্তৃত্ব গত প্রভেদ, রোগী এবং পরিবারের সদস্যদের সম্পৃক্তকরণ, চিকিৎসার ধারাবাহিকতার রক্ষা, আর্থসামাজিক অবস্থাবিবেচনা করা, লিঙ্গ সংবেদনশীলতা, সাংস্কৃতিক সংবেদনশীলতা ইত্যাদি। কারণ আমরা ধরে নিয়েছি এসব স্বাস্থ্য খাতের মানব সম্পদের সংবেদনশীলতার অবিচ্ছেদ্য অংশ। এর বাইরে আপনি কি আর কিছু যোগ করতে চান?
55. Is there anything among these that you want to disagree? Why?  
এগুলোর মধ্যে এমন কি কিছু কি আছে যার বিষয়ে আপনি দ্বিমত পোষণ করেন? কেন?
56. Do you have any suggestion to improve the responsiveness of the physicians?  
রোগীদের প্রতি ডাক্তারদের সংবেদনশীলতা বৃদ্ধিতে আপনার কি কোন পরামর্শ আছে?  
[সংবেদনশীলতার সংজ্ঞা এবং উদাহরণ প্রদান থেকে মনে করিয়ে দিতে পারেন]

### General Reflective Notes

- Interview setting: How private was it? How “neutral” was it? How comfortable was it? Were there interruptions?  
সাফাৎকারের স্থান: এটাকতটুকু একান্ত ছিল? এটাকি ‘পক্ষপাতশূণ্য’ ছিল? এটাকতটা আরামদায়ক ছিল? কোন প্রতিবন্ধকতা ছিল কি?
- About the interviewee: What did she/he look like? Did she/he seem comfortable? Was there anything note-worthy about this interviewee (something that will help you remember him/her later)?  
সাফাৎকার দাতাসম্পর্কে: তাকে কেমন দেখা গেল?  
তিনি কি আরামে ছিলেন? তার সম্পর্কে উল্লেখযোগ্য এমন কি কিছু ছিল যা তাকে ভবিষ্যতে মনে করতে সহায়তাকরবে?
- Interview summary points: What were the main points discussed?  
সাফাৎকারের সাংক্ষিপ্তসার: সাফাৎকারের মূল বিষয়গুলোকি ছিল?
- Reflection on quality of the IDI: What were the challenges? Successes?  
সাফাৎকারের গুণগত মান নিয়ন্ত্রণ: চ্যালেঞ্জগুলোকি ছিল? সাফল্য?
- What would you like to follow up on if you could conduct another IDI with this person?  
এই সাফাৎকার দাতার সাথে আবারো সাফাৎকারের সুযোগ থাকলে আপনি কি কি বিষয়ে ফলো আপ করতে চান?

### Focus Group Discussion Guideline

## Note to focus group facilitator:

Before beginning the FGD, make sure all participants have provided written informed consent. Thank them for agreeing to participate. Introduce yourself as a doctoral student of Johns Hopkins Bloomberg School of Public Health. Do NOT introduce yourself as a doctor, or being from any local organization in the introduction (unless asked specifically by any respondent). Doing this could bias participants' responses.

দলগত আলোচনা শুরু করার আগে সব অংশগ্রহণকারী লিখিত ওয়াকিবহাল সম্মতি দিয়েছেন কিনা নিশ্চিত হয়ে নিন। অংশগ্রহণে সম্মত হওয়ায় তাদের কে ধন্যবাদ দিন। নিজেকে জন্মহপকিঙ্ক মবার্গ স্কুল অফ পাবলিক হেলথের ডক্টরেট ছাত্র হিসেবে পরিচয় দিন। নিজেকে একজন চিকিৎসক হিসেবে, কিনা অন্য কোন স্থানীয় প্রতিষ্ঠানের সদস্য হিসেবে পরিচয় দেবেন না (যদি না এ বিষয়ে কোন অংশগ্রহণকারীর সুনির্দিষ্ট প্রশ্নের সম্মুখীন হন)। কেননা এটি উত্তরকে বিরূপ ভাবে প্রভাবিত করতে পারে।

## Introduction

Good morning/afternoon/evening. My name is \_\_\_\_\_ and I am a doctoral student at Department of International Health in Johns Hopkins Bloomberg School of Public Health in the United States. I am here today to learn more about your perspective on the responsiveness of the physicians towards their patients. If you are ready we may proceed.

আসসালামু আলাইকুম। আমার নাম

\_\_\_\_\_। আমি মার্কিন যুক্তরাষ্ট্রের জন্মহপকিঙ্ক মবার্গ স্কুল অফ পাবলিক হেলথের আন্তর্জাতিক স্বাস্থ্যবিভাগের একজন পিএইচডি শিক্ষার্থী। আমি এখানে এসেছি যাতে আমি রোগীদের প্রতি চিকিৎসকদের সংবেদনশীলতাসম্পর্কে আপনার দৃষ্টিভঙ্গি থেকে শিখতে পারি। আপনার প্রস্তুত হলে আমরা শুরু করতে পারি।

Before we start, I want to explain how the discussion will work.

শুরু করার আগে এই আলোচনা কিভাবে সংঘটিত হবে তা ব্যাখ্যা করতে চাই।

→ Ask participants for agreement on some basic FGD rules:

→ অংশগ্রহণকারীদেরকে এফজিডি সংক্রান্ত কিছু মৌলিক নিয়মকানূনের ব্যাপারে সম্মত হতে অনুরোধ করুন

- We want to learn from you – we're not from [name of the upazila] – we don't know how things are in [name of the upazila] – you are the experts.  
আমরা আপনার কাছ থেকে শিখতে চাই- আমরা [উপজেলার নাম] বাসিন্দা নই – আমরা [উপজেলার নাম] এর অবস্থা সম্পর্কে জানিনা। আপনারাই এলাকা সম্পর্কে ভাল জানেন।
- There are no right or wrong answers.  
এখানে সঠিক বা ভুল উত্তর বলে কিছু নেই।
- We want to hear from everyone – everyone's comments are equally valuable.  
আমরা আপনারা সবার কাছ থেকেই শুনতে চাই- সবার মতামতই সমান মূল্যবান।
- You don't need to wait for me to call on you. This is a discussion; so if you have something to say, just say it.  
আমি আপনাকে কখন ডাকব তার জন্য অপেক্ষা করার দরকার নেই। এটা একটা আলোচনা; কাজেই যখনই মনে হবে আপনি কিছু বলতে চান,

Date of FGD:	Start Time:	End Time:
Moderator's Name:	Location: Alamdanga / Damurhuda / Jibannagar	
Type of Clients: Males / Females	Number of Participants:	FGD Number: 1 / 2 / 3 / 4

বলে ফেলুন।

- Raise your hand so that we can record everyone's response clearly.  
আপনার হাত তুলুন যাতে আমরা সবার কথাই আমরাসুন্দরভাবে রেকর্ড করতে পারি।
- It's OK to disagree with something someone else says, but don't be disagreeable – be polite.  
আরেকজনের মতামতের সাথে আপনি একমত নাও হতে পারেন, এতে কোন সমস্যা নেই, কিন্তু কোন বিবাদে জড়াবেন না। বিনয়ের সাথে বলুন।
- Please turn off all cell phones and other electronic devices.  
মোবাইল ফোন বন্ধ রাখুন।
- Everything you say is very valuable to my research and I don't want to miss anything. So, if you agree, I want to turn on the recorder. If you feel uncomfortable about recording, just let me know; I will turn off the recorder right away.



আপনারযেখাগুলোবলবেনতারসবইআমারকাছেঅত্যন্তগুরুত্বপূর্ণএবংআমিএসবেরকিছুথেকেইবঞ্চিতহতেচাইনা।তাই, যদিআপনারাসম্মতিদেন, আমিআমাররেকর্ডারচালুকরতেচাই।আপনিযদিআপনারকোনকথারেকর্ডকরারব্যাপারেঅস্বস্তিবোধকরেন, আমাকেসাথেসাথেজানান।আমিতৎক্ষণাতরেকর্ডারবন্ধকরেদেব।

## Background Information

1. Have group members introduce themselves. Keep a separate worksheet [attached at the end of this document] table with the basic demographic information of the respondents.  
দলেরসবাইকেনিজনিজপরিচয়দিতবেলুন।একটিপৃথককাগজে [এইকাগজেরশেষেসংযুক্তআছে] সবারমৌলিকজনমিতিকতথ্যলিপিবদ্ধকরুন।
2. Warm up question: Tell me about your family and friends. Who are there in your household? Where do you go for seeking care if someone in the family is sick?  
পরিচিতিমূলকপ্রশ্ন: আমাদেরকেআপনারপরিবারএবংবন্ধুবান্ধবসম্পর্কেবলুন।আপনারবাসায়কেকেথাকে?  
বাসারকেউঅসুস্থহলেসেবানিতেআপনারাকোথায়যান?

## General Questions

3. You have accessed health care several times. Please share your experience about interacting with physicians? Tell me if you noticed any difference in the care provided by public sector physician, private sector physician, and village doctor?  
আপনারানানাসময়চিকিৎসাসেবানিয়েছেন।ডাক্তারদেরসাথেআপনাদেরমিথষ্ক্রিয়ারঅভিজ্ঞতাবলুন।সরকারী, বেসরকারীকিন্মাগ্রাম্যডাক্তারদেরমধ্যেএবিষয়েকোনপার্থক্যচোখেপড়েছে?
4. I understand you go to physicians for health issues. Apart from the technical care provided (diagnosis, advice, treatment), do you have any other expectations from the physicians, e.g., being treated with respect, privacy, confidentiality, etc.? What are your expectations apart from treatment?  
আমরাজানিয়েআপনারামূলত: চিকিৎসাসেবাপেতেইডাক্তারেরকাছেযান।চিকিৎসাসেবারটেকনিকালদিক (ডায়াগনসিস, উপদেশ, চিকিৎসা) বাইরেওকিডাক্তারেরকাছেথেকেআরকিছুপ্রত্যাশাকে? যেমন: ডাক্তারআপনাকেসম্মানেরসাথেকথাবলবে, আক্রমণাকরেপরীক্ষাকরবে, গোপনীয়তাবজায়রাখবেইত্যাদি? চিকিৎসাছাড়াডাক্তারেরকাছেথেকেআপনাদেরআরকিছুপ্রত্যাশাকে?
5. Are these expectation met in the consultations? How? Why, why not?  
ডাক্তারেরপরামর্শেরসময়এসবপ্রত্যাশাকিপূরণহয়?কিভাবে?কেন, কেননয়?
6. How do you think the physicians should treat you (apart from clinical care)?  
ডাক্তারেরআপনাদেরকেকিভাবেসেবাদেয়াউচিত (চিকিৎসাছাড়াও)?
7. Who is a good doctor and who is a bad doctor? Why  
একজনভালডাক্তারএবংএকজনখারাপডাক্তারকাকেবলবেন?কেন?

## Specific Questions

8. When you consult with a physician, how usually she/he greets you? Does the physician greet you with respect?  
আপনিযখনএকজনডাক্তারেরসাথেসাক্ষাতকরেন, তিনিসাধারণতকিভাবেআপনাকেসম্ভাষণজানান?তিনিকিসম্মানেরসাথেতাকরেন?
9. Doctors should ask you before starting any clinical procedure. Do they ask for your consent before performing any procedure?  
ডাক্তারেরউচিতকোনপ্রক্রিয়াশুরুরআগেআপনাদেরকেজিজ্ঞেসকরেনেয়া।তিনিকিকোনচিকিৎসাপ্রক্রিয়াশুরুরআগেআপনাদেরসম্মতিনেন?
10. Do they maintain privacy? Do you think it is an issue? In which cases do you think this is important, and where this is not so important?  
তঁরাকিআপনাদেরআক্রমণাকরেন?আপনাদেরকিমনেহয়এটাজরুরীকোনবিষয়?কোনকোনক্ষেত্রেএটিবেশিজরুরীএবংকোনক্ষেত্রেএটিবেশিজরুরীনয়?
11. How do you feel about being explained to your disease, diagnosis, treatment, prognosis, etc.? Do the physicians explain these properly? What are your experiences in this regard? Do they allow you to ask questions? What do they do if you ask questions?  
রোগীকোরোগ, ডায়াগনসিস, বিকল্পচিকিৎসা, পার্শ্বপ্রতিক্রিয়া, আরোগ্যসম্ভাবনা, চিকিৎসাইত্যাদিব্যাখ্যাকরারবিষয়টাসম্পর্কেআপনাদেরমনোভাবকি?ডাক্তাররাকিতাকরেথাকে?এবিষয়েআপনাদেরঅভিজ্ঞতাকি?ডাক্তাররাকিআপনাদেরকেপ্রশ্নকরারসুযোগদেয়?আপনারাকোনপ্রশ্নকরলেতঁরাকিকরেন?

12. Do you ever feel like consulting a different physician than the current one? Do you think it is fine with the current physician if you express about changing her/him? How do you usually deal this issue?  
আপনাদেরকি কখনো মনে হয় যে এই ডাক্তার না দেখিয়ে আরেক জনের কাছে দেখালে ভাল হত? আপনাদের কি মনে হয়, যদি অন্য ডাক্তার দেখান রকম আপনাদের বর্তমান ডাক্তার কে বলেন, বর্তমান ডাক্তার তা সহজ ভাবে নেবে? আপনারা এই বিষয় টা কি ভাবে মোকাবেলা করেন?
13. Do the physicians inform you about the preventive aspects of your disease, or do they limit the discussion to the curative aspect only?  
ডাক্তাররা কি রোগ প্রতিরোধ বিষয়ে আপনাদেরকে কিছু বলেন, নাকি শুধু প্রতিকার বিষয়েই তাদের পরামর্শ সীমাবদ্ধ থাকে?
14. Do the physicians listen carefully and attentively to you? Do you think the time they spend for each patient is sufficient? What else could they do?  
ডাক্তাররা কি রোগীর রোগ সংক্রান্ত অভিযোগ ধৈর্য ও যত্ন সহকারে শোনেন? সাধারণ ভাবে একজন রোগীকে যতটা সময় তারা দেন, সেটিকি যথেষ্ট মনে করেন? তারা আর কি করতে পারতেন?
15. Do physicians discriminate in this regard based on gender, religion, cast, ethnicity, SES, etc.? For example, treating the rich patient better, or neglecting the female patients ect.?  
তারাকি ধর্ম, বর্ণ, লিঙ্গ, সামাজিক অবস্থান এসব বিষয়ে রোগীদের সাথে বৈষম্য মূলক আচরণ করেন? যেমন: ধনী রোগীকে ভাল করে দেখা, অথবা নারী রোগীকে অবহেলা করা ইত্যাদি।
16. How important do you think is maintaining the dignity of the patients during consultations? How much of it is done? Share your experiences? How the situation may be improved? What are your expectations in this regard?  
রোগীর সম্মান রক্ষা করে পরামর্শ দেয়া টা কতটুকু জরুরী বলে মনে করেন? এরকমটুকু তারা কতখানেক করেন? আপনাদের অভিজ্ঞতা বলা। এই পরিষ্টিতিকা ভাবে ভাল করা যেতে পারে? আপনাদের প্রত্যাশা কি এই বিষয়ে?

### Finishing Questions

17. Is there anyone who wants to add to or disagree with any point? If you have any question for me, you can ask it too.  
এসবের মধ্যে এমন কি ছুঁকি আছে যার সাথে আপনারা আরো কিছু যোগ করতে চান, অথবা কোন কিছু র সাথে দ্বিমত করতে চান?  
আমার কাছে আপনাদের কোন প্রশ্ন থাকলে তা-ও করতে পারেন।

### Wrap-up

- Thank you all for participating. Your comments have been very helpful.  
অংশগ্রহণের জন্য আপনাদের সবাইকে অনেক ধন্যবাদ। আপনাদের মন্তব্যগুলো অত্যন্ত কাজের ছিল।

### General Reflective Notes

57. FGD setting: How private was it? How “neutral” was it? How comfortable was it? Were there interruptions?  
আলোচনার স্থান: এটা কতটুকু একান্ত ছিল? এটাকি ‘পক্ষপাতশূণ্য’ ছিল? এটা কতটা আরামদায়ক ছিল? কোন প্রতিবন্ধকতা ছিল কি?
58. About the participants: What did they look like? Did they seem comfortable? Was there anything note-worthy about them (something that will help you remember him/her later)?  
অংশগ্রহণকারী সম্পর্কে: তাদেরকে কেমন দেখাচ্ছিল?  
তারাকি আরামে ছিলেন? তাদের সম্পর্কে উল্লেখযোগ্য এমন কি ছুঁকি ছিল যা তাদেরকে ভবিষ্যতে মনে করতে সহায়তা করবে?
59. FGD summary points: What were the main points discussed?  
আলোচনার সংক্ষিপ্তসার: সাক্ষাৎকারের মূল বিষয়গুলো কি ছিল?
60. Reflection on quality of the IDI: What were the challenges? Successes?  
সাক্ষাৎকারের গুণগত মান নিয়ে ভাবনা: চ্যালেঞ্জগুলো কি ছিল? সাফল্য?
61. What would you like to follow up on if you could conduct another IDI with this person?  
এই সাক্ষাৎকার দাতার সাথে আবারো সাক্ষাৎকারের সুযোগ থাকলে আপনি কি কি বিষয়ে ফলো আপ করতে ন?

### Basic Demographic Information of the Participants

#### অংশগ্রহণকারীদের মৌলিক জনমিতিক তথ্য

Name নাম	Age বয়স	Gender লিঙ্গ	Occupation পেশা	Education শিক্ষা	Religion ধর্ম


**Appendix 9: List of Data Sources, Data Collector, and Location in Qualitative Part**

<b>Serial Number</b>	<b>Data Source</b>	<b>Data Collector</b>	<b>Location</b>
1	IDI of Public Sector Physician 1	Taufique Joarder	Jibannagar
2	IDI of Public Sector Physician 2	Taufique Joarder	Jibannagar
3	IDI of Informal Provider 1	Taufique Joarder	Alamdanga
4	IDI of Public Sector Physician 3	Taufique Joarder	Alamdanga
5	IDI of Informal Provider 2	Taufique Joarder	Alamdanga
6	IDI of Public Sector Physician 4	Taufique Joarder	Damurhuda
7	IDI of Private Sector Physician 1	Taufique Joarder	Damurhuda
8	IDI of Private Sector Physician 2	Taufique Joarder	Damurhuda
9	IDI of Private Sector Physician 3	Taufique Joarder	Alamdanga
10	IDI of Private Sector Physician 4	Taufique Joarder	Alamdanga
11	IDI of Informal Provider 3	Taufique Joarder	Damurhuda
12	IDI of Private Sector Physician 5	Taufique Joarder	Jibannagar
13	IDI of Public Sector Physician 5	Taufique Joarder	Damurhuda
14	IDI of Informal Provider 4	Taufique Joarder	Damurhuda
15	IDI of Client 1	Taufique Joarder	Alamdanga
16	IDI of Client 2	Taufique Joarder	Damurhuda
17	IDI of Client 3	Taufique Joarder	Damurhuda
18	IDI of Client 4	Taufique Joarder	Jibannagar
19	IDI of Informal Provider 5	Taufique Joarder	Alamdanga
20	FGD with Male Clients 1	Taufique Joarder	Alamdanga
21	IDI of Client 5	Taufique Joarder	Alamdanga
22	FGD with Male Clients 2	Taufique Joarder	Alamdanga
23	FGD with Female Clients 3	Heeyam Sayeed (Female RA)	Alamdanga
24	FGD with Female Clients 4	Heeyam Sayeed (Female RA)	Alamdanga
25	IDI of Client 6	Abir Hossain (Male RA)	Alamdanga
26	IDI of Client 7	Abir Hossain (Male RA)	Alamdanga
27	IDI of Public Sector Physician 6	Abir Hossain (Male RA)	Alamdanga
28	IDI of Public Sector Physician 7	Abir Hossain (Male RA)	Alamdanga
29	PO of Informal Providers	Taufique Joarder	Alamdanga
30	PO of Private Sector Providers	Taufique Joarder	Damurhuda
31	PO of Public Sector Provider	Taufique Joarder	Jibannagar

## Appendix 10: Codebook of Qualitative Part of the Research

### All current codes

#### 1. Background information p1, c1, f1, k1

This code describes the educational and career background of the respondents

#### 2. Why came to this profession p2

Why did the physician or the key informant choose medical profession

#### 3. Experience of working/satisfaction p3, k2 o16

How is the experience of the physician or key informants about working as a physician; how do they feel about this in general. This code also describes why they are satisfied or dissatisfied with their role/job

#### 4. Providers c2, f2

Where does the respondent take family members when they are sick?

#### 5. Type of provider c3

What are the types of providers within the reach of the respondent?

#### 6. Decision about provider c3

Based on what does the provider decide which type of provider to consult.

#### 7. General experience c5, f3

General experience that a patient thinks noteworthy about his/her encounter with a doctor

#### 8. Consultation process p4, c5, o13, o18, o19, o21, o22, o23

This code is about the steps of consultation in general.

#### 9. Greetings p4, c10, f8, o13, o20, o22, o23

Whether the doctor greets, and if he/she does, how does he/she do it.

#### 10. Importance of responsiveness vs. clinical competence p5

What is the view of the physician regarding the importance of responsiveness? Whether responsiveness or clinical competency is more important; or both are equally important to him/her?

#### 11. Lacking of doctors in responsive care p5, p6, p8, p17, p22

This code describes what the lacking of the physicians are in providing care with responsiveness [inductive code]

#### 12. Non medical expectations p6, c4, c7, f4, k4

This code describes what physicians and patients think about what a patient may expect from a physician, which are not directly related to the therapy.

#### 13. Entitlement as a patient c4

What entitlements does a patient think he/she has from a doctor?

#### 14. Non-legitimate expectations p7, k5

This code describes the expectations, which the physicians consider not to be legitimate.

#### 15. Fulfillment/non-fulfillment of expectation c8, f5, f14, o17, o45, o54

Whether these expectations are met in consultations, why, why not [this question was omitted from FGD, but this issue came many times as response to other questions]. [Inductive code]

#### 16. What would be added in ideal condition p8

This code describes what physicians would add to their existing practice if they were given an ideal condition. This code will supplement to 'Lacking of doctors in responsive care'.

#### 17. Good doc c9, f7

Who, according to patients, is a good doctor?

#### 18. Bad doc c9, f7

Who, according to patients, is a bad doctor?

#### 19. Constraints or barriers p9, p10, p17, p22, k6

This code describes the constraints or barriers against doctors to provide care with responsiveness.

#### 20. Training of doctors p9, k8, k10, o56

This code describes if there is any deficiency in the training of the physicians, which they receive either from medical colleges or during career (in-service training). [Inductive code]

#### 21. Difference in public, private sector and informal sectors p10, c6, f3, k7, o1-56

This code describes if there is any difference in responsiveness between doctors in public sector and private sector.

#### 22. Positive things p10

There may be some positive or appreciative approaches from government or in private sector in improving responsiveness. This code covers the positive sides. This also includes some positive things about the patients as reported by the providers. [Inductive code]

#### 23. Taking consent p11, c11, f9, o13, o24, o26

This code describes if the respondent thinks taking consent from patients before performing a procedure is necessary or not. They also explain in favor of their response. They also explain in which conditions they think taking consent is necessary, if any.

#### 24. Maintaining privacy p12, c12, f10, o13, o27

This code describes whether maintaining privacy of the patient during consultation is important to them or not. This also describes if they manage to maintain it or not. They also explain if there is any situation where maintaining or not maintaining privacy may be important.

#### 25. Explaining to patients p13, p26, c13, f11, o13, o25, o28

This code describes if the respondent thinks it is important to explain to the patients their disease, diagnosis, treatment options, side effects, etc. This also explains which explanations doctors provide, if any. It also explains if the respondents think that giving explanation is not necessary in certain conditions.

**26. Asked whether patient understood o52**

Whether the doctor asked if the patient could understand his/her instructions. [Inductive code]

**27. Allowing to ask questions p14, c14, f11, o13, o29**

This describes if the physicians think they should allow the patient to ask questions.

**28. Bad questions p14, c14, f11, o13**

Whether there are some irrelevant questions, which a patient is not expected to ask. What is the reaction of physicians to these questions. [Inductive code]

**29. Questions coming to patients' mind c14, f11**

What types of questions does a patient want to ask to a doctor?

**30. Reaction if patient wants to consult a different doctor p15, c15, f12, o13, o31, o35**

This describes the reaction of the physicians if a patient wants to consult a different doctor and expresses it to him/her; or if the patient just ask for doctor's suggestion about consulting a different doctor.

**31. Referral p16, c16, f12, o13, o51**

Whether the doctors refer patients if he/she fails to treat a patient

**32. Showing respect p17, k3, o13, o21, o22, o32**

Whether doctors acknowledge the importance of showing respect to the patients, and how the doctors usually show respect to the patients.

**33. Breaching respect p17, c17, k3, o13, o32, o33**

How the respect towards the patients is usually breached. Examples of breach of respect.

**34. Confidentiality of patients' information p18, o13, o34**

Whether it is important to maintain the confidentiality of patient's data/information. How it is maintained.

**35. Consciousness of patients about confidentiality p18, c18**

Whether patients are concerned about maintaining the confidentiality of their data. In which cases are they concerned?

**36. Preventive aspects p19, c19, f13, o13, o36**

Whether doctors inform the preventive aspects of a disease. Examples of such suggestions.

**37. Time for patients\_reality p20, c20, f14, o55**

How much time a doctor usually gives a patient in reality. Difference in public and private sector, if any.

**38. Time for patients\_should be given p20, c20, f14**

How much time should ideally be given to a patient.

**39. Empathy/ Reassurance p21, c21, o13, o38**

Whether and how empathy/ reassurance [inductive code; respondents' response to this question is better termed 'reassurance' than 'empathy'] is shown to the patients.

**40. Doctor patient conflict p22, o9, o12, o13, o15, o33, o54**

How frequently conflict (in Bengali the term 'misunderstanding' is used) takes place between doctors and patients. Why and how these occur?

**41. Engaging the patients p23, o13, o42**

Is there any way to engage the patients or their family members in therapeutic process. [This question was not very relevant for the OPD patients]

This may be discarded from the scale item, because this is more relevant with the in-door patients. Neither doctors nor patients talked much about this.

**42. Follow up p24, p29, c22, o13, o40, o53**

If there is any way to follow up with the patients. How this can be improved. This also includes if the patients could access their medical records for future use.

**43. Considering SES p25, c23, o13, o43**

Whether doctors consider the socio-economic status of the patients before prescribing.

**44. Discrimination c24, f15, o13, o30, o44**

Does the physicians discriminate based on gender, SES, political power, religion, ethnicity, disease condition (e.g., TB, leprosy, STD) or anything else?

**45. Respect for culture/ local innovation p26, o13, o47**

Whether the doctors show respect or sensitivity towards the people of specific cultural, religious, ethnic groups (cultural sensitivity). How?

**46. Gender sensitivity p26, f16, o13, o46**

Whether the doctors show respect or sensitivity towards the female patients (gender sensitivity). Is there any instance of being gender insensitive? How?

**47. Household language p26, o13, o47**

Whether doctors talk to the patients in a household language or do they speak using medical jargon.

**48. Maintaining individuality o22, o23, o39**

Whether the doctors maintained the individuality of patients, e.g., calling them by their names.

**49. Suggestions/demands p27, p28, p29, c25, c26, c27, f16, f17, k8, k10, o56**

If respondent wants to add or subtract to the issues discussed. What are their suggestions to improve responsiveness of physicians?

This code also includes some demands expressed by the providers to provide better or responsive care. Mostly the informal providers mentioned these.

**50. Policy issues and guidelines k8, k10**

What, according to respondents, are the upstream policy issues in making the doctors more responsive? How these may be addressed?

**51. Resistance k9**

What could be the potential source of resistance in formulating and implementing policies to improve the responsiveness of physicians?

**52. Location o1**

Location and surrounding of the observation site

**53. Condition o2**

General condition of the health center in terms of cleanliness, condition of basic amenities, etc.

**54. People o3, o5, o14**

Type of people coming to the health facility, and what they do

**55. Operations o4**

Basic operations, e.g., how patients enroll for treatment, where do they wait, where do they get medicine, etc.

**56. Service hours o6**

Start of consultation, break, end of office hour

**57. General interactions o7, o12**

General interaction between different stakeholders in the health center.

**58. Patient flow o8, o14**

General flow of patient with their socio demographics

**59. Transport o10**

Transport of patients and doctors

**60. Types of disease o11**

Types of diseases, as understood from their chief complaints, history, severity

**61. Patients o14**

General observation of patients

**62. Asking name o22**

Whether the doctors asked patients' name. Did they call them by the name? Or was it just for writing on prescription

**63. Introduction by doctors o23**

Did doctors introduce themselves to the patients

**64. Power differential o23**

Was there expression of power differential between patient and doctor? How?

**65. Appearance o48**

Appearance of the physician, whether it was clean, whether he was on professional attire.

**66. Discipline o49**

How discipline was maintained in consultation room

**67. Under the table cost o50**

Where there was any under the table cost involved?

**68. Stories**

Real life stories of doctors and patients

**69. Quotes**

Quotations from doctors and patients

**70. Frustrations**

Frustrations of doctors either or not directly related to responsive care; but indirectly related to responsiveness. These frustration may deter the doctors from providing care responsiveness in the long run. [Inductive code]

**71. Local political pressure/security o33**

Many doctors mentioned about the undue influence of local political leaders. This often breaches the security of the doctors, often leading to quarrels and fights. This hampers the responsiveness of the doctors too. [Inductive code]

**72. Cope up with constraints and other problems**

Doctors adopt different means to cope up with the constraints, pressures from local political thugs, etc. [inductive code]

**73. Reaction to questions**

Doctors often react to the patients' questions. Interestingly, informal care providers seemed more patient about allowing questions. [Inductive code]

**74. Time desired by pts according to doc**

Time desired by patients, as reported by doctors [inductive code]

**75. Pts exploiting the service o33**

This code describes how patients may exploit the services either in public or in private sector. This also includes doctors' complaints about the patients. [Inductive code]

**76. Waiting time**

We asked the respondents about the consultation time, but some of them pointed out that waiting time can also be an important factor for responsiveness [Inductive code]

**77. Good/bad communication**

Explaining the disease and treatment to the patient is important, but there are issues which are not related to the therapy only. For example, it is important to communicate with the patient beforehand regarding the unavailability of doctor, equipment, drugs or other facilities. This code deals with those type of communications. [Inductive code]

**78. Complaints against doctors**

What are the main complaints of patients about the doctors, from doctors' perspective. This was not asked to the doctors or patients directly; but both doctors and patients hinted about this matter directly and sometimes indirectly. Patients' perspective is reported in code 15. [Inductive code]

**79. Expression of mistrust**

This was not asked explicitly, but many patients expressed their mistrust about the doctors either directly or indirectly. This code describes the expressions of mistrust as expressed by the patients. [Inductive code]

**80. Listen attentively and carefully o37**

Whether doctor listened attentively and carefully

## Appendix 11: Broad Category of Codes

Code category	Code number				
1) Background or context related codes	1, 2, 3, 4, 5, 6, 10, 52, 53, 54, 55, 56, 58, 59, 60				
2) General consultation process related codes	7, 8, 11, 15, 16, 40, 57, 61, 78, 79				
3) Initial item generating codes	12, 13, 16, 17, 18				
4) Inductive and deductive codes pertaining to responsiveness domains	Friendliness	Respecting	Informing and guiding	Gaining trust	Optimizing benefit
	9, 63, 48, 62, 77, 39, 47, 64	32, 33, 80, 23, 45, 27, 28, 29, 73, 44, 46, 65, 66, 24	40, 30, 41, 25, 26, 36, 42	34, 35, 31, 79, 67	43
5) Codes to determine which expectations might not be legitimate	14, 24, 28, 29, 33, 34, 37, 38, 40, 41, 57, 61, 73, 74, 76				
6) Constraints to provide responsive care	11, 19, 20, 70, 71, 72, 75				
7) Suggestions to improve HRH responsiveness	20, 22, 49, 50, 51				
8) Difference in responsiveness of public, private and informal providers	21				
9) Quotations and stories	68, 69				

**Note:** Numbers represent the code number in Appendix10



## Appendix 12: List and Sources of All Items in Quantitative Structured Observation Tool

Variable Number	Item	Source: formative (qualitative) research	Source: literature review	Reference
1	<b>Greetings by doctor</b>	√	√	Fassaert et al., 2007; Makoul, 2001
2	<i>Response of doctor to patient's greetings</i>	√		
3	Self Identification by doctor		√	Blanchard et al., 1983; Rodriguez et al., 2012
4	<b>Asking patient's name</b>	√	√	Abdulhadi et al., 2006; Carey & Seibert, 1993; Forouzan et al., 2011; Rodriguez et al., 2012; Wolf et al., 1978)
5	<b>Engaging in social talks</b>	√	√	Abdulhadi et al., 2006; Beck et al., 2000; Blanchard et al., 1983; Boon & Stewart, 1998; Fassaert et al., 2007; Makoul, 2001; White et al., 1991
6	<b>Asking about patient's family</b>	√	√	Blanchard et al., 1983
7	<b>Friendliness</b>	√	√	Abdulhadi et al., 2006; Beck et al., 2000; Walbridge & Delene, 1993; Wolf et al., 1978
8	<b>Showing respect explicitly</b>	√	√	Beck et al., 2000; Carey & Seibert, 1993; Darby et al., 2000; DeSilva, 1999; Elwyn et al., 2005; Forouzan et al., 2011; Hsu et al., 2006; Letkovicova et al., 2005; Rao et al., 2006; Stewart, 1984
9	<b>Listening to patient's complaints completely</b>	√	√	Fassaert et al., 2007; Rao et al., 2006; Wolf et al., 1978
10	<b>Listening to patient's complaints attentively</b>	√	√	Abdulhadi et al., 2006; Beck et al., 2000; Coulter & Jenkinson, 2005; Fassaert et al., 2007; Forouzan et al., 2011; Hsu et al., 2006; Letkovicova et al., 2005; Rao et al., 2006
11	<i>Counseling on social or family issues if related to the disease</i>	√		
12	<i>Home visit by doctor</i>	√		
13	<b>Examining the patient with care</b>	√	√	White et al., 1991
14	<i>Taking consent in particularly necessary conditions</i>	√		
15	Taking consent in general		√	DeSilva, 1999; Letkovicova et al., 2005
16	<i>Maintaining confidentiality of information</i>	√	√	DeSilva, 1999; Letkovicova et al., 2005
17	<b>Suggestions on disease prevention and health promotion in general</b>	√	√	Abdulhadi et al., 2006; Beck et al., 2000; Darby et al., 2000; Makoul, 2001; Rao et al., 2006; Rice et al., 2008a; Sirven et al., 2008; Valentine et al., 2007
18	<i>Referral practice</i>	√	√	White et al., 1991
19	<i>Consultation with colleagues if in confusion</i>	√		
20	<i>Allowing patients to choose</i>	√	√	Coulter & Jenkinson, 2005; Darby et al., 2000; DeSilva, 1999; Forouzan et

	<i>doctors</i>			al., 2011; Letkovicova et al., 2005; Murray et al., 2001; Nigel Rice et al., 2008; Valentine et al., 2007; WHO, 2000
21	<b>Giving courage and reassurance</b>	√	√	Abdulhadi et al., 2006; Beck et al., 2000; Forouzan et al., 2011; White et al., 1997
22	<b>Earning trust of patients</b>	√	√	Blanchard et al., 1983; Makoul, 2001; Wolf et al., 1978
23	<b>Service oriented, not businesslike attitude</b>	√	√	White et al., 1997
24	<i>Not sending patients to specific diagnostic centers</i>	√		
25	Involving patients in care related decision making		√	Boon & Stewart, 1998; Coulter & Jenkinson, 2005; DeSilva, 1999; Forouzan et al., 2011; Letkovicova et al., 2005; Makoul, 2001; Murray et al., 2001; Nigel Rice et al., 2008; Sirven et al., 2008; Valentine et al., 2007; WHO, 2000
26	<i>Considering individual need of the patient</i>	√	√	Forouzan et al., 2011; Hsu et al., 2006; Levinson et al., 2008; Makoul, 2001; Walbridge & Delene, 1993
27	Considering religious and cultural orientation of the patient	√	√	Fernandez et al., 2004; Thom & Tirado, 2006; Werkmeister-Rozas & Klein, 2009
28	<i>Facilitating utilization of local resources</i>	√	√	Forouzan et al., 2011; Thom & Tirado, 2006
29	<b>Considering socio-economic status of the patient</b>	√		
30	<b>Trying to understand socio-economic status of the patient</b>	√		
31	<b>Informing the cost of treatment/ financial counseling</b>	√	√	Walbridge & Delene, 1993; Wolf et al., 1978
32	<b>Providing financial assistance if needed</b>	√		
33	<b>Facilitating follow-up</b>	√	√	Forouzan et al., 2011; Schirmer et al., 2005; Walbridge & Delene, 1993; White et al., 1991
34	<b>Quantity of issues explained and the quality of explanation</b>	√	√	Beck et al., 2000; Wolf et al., 1978
35	<b>Quantity of issues explained</b>	√	√	Boon & Stewart, 1998; Rao et al., 2006
36	<i>Explaining everything to the patient by the doctor himself</i>	√		
37	<b>Asking patient if s/he understood the explanation</b>	√	√	Abdulhadi et al., 2006; Coulter & Jenkinson, 2005; Forouzan et al., 2011; Letkovicova et al., 2005; Thom & Tirado, 2006; White et al., 1997; Wolf et al., 1978
38	<b>Explaining the cause of disease to the patient</b>	√		
39	<b>Explaining the diagnosis of disease to the patient</b>	√	√	Carey & Seibert, 1993; Morphet et al., 2012

40	<b>Explaining the prognosis of disease to the patient</b>	√	√	Blanchard et al., 1983; White et al., 1997; Wolf et al., 1978
41	<b>Explaining the treatment to the patient</b>	√	√	Abdulhadi et al., 2006; Blanchard et al., 1983; Carey & Seibert, 1993; Mashego & Peltzer, 2005; Rao et al., 2006; White et al., 1997; Wolf et al., 1978
42	<b>Explaining the preventive aspects to the patient</b>	√	√	White et al., 1997
43	<i>Explaining the side effects of the treatment to the patient</i>	√	√	Beck et al., 2000; Makoul, 2001
44	<i>Explaining the result of tests to the patient</i>	√	√	Blanchard et al., 1983; White et al., 1997; Wolf et al., 1978
45	Allowing patient to ask questions	√	√	Beck et al., 2000; DeSilva, 1999; Letkovicova et al., 2005; Rao et al., 2006
46	<i>Answering patient's questions by doctor himself</i>	√		
47	<i>Keeping patience in patient's irrelevant questions</i>	√		
48	<b>Encouraging patient to ask questions</b>	√	√	Abdulhadi et al., 2006; Beck et al., 2000
49	<b>Listening attentively to patient's questions</b>	√	√	Beck et al., 2000
50	<b>Not using jargon</b>	√	√	Beck et al., 2000; Bernhart et al., 1999; Fassaert et al., 2007; Fernandez et al., 2004; Makoul, 2001; Wolf et al., 1978
51	<i>Communicating limitations to the patient at the outset</i>	√		
52	<b>Closing salutation by doctor</b>	√	√	Abdulhadi et al., 2006; Beck et al., 2000; White et al., 1991; White et al., 1997
53	<i>Responding to patient's closing salutation</i>	√		
54	Legibility of prescription	√		
55	Not showing hierarchical difference	√	√	Forouzan et al., 2011
56	Gender sensitivity	√	√	Berlan & Shiffman, 2012; Haaland & Vlassoff, 2001
57	Interruption during consultation	√	√	Beck et al., 2000; Fassaert et al., 2007; Makoul, 2001; Rhoades, McFarland, Finch, & Johnson, 2001
58	Appearance of doctor	√	√	Andaleeb, 2001; Walbridge & Delene, 1993
59	<i>Establishing discipline in consultation room</i>	√	√	Andaleeb, 2001
60	<b>Non-verbal communication by doctor</b>	√	√	Abdulhadi et al., 2006; Beck et al., 2000; Boon & Stewart, 1998; Fassaert et al., 2007
61	<b>Compassionately touching the</b>	√	√	Beck et al., 2000; Blanchard et al., 1983

	<b>patient by doctor</b>			
62	<b>Not being involved in illegal activities</b>	√	√	Andaleeb, 2001
63	<b>Sense of humor</b>	√	√	Beck et al., 2000; Hojat et al., 2002; White et al., 1997
64	Relaxedness and confidence		√	Fassaert et al., 2007; Stewart, 1984

Italicized items (n = 19) were dropped due to being defective (i.e., more than 50% non-response or missing values)

Bold font items (n = 34) are included in the final version of the item

## Appendix 13: Structured Observation Tool (Full Version-64 Items)

# Understanding and Measuring Responsiveness of Human Resources for Health in Rural Bangladesh

## Structured Observation Tool

### 1. General Identification Questions

**Instruction to the observer:** Fill out these information's just before starting the interview with the doctor and structured observation. Take the first photo of the consultation room (with patients and the doctor if possible) during this time. Take the second photo after the consultation.

2. Observation ID
3. Observer ID
4. Date of observation
5. Location of observation
6. Observation setting: Public sector/private sector
7. Type of provider (in case of private sector): Exclusively Private/ both public and private but observed in private setting only/ both public and private and observed in both settings
8. Geospatial data (longitude/ latitude) [This is best captured in open space]
9. Starting time of observation
10. Ending time of observation

### 11. Questions for the Doctor

**Instruction to the observer:** Ensure you have obtained the consent from both the patients and the doctor. Greet the doctor; introduce yourself, and record this information.

12. ID of the doctor [Write the name, which will be replaced by a numeric ID later]
13. Age of doctor [in years]
14. Gender
15. Degrees [E.g., MBBS, FCPS (Medicine)]
16. Medical College [E.g., Khulna Medical College]
17. Year of graduation
18. Number of months in practice [Including internship]
19. Number of months working in this upazila
20. Number of months working in rural settings
21. Is the doctor originally from this area? [Yes/ No]
22. How many patients does the doctor attend on an average in a typical day (if the observation is in public sector, doctor should give an estimate of patients attended per day in public sector setting and vice versa)? [Feeds into 89]

### 23. Observation Items

**Instruction to the observer:** Be present while consulting with 11 patients. Do not record first 10 observations. Fill out the tool on the basis of last (11th) observation.

#### Exclusion Criteria:

Do not include the following patients in your observation: Those who are below 18 years, suffering from gynecological diseases, venereal diseases, emergency patients and patients suffering from diseases where it is necessary to examine private parts (i.e., where extra privacy is required).

#### **Beginning part**

24. Patients expect that the doctor will greet and welcome the patient, make the patient feel comfort, accept the patient cordially, reply the patient's greetings and ask the patient's well being. Assess the role of the doctor in this regard by 1 to 4 where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor started writing the prescription without any greeting. If the patient	The doctor expressed minimum greetings to the patient. If the patient greeted first, doctor responded to the	The doctor greeted and welcomed the patient; however, it was not enough to make the patient easy or friendly. If the patient greeted first, doctor gave his answer in words when the	The doctor greeted warmly and welcomed the patient friendly and became easy with him. If the patient greeted first, doctor cordially answered the patient's and also exchanged greeting.

greeted first, the doctor even did not respond to the greetings of the patient.	patient's greetings indirectly (by shaking head, lifting eyes, shaking hand etc.). <b>Following greetings among the traditional greetings in this country might have been included:</b> asking the name of the patient, asking him to take a seat etc.	patient gave salam. <b>Following greetings among the traditional greetings in this country might have been included:</b> giving salam to the patient (Saying Adab/Nomoskar to the Hindus and others as per their religion), asking the name of the patient, asking his well beings (how are you/what's the matter), appropriate salutation like mother, father, brother, sister, sister-in-law, asking to take a seat, exchange smiles etc.	<b>Following greetings among the traditional greetings in this country might have been included:</b> giving salam to the patient (Saying Adab/Nomoskar to the Hindus and others as per their religion), asking the name of the patient and calling in his name, asking his well beings (how are you/what's the matter), appropriate salutation like mother, father, brother, sister, sister-in-law, saluting 'Babu' (in case of children), Sweetly etc. Asking to take a seat, asking whether he had his breakfast, asking about his residence and profession, smiling at him; to shake hands with him; showing respect to the aged person by standing up etc.
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25. In our country usually patients give Salam to the doctors in most of the cases. The patients expect that the doctor will start consultation after replying Salam and asking the patient's well being. Assess the role of the doctor in this regard by 1 to 4 where 1-completely unsatisfactory and 4-completelysatisfactory. Possible observations are as follows: **[Use N/A in case the patient did not greet first.]**

NA-----1-----2-----3-----4			
The patient gave Salam/ greetings to the doctor, but he did not reply.	The doctor replied the patient's greetings by gesture (moving neck, eye expression, moving hand etc.), but did not say anything in words.	The doctor replied in brief in response to patient's greetings. As for example by moving neck, eye expression and at the same time by saying Olaikum Salam.	The doctor replied the patient's greetings completely and cordially and also s/he himself exchanged some greetings.

26. The patients become confused if they do not know the doctor's identity (especially the doctor's designation, e.g., Medical Officer, Sub Assistant Community Medical Officer etc. or specialty, e.g., pediatrician, gynecologist etc.). So, it is necessary to make arrangement for showing the identity in any consultation. Assess the role of the doctor in this regard by 1 to 4 where 1-completely unsatisfactory and 4-completelysatisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
If none of the issues mentioned below is present.	If any of the issues mentioned below is present.	If any two of the following issues are present.	If all of the following three issues are present.
<b>There may be following measures for showing the identity:</b> The doctor's name and designation was visibly mentioned outside the consultation room. Inside the room the doctor's identity was written in front of the doctor or in the nameplate in his body. The doctor introduced himself with the patients before consultation.			

27. Patients expect that the doctor will ask patient's name at least and will treat the patient as a person. Assess the role of the doctor in this regard by 1 to 4 where 1-completely unsatisfactory and 4-completelysatisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor did not consider asking the name of the patient as necessary or just asked the name for writing in the prescription.	The doctor asked the name of the patient but it was not seemed that he listened to the patient by giving importance or attention.	The doctor asked the name of the patient and listened attentively. But did not call her/ him in that name.	The doctor asked the name of the patient, listened attentively and also called her/ him in that name.

28. The patient expects that the doctor will not only listen to his problem but also do some social talks and listen to the patient if he does any social talk. Assess the role of the doctor in this regard by 1 to 4 where 1-completely unsatisfactory and 4-completelysatisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor did not do any social talk with patient. Even he stopped the patient when the patient started to do some social talks.	The doctor did minimum social talk or responded when the patient started social talk. <b>In this case following social talks might have been included:</b> Who are there in the family etc.	The doctor did some social talk or responded when the patient started social talk. <b>In this case following social talks might have been included:</b> The patient’s profession, family members etc.	The doctor got involved completely into social talk or if the patient started, he participated satisfactorily into social talks. <b>In this case following social talks might have been included:</b> The patient’s profession, education, children, family members, weather etc.

29. The patient expects that doctor will also ask about his family. Assess the role of the doctor in this regard by 1 to 4 where 1-completely unsatisfactory and 4-completelysatisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor did not ask anything about the family of the patient or there was nothing in this regard during his consultation.	The doctor did not want to know anything about the family of the patient but there were some talking regarding this in his advice. That means it was a part of his treatment but not a social talk.	The doctor wanted to know about the family of the patient but not in details. That was not a part of the treatment rather a part of social talk. <b>For example:</b> how many members are there in his family, how many children, are they all well etc.	The doctor wanted to know about the family of the patient in details cordially. That was not a part of the treatment rather a part of social talk. <b>For example:</b> how many members are there in his family, how many children, are they all well etc.

30. Patients expect that the doctor will be friendly. Assess the role of the doctor in this regard by 1 to 4 where 1-completely unsatisfactory and 4-completelysatisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor was not friendly.	The doctor was friendly at a minimum level.	The doctor was somewhat friendly.	The doctor was fully friendly.
<b>The example of friendliness may be:</b> remembering the name and face of the patient and calling him by name (here ‘calling by name’ means calling by name of the patient in a friendly manner); asking or making comment about an event of the patient’s family; praising the patient (about clothing or anything else); asking for an opinion of the patient about anything (weather, politics etc.)			

31. Patients do not expect misbehave rather expect good behavior from the doctor. Assess the role of the doctor in this regard by 1 to 4 where 1-completely unsatisfactory and 4-completelysatisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor misbehaved with the patient.	The doctor neither misbehaved nor behaved well with the patient.	The doctor showed least but not much respect. <b>As for example:</b> replying salam and good-bye, talking softly with the patient etc.	The doctor showed respect to the patient perfectly. <b>The example of showing respect to the patient perfectly may be:</b> giving honor to an aged patient by standing up, helping an aged patient to sit down, giving Salam or at least replying when patients give Salam, talking softly with the patient etc.
<b>Examples of behavior showing disrespect might be:</b> Bargaining for money, using bad words, denying to provide treatment etc.; stopping the patient in the middle; talking in an authoritative tone, misbehaving, scolding etc.; getting the patient out of the room; “Do you know more than me? Then why did not you become a doctor?”-Telling such etc.			

## History Taking

32. Patients expect that the doctors will start writing the prescription after listening to the symptoms in detail and completely. Assess the role of the doctor in this regard by 1 to 4 where 1-completely unsatisfactory and 4-completelysatisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor did not listen to the patient attentively. The doctor stopped the patient while describing his complaint.	The doctor listened to some of the patient's complaints, but at some stage doctor stopped the patient either by verbal or non-verbal cues. Doctor had gone to the next step (examining, prescribing, etc.) before the patient finished describing his complaints.	The doctor listened to patient's complaints, did not stop the patient in the middle. But doctor had gone to the next step (examining, prescribing, etc.) before the patient finished describing his complaints.	The doctor heard the patient up to the end, did not interrupt (except necessary questions). He started next step only when the patient completed the description of the disease in details.

33. Patients expect that the doctor will listen to them attentively with patience and that would be expressed by his behavior. Assess the role of the doctor in this regard by 1 to 4 where 1-completely unsatisfactory and 4-completelysatisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor did not show attentiveness and patience in his behavior and language.	The doctor showed at least minimum attentiveness and patience in his behavior and language (e.g., At least one of the following things, <b>but did not ask questions</b> )	The doctor showed attentiveness and patience in his behavior and language to some extent (e.g., <b>Asking questions to learn more</b> and any two of the following).	The doctor showed attentiveness and patience clearly and fully by his behavior and language (all or most of the following).
<b>Behaviors indicating attentiveness and patience may be:</b> shaking head while talking, looking at the patient, asking questions to learn more, variation in tone, smiling face, some interest expressing words (e.g., Ok, hm etc.)etc.			

34. Patients expect that the doctor would help to solve the family problem that is related to his disease (e.g., torturing by husband, family feud, etc.) with the help of the concerned person of that area (e.g., political representative, administrative personnel, health sector personnel, etc.). Assess the role of the doctor in this regard by 1 to 4 where 1-completely unsatisfactory and 4-completelysatisfactory. Possible observations are as follows: **[Use N/A if there is no such patient.]**

NA-----1-----2-----3-----4			
The doctor did not take any step in this regard.	Though the doctor gave some suggestions in this matter, but did not get involved.	The doctor did not escape the matter rather tried to help the patient. However, it was not completely satisfactory.	The doctor informed the concerned person at once by calling or by some other means and made arrangement to solve the problem promptly. In this regard the role of the doctor was completely satisfactory.

35. Patients expect that doctor should visit their home for treatment when necessary. Assess the role of the doctor in this regard by 1 to 4 where 1-completely unsatisfactory and 4-completelysatisfactory. Possible observations are as follows: **[Use N/A if patients did not request doctor to visit his/her home.]**

NA-----1-----2-----3-----4			
He said 'No' rudely.	Did not go, however, explained it and even did not behave rudely.	Went reluctantly.	Went readily.

## Examination

36. Patients expect that the doctor would do the necessary physical examination with care. Assess the role of the doctor in this regard by 1 to 4 where 1-completely unsatisfactory and 4-completelysatisfactory. Possible observations are as follows: **[Use 'N/A' if the patient does not come with a problem which require physical examination or if it is not clear whether the problem requires physical examination. If it is seemed that the problem requires physical examination,**



**but doctor does not examine, fill in the field '1'. Do not fill in 'N/A' field if the doctor conducted any physical examination./**

NA-----1-----2-----3-----4			
The doctor did not examine the patient any more.	The doctor examined the patient at least once (only measured body temperature or pulse rate etc.).	The doctor measured the body temperature, blood pressure, pulse rate etc. (which were necessary) with some care.	The doctor measured the body temperature, blood pressure, pulse rate etc. and did all with care.
The example of examining the patient physically may be: telling the patient politely to fold up his sleeves, telling the patient that what he is going to do etc.			

37. Patients expect that the doctor would take consent from the patient at least in some particularly necessary conditions. Assess the role of the doctor in this regard by 1 to 4 where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[Use 'N/A' if there is no such particularly necessary case for taking consent (e.g., exposing the patient, touching, etc.) or if female patients do not come to a male doctor (e.g., male patient to male doctor, female patient to female doctor, and male patient to female doctor) or if it is not possible to observe somehow (e.g., if doctor or patient does not allow the observer in the room, if it falls under the exclusion criteria)]**

NA-----1-----2-----3-----4			
The doctor just ignored taking consent.	The doctor took consent at a minimum level. <b>As for example:</b> telling the female patient before doing any physical examination by a male doctor (e.g., I will do your ultra sonography, please fold up your sleeves as I am going to measure your blood pressure, etc.).	The doctor took consent somewhat properly. <b>As for example:</b> asking consent from the female patient in clear language before doing any physical examination by a male doctor (e.g., Mother, I will do this, do you agree?)	The doctor took consent perfectly. <b>As for example:</b> telling the patient before doing any examination and asking consent from the patient about it; keeping a female attendant if the male doctor examines a female patient, etc.
<b>The patients consider it particularly necessary to take consent when:</b> placing the stethoscope on the chest of a female patient by a male doctor; uncovering any covered part of the body or touching a part of the body while examining (except touching the forehead for fever). <u>Though it is necessary to take consent in following cases, but it would not be possible to observe, as the observer is not allowed to stay in the room. The observer would go outside the room and use 'NA' in these situations.</u> Examining the private parts of any patient; doing PR and PV; uncovering the abdomen of a female patient by a male doctor for examination; examining anybody by taking off the cloths; examining the appendix of a female patient by a male doctor etc.			

38. A good practice is that, a doctor should inform the patient before doing any examination and take consent of the patient. Assess the role of the doctor in this regard by 1 to 4 where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[Use 'NA' if it is not necessary to take consent (i.e., if no physical examination is done). Do not use 'NA' if any physical examination is done.]**

NA-----1-----2-----3-----4			
The doctor examined in spite of the unwillingness and/or disagreement of the patient.	The doctor indirectly made the patient understand that he is going to do a physical examination. (E.g., uncovering the machine for measuring blood pressure, indicating the bed for doing examination etc.). As the patient did not say anything or did not protest, so it had been considered as 'implied consent'.	The doctor had verbally told the patient what he was going to do, but did not take his consent properly. <b>As for example:</b> I will examine your that organ (the name of the organ).	The doctor had said the patient that what he was going to do and took consent clearly. <b>As for example:</b> "Mother/father, I want to examine your that organ (name of the organ). Do you have any problem? Can I see it?"

39. Disclosure of information given by the patient about some sensitive issues may be harmful for him especially from the social point of view. Assess the doctor's role for not disclosing the information outside by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[Use 'NA' if there were no such patient, if it could not be understood whether the information were sensitive, or if it was not possible to observe due**

to any reason (such as, if the doctor or patient does not allow the observer in the room, if it falls under the exclusion criteria).]

NA-----1-----2-----3-----4			
The doctor did not play any role.	The doctor had minimal role. Some of the following points were observed.	The doctor had some role. Some of the following points were observed.	The doctor played role completely. Almost all of the following points were observed.
<p><b>Doctor can play the following roles:</b> Allowing nobody in the room except the doctor and the patient; if patient comes with his attendant, then talking to them separately; telling nothing if anybody wants to know anything about the disease or patient by introducing himself as the relative of the patient; assuring the patient that their conversation would be kept secret; ensuring that nobody heard their conversation from outside.</p> <p><b>Sensitive topics may include the following:</b> if an unmarried woman conceives, if a woman conceives though her husband lives abroad, tuberculosis, venereal disease, infertility.</p>			

### Prescription Writing

40. Patients expect that the doctor would not only treat the disease but also suggest some measures on disease prevention and health promotion. It may be or may not be directly related to the patient's disease. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

[This information is about common disease prevention and health promotion measures; specific prevention measures are given later]

NA-----1-----2-----3-----4			
The doctor did not ask anything about the disease prevention and health promotion did not suggest anything in this regard.	Doctor indirectly told about some disease prevention and health promotion measures; but that came as part of the patient's disease condition. (The doctor told at least one of the following measures.)	The doctor asked the patient about the disease prevention and health promotion and also gave some suggestions in this regard. (The doctor told more than one of the following measures)	The doctor asked the patient about disease prevention and health promotion. He also advised the patient for leading a healthier life in details.
<p><b>Disease prevention and health promotion measures may be:</b> using sanitary latrines, habit of hand washing, vaccinating children, giving breast milk to the infants, physical activity or exercise, giving up smoking, general cleanliness, avoiding fatty foods, using germ-free water, eating nutritious food etc.</p>			

41. Patients expect that the doctor would refer the patient to another doctor immediately, if he cannot diagnose or treat the disease himself. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: [Use 'NA' if it is not necessary to refer the patient to another doctor or if it is not understood whether referring is required or not. If the patient required a referral (and the observer understood that), but if the patient was not referred, then fill out '1'. Do not fill in the 'NA' if patient was referred to another doctor.]

NA-----1-----2-----3-----4			
Even though the doctor knew that he would not be able to treat the disease, he did not refer the patient to another doctor. Or, the patient went away from the hospital at his own accord or was compelled to accept low-quality treatment.	The doctor did very late to realize that he would not be able to treat the patient, or he referred the patient only when the patient requested him. Or, he did not perform most of the <b>standard referral activities but one or two of the following:</b> explaining his limitations to the patient, telling where to take the patient, writing the address of the doctor/hospital where to take the patient, sending the information of the patient to the referred place beforehand etc. He referred the patient without care.	The doctor realized after a short time that he would not be able to treat the patient. He did all or some (at least 3) of the <b>following standard referral activities:</b> explaining his limitations to the patient, telling where to take the patient, writing the address of the doctor/hospital where to take the patient, sending the information of the patient to the referred place beforehand etc.	The doctor realized quickly that he would not be able to treat the patient, explained his limitations to the patient, told where to take the patient, wrote the address of the doctor/hospital where to take the patient, sent the information of the patient to the referred place beforehand etc. He satisfactorily did all the tasks related with referring the patient.

**Note:** If the patient is sent for a diagnostic test, or if he is advised to consult the doctor with the result of the test- then it is not considered as a referral.

42. Patients expect that the doctor would discuss with his colleague, another nearest doctor or anybody having knowledge about the disease if the doctor has some confusion or does not understand anything clearly about the treatment. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[Fill in the ‘NA’ field if the doctor is not unable to provide treatment, or if it is not understood whether he is unable to provide treatment. If the doctor’s inability is visible to the observer, but if the doctor does not consult with anybody, fill out '1'. If the doctor consulted with others, do not fill out 'NA'. ]**

NA-----1-----2-----3-----4			
Although the inability of the doctor for treating the disease was observed (such as inability to understand X-ray, ECG, ultra sonogram, inability to diagnose skin diseases confidently etc.), he did not ask anybody (nearest doctor, SACMO, nurse or by phone call).	Although the inability of the doctor for treating the disease was observed (such as inability to understand X-ray, ECG and ultra sonogram, inability to diagnose skin diseases confidently etc.), he did not tell it directly to his patient. He asked somebody (nearest doctor, SACMO, nurse or by phone call) with hesitation and unwillingness.	Although the inability of the doctor for treating the disease was observed (such as inability to understand X-ray, ECG and ultra sonogram, inability to diagnose skin diseases confidently etc.), he did not tell it directly to his patient. He asked somebody (nearest doctor, SACMO, nurse or by phone call) about it promptly.	The doctor clarified his inability or confusion to the patient and provided treatment after discussing with a related person promptly.

43. Often patients cannot choose the right doctor (Neurologist, Cardiologist etc.) for their diseases. Often they want to go to male/female doctor and expect to consult with the nearest doctor. They expect that they would consult with the doctor and the doctor would provide suggestion free of cost. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[Fill in the ‘NA’ field if no patient comes with such issue.]**

NA-----1-----2-----3-----4			
The doctor did not suggest anything when patient came with such purpose.	The doctor gave suggestion but rudely or it was not suitable for the patient.	The doctor was reluctant to suggest. However, his behavior was not rude.	The doctor suggested the patient sincerely and cordially.

44. Patient wants courage and assurance from the doctor. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor neither said anything nor behaved in such a way that expressed reassurance.	The doctor reassured either verbally or nonverbally (speech or behavior).	The doctor reassured both verbally and nonverbally. (There should be both speech and behavior).	The doctor showed most of the reassurance expressing speech or behavior (there should be both speech and behavior).
<b>Reassurance expressing speech and behavior may be:</b> You have no problem; you will be all right; nothing has happened to you; there is nothing to be worried; I would be able to cure your disease, inshallah, etc.-such type of speech; putting hands on the shoulder of the patient, giving him courage by holding his hand, giving courage by putting hand on the body-such type of behavior			

45. Patients want to have trust on the doctor. The doctor should not tell or do anything, which might breach the trust; rather he should behave for earning trust. Here ‘trust’ means **“The doctor advised for maximizing the patient's benefit, not for maximizing his own benefit.”** In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
Most of the behaviors (at least two) of the doctor were such that might	Some behaviors (at least one) of the doctor were	The doctor did not behave such that might cause breach of trust of the patient. However, he also did not do	The doctor did not behave such that might cause breach of trust of the patient.

break the trust of the patient.	trust breaking.	anything for earning the trust of the patient.	However, he tried to earn the trust of the patient.
<p><b>Examples of such behavior that may cause breach of trust:</b> telling the patient to do test from any specific diagnostic center (but if the patient himself asks where to do the test and the doctor tells the name in response, then it will not be considered as breach of trust), encouraging to buy medicines of a specific pharmaceutical company, telling the patient under consultation of a govt. doctor to go to a private clinic, seeing private patients by a public doctor during office hour (moonlighting) etc.</p> <p><b>Examples of activities to gain the trust:</b> Explaining the necessity to the patient if any test has been given.</p>			

46. Patients expect service-oriented attitude from the doctor and consider business-oriented attitude as unwanted. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
Most of the behaviors (at least two) of the doctor were such that the patient might think those as business oriented attitude.	Some behaviors (at least one) of the doctor might be considered as of business oriented to the patient.	The doctor did not do anything that might be considered as business oriented to the patient. However, the doctor's behavior was not service oriented also.	The doctor did not do anything that might be considered as business oriented to the patient. Rather, the doctor's behavior was service oriented.
<p><b>Behaviors expressing business oriented attitude may be:</b> telling the patient to do test from any specific diagnostic center, encouraging to buy medicines of a specific pharmaceutical company, taking money from patients forcibly, telling the patient under consultation of a govt. doctor to go to a private clinic, etc.</p> <p><b>Examples of service-oriented attitudes may be:</b> asking the patient's ability to bear the cost of treatment, if necessary assisting the patient in getting low-cost medical care and so on.</p>			

47. Patients most dislike if the doctor tells the patient to do diagnostic tests from any specific diagnostic center. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[Fill in the 'NA' field if no test is prescribed.]**

NA-----1-----2-----3-----4			
The doctor forced the patient to do tests from a specific diagnostic center.	The doctor advised the patient to do tests from a specific diagnostic center but did not force him to do so.	The doctor did not advise the patient directly to do tests from a specific diagnostic center. However, he indirectly did (such as, do you want to do test from any good diagnostic center?).	The doctor did not suggest any specific place for doing tests; even he did not do so indirectly.
<p><b>Note:</b> It would not be considered as negative if the doctor suggests doing tests from the upazila health complex or any other public organizations; because it is possible at low prices and the doctor does not have the chance of any benefit.</p>			

48. A good practice is that, the patient should participate in making decisions regarding treatment. He should be informed about different treatment options, treatment cost and advantages and disadvantages of each option. The doctor should help the patient to choose the best option by considering patient's personal and social conditions and the doctor should respect the patient's choice. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor did not make the patient participative in making decisions regarding treatment.	The doctor told the patient about different treatment options. He informed about advantages and disadvantages of those options.	The doctor told the patient about different treatment options, informed about advantages and disadvantages of those options and helped the patient to choose the best option for him by considering patient's personal and social	The doctor told the patient about different treatment options. He gave idea about treatment cost and informed about advantages and disadvantages of those options. He helped the patient to choose the best option for him by considering patient's personal and social conditions. The doctor honored the patient's choice.

		conditions.	
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49. Each patient is an individual person and the patient's environment (context) is also different; so their needs are also different. Patients expect that the doctor would provide treatment to comply with the patient's individual need. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[Fill in the 'NA' field if patient does not inform the doctor about his problem to comply with the prescribed treatment.]**

NA-----1-----2-----3-----4			
The patient informed the doctor about his problem to receive the prescribed treatment. The doctor did not adjust his treatment; rather rudely informed that the issue was not under his jurisdiction or that he is unable to solve the matter.	The patient informed the doctor about his problem to receive the prescribed treatment. The doctor did not adjust his treatment; he politely informed that the issue is not under his jurisdiction or that he is unable to solve the matter.	The patient informed the doctor about his problem to receive the prescribed treatment. Then the doctor adjusted his treatment. However, the doctor did not make sure whether the patient would be able to follow the changed prescription.	The patient informed the doctor about his problem to receive the prescribed treatment. The doctor adjusted his treatment after listening to the patient attentively. The doctor made sure that the patient would be able to follow the changed prescription.
<b>Examples of contextual and the individual need of the patient may be:</b> considering the obstacles of patient's personal and social life (referring the patient to a distant place, coordinating the treatment schedule with children's examination and the patient's job, etc.).			

50. Doctors should prescribe treatment considering the religious and cultural orientation of the patient. What was the status of such cultural sensitivity at the suggestion of the doctor? In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor was culturally insensitive.	The doctor did not do any kind of culturally insensitive behavior. However, he also did not leave an example of a culturally sensitive behavior.	The doctor demonstrated at least minimum level of cultural sensitivity during consultation.	The doctor demonstrated cultural sensitivity clearly more than once in various steps of consultation.
<b>Examples of cultural sensitivity may be:</b> making adjustment while giving medicine to a Muslim patient during Ramadan, giving advice to the patient to eat less fried food at 'iftari', telling the patient to eat fruits that are available during that season (or refraining from suggesting out of season fruits), not giving advice of doing or eating anything which is religiously prohibited, giving idea about the disease and treatment by using some local languages (e.g., using 'giving gas' instead of nebulization, 'Jor chumka' instead of febrile convulsion, 'lukewarm water' for giving idea of hot water etc.), using simple examples to explain the advice given (such as RC Cola Bottle head equivalent drugs, mixing a pinch of salt, one handful gur etc.), explaining in plain Bangla language after using medical terminology (e.g., <i>puj</i> instead of 'pus cell', <i>hojom hoe jabe</i> instead of 'it will be absorbed', etc.) and so on. <b>Examples of cultural insensitivity may be:</b> Suggesting any diet to the patient which is religiously prohibited, advising such fruit or food which is not available in that season; using medical terminology; using very formal language which the patient cannot understand; wearing such a dress which is socio-culturally unacceptable.			

51. It is expected from the doctor that they would facilitate the service at the locality of the patient. So, doctors should know about the resources available in the locality of the patient and give suggestion accordingly. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[Fill in the 'NA' field if no such patient comes or if it cannot be understood.]**

NA-----1-----2-----3-----4			
The doctor did not want to know about the local resources; even he did not take it seriously when patient told.	The doctor did not want to know about local resource on his own. However, he adjusted his treatment when the patient told.	The doctor wanted to know about the local resource on his own, he adjusted his treatment depending on the patient's answers.	The doctor wanted to know about the local resource on his own, took the patient's answers seriously, adjusted his treatment depending on the patient's answers and gave

		necessary advices.
<b>Examples of local resource maybe:</b> there may be a service provider in the patient's community who may inject medicine or saline; The patient may have a relative at home who can help the patient in the treatment (reminding medicine, exercise etc.).		

52. Patients expect that the doctors would consider the financial strength of the patients and help the patients to get treatment within their ability. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[Fill in the 'Not Applicable' field if all treatment is provided at free of cost or if the treatment is very cheap (Diarrhea, common cold and fever etc.).]**

NA-----1-----2-----3-----4			
None of the three steps of financial assistance to the patient was followed. The doctor even did not help the patient when needed; he did not explain the patient and even he did not show sympathy.	One of the three steps of financial assistance to the patient (examples are given below) was followed. Even he helped the patient when needed (at least one of the following helps); the doctor explained when he could not help and showed sympathy.	Two among three steps of financial assistance to the patient (examples are given below) were partially followed. Even he helped the patient when needed (at least one of the following helps); the doctor explained when he could not help and showed sympathy.	Two among three steps of financial assistance to the patient (examples are given below) were fully followed. Even he helped the patient when needed (more than one of the following helps); the doctor explained when he could not help and showed sympathy.
<b>It is necessary to follow three steps for providing financial assistance to the patient:</b> Trying to understand the financial condition of the patient; giving idea about treatment cost; helping the patient if necessary. <b>Example of trying to understand the financial condition of the patient may be:</b> Asking the patient directly about his income or whether he would be able to bear the treatment cost; Asking him indirectly (such as, asking his profession); if the patient tells. Beside these, it might be guessed by observing the patient's conversation, behavior and clothing or the doctor might have idea about local people-however, but it is difficult to understand through observation. <b>Example of giving idea about cost of treatment may be:</b> How much would be needed to complete the treatment; how long the treatment may continue; what impact the patient would be able to put on his ability of income during and after receiving treatment. <b>Example of helping the poor patient may be:</b> Prescribing low cost antibiotics; taking less or no consultation fee (in case of private doctors); helping patients from 'poor fund'; helping forgetting free medicines from the hospital (in case of government doctors);giving time and advice to collect money; focusing on the history and physical examination to avoid investigation; prescribing the essential tests only; cutting the commission paid to the doctor for each test; recommending that treatment method to the patient which saves money (meeting the nutritional needs from domestic sources, suggesting the pregnant woman to spend money for nutritious food instead of repeated ultra sonography etc.) and so on.			

53. Patients expect that the doctor would try to understand the socio-economic condition of the patient before providing treatment. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[Fill in the 'Not Applicable' field if the patient is visibly financially solvent or if treatment is given at free of cost or if treatment cost of the disease is smaller amount (diarrhea, common cold and fever etc.).]**

NA-----1-----2-----3-----4			
The doctor did not try to understand the patient's financial condition.	The doctor heard and understood when the patient told willingly.	The doctor indirectly asked him (such as, he asked the profession of the patient) that whether he would be able to bear the cost of the treatment.	The doctor directly asked him that whether he would be able to bear the cost of the treatment.

54. Patients expect that the doctors would give them idea about treatment cost before starting treatment. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[If all medications are given free of cost, or if the treatment is very cheap (diarrhea, common cold) then fill in the 'NA 'field]**

NA-----1-----2-----3-----4			
The doctor did	The doctor gave minimum	The doctor gave rough idea to	The doctor himself told the patient in

not give any idea about the cost of treatment to the patient, even if the patient asked.	idea to the patient about the treatment cost and did so when patient wanted to know. <b>Examples might be:</b> how much will it cost to complete the treatment.	the patient about the treatment cost or did so when the patient asked. <b>In this case examples of giving idea might be:</b> how much will it cost to complete the treatment, how long treatment may continue on etc.	details about the treatment cost. <b>Examples of giving idea might be:</b> how much will it cost to complete the treatment, how long treatment may continue on and what would be the impact on the earning ability of the patient after completion of the treatment etc.
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55. Patients expect that the doctor would help them if they become unable to bear the cost of the treatment. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[If the patient is visibly affluent, or the doctor confirmed his ability to bear the cost by asking the patient, then fill in the 'NA' field.]**

NA-----1-----2-----3-----4			
The doctor did not help the patient by any means.	The doctor did minimum helps from the following list (at least one) to the patient.	The doctor did some helps from the following list (at least two) to the patient.	The doctor did almost all helps from following list to the patient.
<b>The examples of helping the poor patient may be:</b> Prescribing low cost antibiotics, taking less or no consultation fee (in case of private doctors), providing financial assistance to the poor patients, helping in getting free medicines from the hospital (in case of government doctors), giving time and advice to obtain money for treatment, trying to focus on the history and physical examination to avoid investigation, prescribing the essential tests only, deducting the commission paid to the doctor for each test, recommending the treatment method that saves money (to meet the nutritional needs from domestic sources, suggesting the pregnant woman to spend money for nutritious food instead of repeated ultra sonography etc.) and so on.			

56. Patients expect that the doctors would facilitate post treatment follow-up and give them a follow-up plan. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor did not give any follow-up plan to the patient.	The doctor gave <b>minimum</b> follow-up plan to the patient. <b>At least</b> he told when to come to the doctor again and what would be the cost of follow-up.	The doctor gave the patient a somewhat fair follow-up plan. At least he told when to come to the doctor again and what would be the cost of follow-up. Beside this, at least one of the following points was included.	The doctor willingly gave the patient a complete follow-up plan. Almost all of the following points were included.
<b>Complete follow-up plan could be:</b> When the patient would meet the doctor again; in which case the patient should contact the doctor before; if necessary, how the patient can reach the doctor; providing mobile number to the patient; telling about follow-up costs; follow-up should be at free of cost; to write down what the patient should come up with at the time of follow-up (or at least tell); telling to inform the doctor immediately if any of the side effects of treatment arise etc. <b>Note:</b> Often doctors suggest the patients to meet them again after doing any test. It would not be regarded as follow-up because it is not a part of sensitivity but a part of the treatment process.			

### Explanations and Questions

57. Patients expect that the doctor would explain everything to them, such as cause of the disease, diagnosis (at least the name of the disease), prognosis and severity, treatment (at least explaining the prescription), side effects of the medicines (if any), report of diagnostic tests (if any), preventive measures of disease (Diet) etc; he would do it by himself (that means he would not give this responsibility to his assistant or pharmacist, rather he would tell it) and ask the patient whether he has understood. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[Follow two steps for answering this question: at first, guess a score on the basis of three parameters of giving explanation. Later, adjust the score on the basis of the number and quality of explained issues.]**

NA-----1-----2-----3-----4
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Explained, he himself explained, asked whether understood – no one of these three points is positive.	Explained, he himself explained, asked whether understood –one of these three points is positive.	Explained, he himself explained, asked whether understood-two of these three issues are positive.	Explained, he himself explained, asked whether understood- all of these three issues are positive.
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58. Patients expect the doctor would explain everything to them, such as cause of the disease, diagnosis (at least the name of the disease), prognosis and severity, treatment (at least explaining prescription), the side effects of the drugs (if any), the result of diagnostic tests (if any), preventive measures of disease (Diet) etc. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor did not explain anything to the patient. He only wrote the prescription.	The doctor explained at least one thing to the patient. Such as: diagnosis (at least the name of the disease), treatment (at least explaining prescription) etc.	The doctor explained many issues to the patient. Such as: diagnosis (at least the name of the disease), treatment (at least explaining prescription), the result of diagnostic tests (if any), preventive measures of disease (Diet) etc.	The doctor explained everything to the patient. Such as: cause of the disease, diagnosis (at least the name of the disease), treatment (at least explaining prescription), the side effects of the drugs (if any), the result of diagnostic tests (if any), preventive measures of disease (Diet) etc.

59. Patients expect that the doctor (i.e., not his assistant, pharmacist or anyone else) would explain different aspects about the patient’s disease (in this case, diagnosis, treatment and diet) to them. He would not leave this task on anybody else (such as, his assistant, pharmacist, etc.).In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[Fill in the ‘Not Applicable’ field if at least three issues (such as diagnosis, treatment and diet) are not explained.]**

NA-----1-----2-----3-----4			
The doctor told the patient to go to another person (assistant, pharmacist, any other person) for explanation of all three issues.	The doctor explained one of the three issues; he told the patient to go to another person (assistant, pharmacist, any other person) for explanation of two issues.	The doctor explained two of the three issues; he told the patient to go to another person (assistant, pharmacist, any other person) for explanation of one issue.	The doctor explained diagnosis of the disease (name of the disease), treatment and diet to the patient. He did not involve any one else for this task.

60. It is extremely important that the patient understands all suggestions or explanations given by the doctor. The doctor should be sure that the patient understands him. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[If the doctor does not explain anything, then fill in the ‘Not Applicable’ field; because there is no question of understanding, if he does not explain anything.]**

NA-----1-----2-----3-----4			
The doctor did not ask the patient about his understanding after explaining him the cause of the disease, diagnosis (name of the disease), prognosis, treatment etc.	The doctor asked the patient about his understanding after explaining him at least one (especially name of the disease and/or treatment) of the following issues, such as, cause of the disease, diagnosis (name of the disease), prognosis, treatment etc.	The doctor asked the patient about his understanding after explaining him at least two or more of the following issues, such as, cause of the disease, diagnosis (name of the disease), prognosis, treatment etc.	The doctor asked the patient about his understanding after explaining him each of the following issues, such as, cause of the disease, diagnosis (name of the disease), prognosis, treatment etc.

61. Patients expect that the doctor would explain the cause of the disease like why the disease occurred, what may be the causes of the disease etc., he would do it on his own (that means he would not give responsibility to his assistant, pharmacist, rather he would tell it) and would ask whether the patient has understood. In this regard, assess the role of the



doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[If no patient comes with such diseases like injury, common cold and fever etc. where it is necessary to tell the causes, fill in the ‘Not Applicable’ field.][Follow two steps for answering this question: at first, guess a score on the basis of three parameters of giving explanation. Later, adjust the score on the basis of quality of explained issues.]**

NA-----1-----2-----3-----4			
Explained the cause of the disease, he himself explained, asked whether understood – none of these three points is positive.	Explained the cause of the disease, he himself explained, asked whether understood –one of these three points is positive.	Explained the cause of the disease, he himself explained, asked whether understood- two of these three issues are positive.	Explained the cause of the disease, he himself explained, asked whether understood- all of these three issues are positive.

62. Patients expect that the doctor would explain in details about the diagnosis (that means the name of the disease) of their diseases (However, it should be told in such a way that it does not create panic). In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[If no patient comes with such diseases like injury, common cold and fever etc. where it is necessary to tell about the diagnosis, fill in the ‘Not Applicable’ field.][Follow two steps for answering this question: at first, guess a score on the basis of three parameters of giving explanation. Later, adjust the score on the basis of quality of explained issues.]**

NA-----1-----2-----3-----4			
Explained about diagnosis, he himself explained, asked whether understood – none of these three points is positive.	Explained about diagnosis, he himself explained, asked whether understood –one of these three points is positive.	Explained about diagnosis, he himself explained, asked whether understood- two of these three issues are positive.	Explained about diagnosis, he himself explained, asked whether understood- all of these three issues are positive.

63. Patients expect that the doctor would explain the severity of the disease, prognosis (recovery, consequence etc.) etc. in details. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[If no patient comes with such diseases like common cold and fever etc. where it is necessary to tell about the prognosis, fill in the ‘Not Applicable’ field.][Follow two steps for answering this question: at first, guess a score on the basis of three parameters of giving explanation. Later, adjust the score on the basis of quality of explained issues.]**

NA-----1-----2-----3-----4			
Explained about severity and prognosis, he himself explained, asked whether understood – none of these three points is positive.	Explained about severity and prognosis, he himself explained, asked whether understood –one of these three points is positive.	Explained about severity and prognosis, he himself explained, asked whether understood- two of these three issues are positive.	Explained about severity and prognosis, he himself explained, asked whether understood- all of these three issues are positive.

64. Patients expect that the doctor would explain about the treatment of their diseases like which medicines have been given and why, how to take those medicines etc. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[Fill in the ‘Not applicable’ field if no treatment is given (such as, if patient is referred or admitted in the hospital).] [Follow two steps for answering this question: at first, guess a score on the basis of three parameters of giving explanation. Later, adjust the score on the basis of quality of explained issues.]**

NA-----1-----2-----3-----4			
Explained about treatment, he himself explained, asked whether understood – none of these three points is positive.	Explained about treatment, he himself explained, asked whether understood –one of these three points is positive.	Explained about treatment, he himself explained, asked whether understood- two of these three issues are positive.	Explained about treatment, he himself explained, asked whether understood- all of these three issues are positive.

65. Patient expects that the doctor along with the treatment of the disease would also explain in details about diet, which foods are allowed and which are forbidden, prevention of the disease for which he has gone to the doctor, how to remain away from it etc. as well as lifestyle modification, preventive advice etc. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[If no patient comes with such issues or if it is not clear whether it is necessary to tell such things, fill in the 'Not Applicable' field.]****[Follow two steps for answering this question: at first, guess a score on the basis of three parameters of giving explanation. Later, adjust the score on the basis of quality of explained issues.]**

NA-----1-----2-----3-----4			
Explained about diet, he himself explained, asked whether understood – none of these three points is positive.	Explained about diet, he himself explained, asked whether understood –one of these three points is positive.	Explained about diet, he himself explained, asked whether understood- two of these three issues are positive.	Explained about diet, he himself explained, asked whether understood- all of these three issues are positive.
<b>Examples of lifestyle modification related advices may be:</b> In case of diarrheal patients, how diarrhea spreads and how to escape from the diarrhea (hand washing, use of sanitary latrines, etc.); protecting the child from catching cold who is suffering from pneumonia; advising the patient suffering from venereal diseases to use condom; maintaining cleanliness and drinking more water in case of UTI; eating less spicy food, drinking more water in case of PUD's; avoiding sweet foods in case of Diabetic patients; avoiding oily food, weight loss, eating less, taking precautions for preventing common fever and cold (wearing warm clothes, drinking warm water) in case of cardiac diseases and so on.			

66. Medicines which are given for some diseases have side effects such as medicine for tuberculosis. Patients expect that the doctor would warn them if there is any such side effect. However, it should be done in such a way that it does not create unnecessary fear about the medicine. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[If no patient comes with such issues or if it is not understandable to the observer, fill in the 'Not Applicable' field.]****[Follow two steps for answering this question: at first, guess a score on the basis of three parameters of giving explanation. Later, adjust the score on the basis of quality of explained issues.]**

NA-----1-----2-----3-----4			
Explained about side effects, he himself explained, asked whether understood – none of these three points is positive.	Explained about side effects, he himself explained, asked whether understood –one of these three points is positive.	Explained about side effects, he himself explained, asked whether understood- two of these three issues are positive.	Explained about side effects, he himself explained, asked whether understood- all of these three issues are positive.

67. If the patient does any diagnostic test (during any previous visit, at another doctor's advice or on his own) and shows the report to the doctor during consultation, the doctor should explain it to the patient. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[If no patient comes with such issues, then fill in the 'Not Applicable' field.]****[Follow two steps for answering this question: at first, guess a score on the basis of three parameters of giving explanation. Later, adjust the score on the basis of quality of explained issues.]**

NA-----1-----2-----3-----4			
Explained the test report, he himself explained, asked whether understood – none of these three points is positive.	Explained the test report, he himself explained, asked whether understood –one of these three points is positive.	Explained the test report, he himself explained, asked whether understood- two of these three issues are positive.	Explained the test report, he himself explained, asked whether understood- all of these three issues are positive.

68. Patients expect that the doctor would give them the opportunity to ask questions and also give appropriate answers to the patients. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[If the patient did not ask any question fill in the 'NA' field.]**

NA-----1-----2-----3-----4			
The doctor did not answer the	The doctor himself did not ask if the patient has any question.	The doctor himself did not ask if the patient has any question.	The doctor himself asked the patient if he has any questions.

patient's questions or snubbed him.	However, he briefly answered some questions of the patient (example: replied in one sentence, such as, when the patient asked about his disease, he said: skin disease, infection, etc.). If patient asked irrelevant questions, he was slightly resent.	However, he answered almost all the questions of the patient in somewhat details and accurately. Even when the patient asked irrelevant questions, he did not misbehave, but did not explain it.	He answered all the questions of the patient in details and appropriate way. Even when the patient asked irrelevant questions, he did not misbehave, rather he explained the patient that the question is not relevant.
<p><b>The patients usually have questions about:</b> why he is not getting well even after taking medicine for a long time; what is the name of his disease; treatment related any other question; when he would come to the doctor next time; what kind of food to eat.</p> <p><b>The questions of the patients that might be considered irrelevant:</b> asking the same question repeatedly; questions about price of medicines are considered irrelevant to the doctors; answering the same questions again and again to various person who came with the patient; questions which are not related with the disease, to refrain from any suggestions (such as smoking, sexual intercourse, etc.); asking guarantee about patient's recovery etc.</p>			

69. Patients expect that the doctor would reply if the patient has any question (in this case, at least three questions). He would not leave this task on anybody else (e.g., his assistant, pharmacist etc.). In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[If patient does not ask at least three questions, fill in the 'Not Applicable' field.]**

NA-----1-----2-----3-----4			
The doctor did not answer any of the three questions; he told the patient to go to another person for each question (assistant, pharmacist, any other person).	The doctor replied at least one question. However, he told the patient to go to another person for answer of the two questions (assistant, pharmacist, any other person).	The doctor answered at least two questions. However, he told the patient to go to another person for the answer of one question (assistant, pharmacist, any other person).	The doctor answered all three questions of the patient.

70. Many of our patients often ask irrelevant questions, as they do not know what to ask about the disease. The patients expect that the doctor would keep patience about their questions and tell them nicely. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

**[If the patient does not have any questions or if there is not an irrelevant question, fill in the 'Not Applicable' field.]**

NA-----1-----2-----3-----4			
When the patient asked irrelevant question, the doctor insulted him. He did not explain that the question is irrelevant to his disease. He might be angry with him.	When the patient asked irrelevant question, the doctor told him that the question is irrelevant to his disease. He did not become angry with him, but his behavior expressed annoyance. He did not say what might be the relevant questions.	When the patient asked any irrelevant question, the doctor did not insult him, rather smiled and explained nicely that the question is irrelevant to his disease. He neither become angry with him nor insulted him. However he did not say what might be the relevant questions.	When the patient asked any irrelevant question, the doctor did not insult him, rather smiled and explained nicely that the question is irrelevant to his disease. He neither become angry with him nor insulted him. He told what might be the relevant question and also answered it.
<p><b>The questions of the patients that might be considered irrelevant:</b> asking the same question repeatedly; questions about price of medicines are considered irrelevant to the doctors; answering the same questions again and again to various person who came with the patient; questions which are not related with the disease, to refrain from any suggestions (such as smoking, sexual intercourse, etc.); asking guarantee about patient's recovery etc.</p>			

71. Some of the behavior of the doctor discourages patients to ask questions. Patients expect that they would not be discouraged by any behavior of the doctor; rather the doctor would behave such that would provide courage and encourage them to ask questions. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
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The patients were greatly discouraged to ask questions by the words or behavior of the doctor. <b>Examples of discouraging behavior may be:</b> repeatedly looking at the clock, giving reminder to the patient to be short, writing prescription while answering the question, ultra-seriousness, answering very shortly (in one word), answering in nagging tone, remaining many patients together at the queue, "you understand more," or "you are the doctor" - telling such neglectful words etc.	The patients might be slightly discouraged to ask questions by the words or behavior of the doctor. <b>Examples of such behavior could be:</b> repeatedly looking at the clock, writing prescription while answering the question, answering very shortly (in one word), waiting many patients at the queue, etc.	The words or behavior of the doctor did not discourage patients to ask question. However, the doctor also did not behave in such way to provide courage or to encourage the patients for asking questions. <b>Example of encouraging conduct may be:</b> smile answered, carefully listening to the questions, etc.	The words or behavior of the doctor did not discourage patients to ask question; rather the doctor behaved in such way that provided courage or encouraged the patients for asking questions. <b>Example of encouraging conduct may be:</b> smile answered, carefully listening to the questions, etc.
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72. Patients expect that the doctor not only listen to their disease with patience and attention, but also listen to their questions with patience and attention. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[If the patient does not have any questions, fill in the 'Not Applicable' field.]**

NA-----1-----2-----3-----4			
When the patient asked question, the doctor did not show attention and patience through his behavior and words.	When the patient asked question, the doctor showed least attention and patience through his behavior and words. (as for example, at least any of the following issues)	When the patient asked question, the doctor showed some attention and patience through his behavior and words. (as for example, asking question to hear more and any two of the following issues)	When the patient asked question, the doctor showed clear and full attention and patience through his behavior and words. (most or all of the following issues)
<b>Behavior expressing attention and patience might be:</b> shaking head while listening, looking at the patient, asking question to hear more, the nuances of voice, smiling, some interest revealing words (e.g.,: Well, hmm, etc.) and so on.			

73. One of the most important impediments for patients to understand doctor's advice is the medical terminology (jargon), professional language etc. So, the doctor should avoid such language or explain it if used. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[If the doctor does not say any word to the patient, fill in the 'Not Applicable' field.]**

NA-----1-----2-----3-----4			
The doctor used many medical terminologies, and did not explain it to the patient.	The doctor used many medical terminologies, and explained some of those to the patient.	The doctor used one or two medical terminologies, and also explained.	The doctor did not use any medical terminology.
<b>Example of medical terms:</b> pus cell (puj), absorb (digestion), nebulize (providing gas)			

74. In our country patients often become engaged in argument with doctors, the most common reason of it is disproportionate expectations of patients with attainment. So, if there is possibility of such worse situation, then the doctor should inform the patients at the beginning that which services they can get from the doctors and which is not possible to get. In this way patient's expectations become realistic and it is possible to avoid many unnecessary disputes. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[Fill in the "N/A" field if there are no circumstances for telling about the capabilities or limitations (examples of such type of situation are given below.)**

NA-----1-----2-----3-----4			
The doctor did not tell anything about his capabilities and limitations to the patients. As a	The doctor did not tell anything about his capabilities and limitations	The doctor told least about his capabilities or limitations to the patients	The doctor explained his limitations and capabilities to the patients clearly and

result, undesirable situation such as tug of war, dispute etc. was created.	to the patients. As a result, the patient had a little excitement or dissatisfaction.	to avoid such type of situations.	became sure that the patients had understood.
<b>Example of telling patients about capabilities and limitations may be:</b> It might be needed to refer the patient if any complexity arises at the time of caesarian operation; telling patients in advance about delay due to patient's load and doctor's limitation; explaining any other reason of delay to the patients; if patient shows impatience (or if there is possibility of showing impatience, such as prescribing costly medicine from outside) because of getting no free medicine (that means if not prescribed), then giving the patients idea about free medicines which are available in the hospital and which are not; telling about the shortage of beds in the hospital; if patient comes with any complex disease (such as, MI, stroke) and if its proper treatment is not available, then informing the patient and making aware about possible consequences; if the doctor goes to anywhere else due to any reason (such as attending patients in emergency room, attending patients at indoor), then informing the patients before going there; if patient's condition is getting worse, then it should be informed to the patient's attendants at the beginning and it should be discussed with them etc.			

### Closing Salutation

75. Saying good-bye is also as important part of consultation as greetings. In this regard, doctor should tell the summary of consultation, verify whether the patient has understood everything properly, tell the patient how to communicate with the doctor if any problem arises later and say goodbye with smile. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor did not say good-bye; even when patient said goodbye he did not reply.	The doctor hardly said good-bye to the patient. When patient said goodbye to the doctor, he replied by using gesture (by nutation, eye contact, waving hand etc.).	The doctor said good-bye to the patient but it was not complete or enough. When patient said good-bye, the doctor replied him verbally. <b>Examples may be:</b> saying walaikumassalam; ok, you may go; be well etc.	The doctor said goodbye to the patient properly. When patients said good-bye, the doctor responded warmly. <b>As a good practice, following issues might be included:</b> summarizing the whole consultation; verifying whether the patient has understood everything properly or not; telling the patient how to communicate with the doctor if any problem arises later and saying goodbye with smile (assalamualaikum, khodahafez, be well, etc.)

76. In our country most of the time patients say goodbye to doctors. Patients expect that doctor would reply. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[Fill in the "N/A" field if patient does not say goodbye.]**

NA-----1-----2-----3-----4			
Patient said goodbye but the doctor did not even reply.	When patient said goodbye to the doctor, he replied by using only gesture (by moving neck, eye contact, waving hand, etc.), but did not tell anything verbally.	When patient said goodbye to the doctor, he replied briefly; such as: by moving neck, eye contact, waving hand and along with it replied the salam verbally (walaikumassalam, khodahafez, Allah hafez)	When patient said goodbye, the doctor replied warmly and appropriately and he also said good-bye (khodahafez, be well, etc.).

77. Patients expect that the doctor's handwriting would be readable so that they can follow the prescription accordingly. Prescription should be easily followable. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[Read the prescriptions. Fill in the "N/A" field if it is not possible to check the prescription.]**

NA-----1-----2-----3-----4			
None of the following three features was present.	At least one of the following three features was present.	Two of the following three criteria were present.	All of the following three criteria were present.
<b>Features of a good prescription may be:</b> The handwriting of the doctor was clear. There was details about treatment in the prescription (such as if which medicine to take and when to take is written in such a way that is readily understandable			

to the patient). Diet, what can be done, what cannot be done, other advices etc., were also mentioned in the prescription.

### Throughout Consultation

78. Patients expect that the doctor's behavior would not show hierarchical difference. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
<p>Hierarchical difference was very clearly evident in doctor's behavior and consultation process.  <b>Hierarchical difference could be understood by the following issues:</b> Difference between doctor's and patient's chair (The doctor sits on the cushioned chair whose height is slightly more and there is a towel on the backrest of the chair; patients sit on the tool.)(However, if there is no sitting arrangement for the patient in the room, then it might not be due to the insensitivity of the doctor, rather it might be due to faulty management of hospital.); though patients have to enter the doctor's room by putting off shoes but the doctor enters with shoes; asking the patients to address the doctor as "Sir"; many differences in behavior with patients by his dress up, type of sitting, tone of voice (authoritative tone), and style of speech that means the doctor's attitude; not looking at patients etc.</p>	<p>Hierarchical difference was quite clearly visualized in doctor's behavior and consultation process.  <b>Hierarchical difference could be understood by the following issues:</b> Difference between doctor's and patient's chair (The doctor sits on the cushioned chair whose height is slightly more and there is a towel on the backrest of the chair; however, there were good chairs also for patients)(However, if there is no sitting arrangement for the patient in the room, then it might not be due to the insensitivity of the doctor, rather it might be due to faulty management of hospital.); a little bit differences in behavior with patients by his dress up, type of sitting, tone of voice (authoritative tone), and style of speech that means the doctor's attitude etc.</p>	<p>Hierarchical difference was not clearly visualized in doctor's behavior and consultation process. However, initiative expressing equality was also absent.  <b>Hierarchical difference could be understood by the following issues:</b> Slight difference between doctor's and patient's chair; however, there were good chairs also for patient's sitting; (However, if there is no sitting arrangement for the patient in the room, then it might not be due to the insensitivity of the doctor, rather it might be due to faulty management of hospital.); however, observing not much difference in doctor's attitude with patients.</p>	<p>No Hierarchical difference was seen in doctor's behavior and consultation process; moreover, it was found that the doctor took initiative for showing equality. Symptoms of hierarchical difference mentioned earlier were absent.</p>

79. Doctors should show gender sensitivity and should refrain from gender insensitive behavior. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[If the patient is not a female, fill in the "Not Applicable" field.]**

NA-----1-----2-----3-----4			
The doctor clearly showed gender insensitive behavior.	Some (at least one) of doctor's behavior can be regarded as gender insensitive.	The doctor remained away from any kind of gender insensitive behavior. However, he also did not leave any example of gender sensitive behavior.	The doctor remained away from any kind of gender insensitive behavior. Not only that, he did some clear gender sensitive behavior.
<p><b>Examples of gender insensitive behavior may be:</b> Making comments to degrade women; avoiding legal assistance related issues to women who are affected by violence; providing poor services to female; making abusive comments to the female for rejecting gender norm; making comment by considering violence against women as usual; blaming the victim; asking male attendant for taking consent about treatment of female patient or advice etc.</p> <p><b>Examples of sensitive behavior to female in context of Bangladesh may be:</b> Providing service to female patients on priority basis (especially aged and pregnant); expressing the matter of giving importance to female patients by behavior; maintaining modesty while physical examination; maintaining privacy, etc.</p>			

80. Patients do not expect any sort of disturbance (interruption) during consultation. On the basis of interruption assess the consultation within 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as following:

NA-----1-----2-----3-----4
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Severe interruption occurred during consultation. <b>For example:</b> The doctor called someone over phone; entrance of medical representatives inside (that means allowing them inside by the doctor); calling someone else inside the room by the doctor (that means he did not come intentionally rather the doctor called him or the doctor allowed him).	<b>In this case examples of interruption may be:</b> Entrance of any other patient (that means allowing him by the doctor); entrance of any person familiar with the doctor (the doctor did not call him); the doctor left the room for some reason etc. Fill in the field '1' if any of these events occurs more than once.	<b>In this case examples of interruption may be:</b> Incoming call in the doctor's mobile phone (he did not make the call); entrance of clerk or anyone else inside the room during consultation for official purpose; knocking at the door by medical representative (but he did not enter the room); entering any other doctor or nurse inside the room for some reason. Fill in the field '2' if any of these events occurs more than once.	No interruption occurred during consultation.
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81. Doctor's appearance should be neat and clean, tidy and professional. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
Two among the following features were less visible in the doctor's appearance: neat and clean, formal, modest.	The doctor did not wear apron but at least two of the following characteristics were present in his appearance: neat and clean, formal, modest.	The doctor did not wear apron but at least three of the following characteristics were present in his appearance: neat and clean, formal, modest.	The doctor wore apron and at least three of the following characteristics were present in his appearance: neat and clean, formal, modest.
<b>Formal dress may be:</b> Pant, shirt (Male), sharee, salower-kamiz (female). <b>Example of professional dress:</b> Apron. <b>Modest Dress:</b> According to the social norms of Bangladesh, any dress which is not offensive would be considered as modest; in this case, keeping veil or wearing religious dress is not necessary.			

82. Patients expect that the doctor would take initiative to bring back the discipline if there is no discipline inside the doctor's room (where there is no measure to control patients). In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[Fill in the "NA" field if there is discipline already inside the doctor's room; that means if there is no chance to observe the role of the doctor in establishing discipline]**

NA-----1-----2-----3-----4			
There was complete chaos, and the doctor did not take any measure to control it.	The doctor tried to establish discipline (least) in the room because of patient's request. However, it did not work (that means discipline was not established in the room).	The doctor established discipline in the room because of patient's request and it was effective (that means discipline was established in the room).	The doctor established discipline in the room spontaneously and it was effective (that means discipline was established in the room). As for example, calling patients one by one according to the ticket or slip.

83. Patients expect that doctors would do non-verbal communication, such as keeping hand on the body (for assuring the patient), eye contact, etc. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor did not do any non-verbal communication with the patients.	Shaking head while talking, eye contact with the patients, etc.	Shaking head while talking, eye contact with the patients, variation of pitch, smiling face, etc.	Shaking head while talking, eye contact with the patients, variation of pitch, smiling face, holding patient's hand, keeping hand on the patient's shoulder, rubbing on the head, sitting lean forward, etc.

84. Patients expect that doctors would touch them. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor did not even touch the patient.	The doctor touched the patient at least once for physical examination or for providing consolation or reliance.	The doctor touched the patient more than once for physical examination or for providing consolation or reliance.	The doctor touched the patient several times for various purposes. As for example, for examining, for providing consolation or reliance.

85. Patients do not want to see the doctor involved in illegal or unethical activity, especially if it is related with their treatment. The doctor should remain away from such type of activity. Assess the role of the doctor for remaining away from visualized immoral activities by 1-4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[Fill in the “N/A” field if the thing could not be observed for any reason.]**

NA-----1-----2-----3-----4			
The doctor was involved with various illegal activities.	The doctor was involved with at least one illegal activity.	The doctor was not directly involved with any illegal activity. However, such kind of activities happened in front of him and he remained silence that means he had tacit support. Examples: ignoring presence of brokers (inside the room), behavior with medical representatives seen to be over treated etc.	The doctor was not involved with any illegal activity and he was not seen to support any such activities either directly or indirectly.
<b>Examples of such illegal activities may be</b> taking money from patients against free services; bringing patients with the help of brokers; presence of brokers around the chamber (Doctors did not take any step to stop this); collusion with diagnostic centers. Accepting gift from medical representative (and prescribing medicine of that company); taking advantage from brokers (utilizing in hospital, utilizing for personal work) and so on.			

86. Patients expect that the doctor would have sense of humor and would provide treatment by becoming easy with patients using his sense of humor. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor was in serious mood. He did not have any kind of humor.	The doctor was smiling or he had some humor.	The doctor was smiling and he had some humor.	The doctor was smiling all the time and made the patient feel comfortable by joking.
Examples of humor may be <b>(examples from my participant observation):</b> When a young lady asked for vitamin syrup, the doctor replied, “Leave these baby foods”. After doing ultra sonogram the doctor told the child patient, “Go and run now”. During ultra sonogram the doctor told a female patient, “I see that you have eaten very well at noon”.			

87. Patients expect that the doctor would be relaxed and confident. There would be no tension and anxiety in his behavior. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
Stress and anxiety were expressed in doctor’s behavior.	Even though the doctor’s behavior did not show stress and anxiety, he did not look relaxed and confident.	The doctor’s behavior looked slightly relaxed and confident.	The doctor was fully relaxed and confident.
<b>Stress and anxiety expressing behavior may be:</b> restless movement of hand, feet, pen, and nervous laughter. <b>Confidence expressing behavior may be:</b> The doctor would say, “You will get well after taking this.”			

88. Patients expect that the doctor would give them enough time. For assessing the role of the doctor in this regard record the consultation time (in seconds) using a stop watch.

89. Patients expect that the doctor would not consult with more than a certain number of patients every day. For assessing the role of the doctor in this regard record the number of patients he attended in a day in public/private sector (which is applicable) based on the answer to the question number 22.

## 90. Questions for 11th Patient

**Instruction to the observer:** When the patient leaves the room, please leave the room along with the patient and record the following information.



91. Age of the patient
92. Gender of the patient
93. Educational background of the patient

### Appendix 14: Schedule and Content of the Research Assistants' Training

Day/ Date	Time	Topic	Description if any
Day-1; December 08, 2014	05:00 pm to 05:30 pm	Overview of the training session	
	05:30 pm to 06:30 pm	Ethical principles in human subject research	Compatible with CITI training and based on Johns Hopkins Ethics Field Guide
	06:30 pm to 07:30 pm	Basic concepts of health policy and systems research	
	07:30 pm to 09:00 pm	Presentation on my proposal	
Day-2; December 09, 2014	05:00 pm to 06:00 pm	Research Methods Basics	
	06:00 pm to 07:00 pm	Specific Research Methods- Observation Techniques	
	07:00 pm to 08:00 pm	Structured Observation	
	08:00 pm to 09:00 pm	Introducing my research tool (structured observation tool)	A brief description was given on the items and how the items were generated from qualitative research
Day-3; December 10, 2014	05:00 pm to 09:00 pm	Practice on my structured observation (SO) tool	Each item and response categories were discussed elaborately. This was followed by feedback from the RAs. Their feedback was integrated and the SO tool was updated.
Day-4; December 11, 2014	05:00 pm to 09:00 pm	Practice on my structured observation (SO) tool	
Day-5; December 12, 2014	10:00 am to 01:00 pm	Practice on my structured observation (SO) tool	
Day-6; December 13, 2014	03:00 pm to 06:00 pm	Hands on training on mobile based data collection	Each student was given a Samsung Android mobile phone. They collected and sent the mock data for training.
	09:00 am to 02:00 pm	Practice data collection in real location, field test, concordance/ agreement test	18 RAs were divided into 3 groups (groups A, B, C). Group A was taken to Dumuria Upazila Health Complex (UHC).
Day-7; December 14, 2014	05:00 pm to 09:00 pm	Display and discussion on the results of concordance test followed by debriefing with all the groups (A, B and C)	Findings/ feedback from the field test were also integrated into the SO tool. The response categories and scenarios were adjusted based on RAs' feedback
	09:00 am to 02:00 pm	Practice data collection in real location, field test, concordance/ agreement test	Group B was taken to Dumuria Upazila Health Complex (UHC).
Day-8; December 15, 2014	05:00 pm to 09:00 pm	Display and discussion on the results of concordance test followed by debriefing with all the groups (A, B and C)	Findings/ feedback from the field test were also integrated into the SO tool. The response categories and scenarios were adjusted based on RAs' feedback
	09:00 am to 02:00 pm	Practice data collection in real location, field test, concordance/ agreement test	Group C was taken to Dumuria Upazila Health Complex (UHC).

Off due to the Independence Day of Bangladesh, December 16, 2014			
Day-9; December 17, 2014	09:00 am to 02:00 pm	Practice data collection in real location, field test, <b>final concordance/ agreement test</b>	Groups A, B, and C were taken to Dumuria Upazila Health Complex (UHC).
	05:00 pm to 09:00 pm	Display and discussion on the results of concordance test followed by debriefing with all the groups (A, B and C)	Findings/ feedback from the field test were also integrated into the SO tool. The response categories and scenarios were adjusted based on RAs' feedback
Day-10; December 18, 2014	09:00 am to 02:00 pm	Practice data collection in real location, field test, <b>final concordance/ agreement test for those who failed to achieve 90% agreement on first day</b>	RAs from Groups A, B, and C who failed to achieve 90% agreement were taken to Dumuria Upazila Health Complex (UHC). Those successfully achieved 90% agreement were allowed to start data collection
	05:00 pm to 07:00 pm	Display and discussion on the results of concordance test followed by debriefing with all the groups (A, B and C)	Findings/ feedback from the field test were also integrated into the SO tool. The response categories and scenarios were adjusted based on RAs' feedback
	07:00 pm to 09:00	Field guideline and planning for subsequent data collection	15 RAs were finally recruited and assigned their responsibilities

### Appendix 15: Different Spells of Field-tests and their Contribution to the Study

Spell	Duration	Location	Participants	Contribution
1st	22-26 November, 2014	Keraniganj UHC, 10 km from Dhaka	I and 2 old RAs	Checked operability of mobile tool and adjusted accordingly; determined the sequence of data collection; decided the SO tool items
2nd	08-11 December, 2014	Monirampur UHC, Jessore, 50 km from Khulna	I and 1 old RA	Changed from last 5 consultations to only 11th consultation; checked the permission and consent process in upazila level; changed the idea of approaching individual doctors to targeting one upazila at a time; finalized the questions to be asked to the doctors and the patient
3rd	13-18 December, 2014	Dumuria UHC, 10 km from Khulna	Whole team	Finalized the response categories, observation scenarios, agreement test

**Appendix 16: Samples (Observed Consultations) Collected from Different Locations**

Division	District	Upazila	# Public Doctors	# Private Doctors	# Total Doctors	
Khulna	Khulna	Dumuria	15	7	22	
		Botiaghata	9	3	12	
		Rupsha	6	4	10	
		Phultala	11	6	17	
		Digholia	4	1	5	
		Terakhada	4	5	9	
		Dacope	8	4	12	
		Paikgachha	0	5	5	
		Koyra	0	2	2	
	Bagerhat	Fakirhat	4	3	7	
		Mollarhat	4	0	4	
		Chitalmari	0	8	8	
		Rampal	11	6	17	
		Mongla	3	5	8	
	Jessore	Abhaynagar	11	7	18	
		Keshabpur	12	15	27	
		Monirampur	14	2	16	
		Chowgachha	7	5	12	
		Jhikargachha	6	5	11	
		Sharsha	6	14	20	
		Bagharpara	2	0	2	
	Satkhira	Tala	7	6	13	
		Kaligonj	0	3	3	
	Jhenaidah	Kaliganj	15	29	44	
		Kotchadpur	12	18	30	
	Magura	Shalikha	4	1	5	
	Kushtia	Bheramara	8	23	31	
		Mirpur	3	0	3	
		Kumarkhali	3	5	8	
		Khoksha	6	6	12	
	<b>Total</b>			<b>195</b>	<b>197</b>	<b>393</b>

## **Appendix 17: Steps of Data Collection**

- Things to take with you during fieldwork
  - Mobile phone (from project)
  - Structured Observation Tool
  - The notebook
  - Stationery (pen, pencil, sharpener, eraser)
- Make sure the mobile phone is fully charged
- Check the internet connectivity
- Check the location server
  - In setting
  - In camera (geo-tag on)
- Go to the observation site earlier than the appointment time
- Introduce yourself to the relevant persons (UH&FPO, doctors)
- Take consent from the doctor and patients, get their signature, keep a copy
- Take a picture of observation setting
- Record the background information of consultation setting on paper
- Ask relevant questions to the doctor and record the answers on paper
- Observe 11 consultations (try not to have many things in your hand during consultation, e.g., mobile phone, pen, paper, etc.)
- Pay special attention to observation<sup>11</sup>
- Record consultation time of observation 11 using stop watch in your mobile phone
- Thank the doctor and come out of the room with the observed patient.
- Ask background information of the patient and record on paper
- Take another picture of the consultation room
- Take out the Structured Observation Tool. Better not to bring it out inside the consultation setting.
- Follow the structured observation tool and record your observation finding on in your notebook
- Now start recording your findings in your mobile phone
- Make sure you recorded the GIS location (this is best done outdoor)
- Upload the data if there is internet network
- MMS the two pictures (taken before and after observation) to the following number: 017XXXXXXXX
- Call me (017XXXXXXXX) if you need any clarification or assistance
- Meet with me after returning from the field, I will be waiting in Khulna University

### **Mobile Phone Checklist**

- Turn on the 'mobile data'
- Turn on GPS
- From 'Settings', click 'Location services' and check all three boxes ['Use wireless networks', 'Use GPS satellites', 'Location and Google service']
- From 'Camera', click on 'Settings' and turn on 'GPS tag'

## **Appendix 18: Structured Observation Checklist**

1. Greetings/ closing salutation
2. Social talk if any
3. Identification of doctor (name outside the door, on the table, on nameplate, etc.)
4. Listening, explaining, questioning, answering to patients' questions
5. Body language (eye, hand, body, sitting)
6. Examination (consent, privacy, care)
7. Reassurance giving
8. Touching the patient (for clinical examination, for giving support or reassurance)
9. Anything that may breach trust or seem businesslike
10. Humor, friendliness
11. Whether concerned about socio-economic condition of patient
12. Follow up, referral, consult with other doctors if needed
13. Medical jargon, cultural sensitivity, gender sensitivity
14. Dress up
15. Interruption (mobile phone, someone else coming during consultation)
16. Prescription if possible
17. Don't forget to record 11th patient's consultation time
18. Don't forget to talk with the 11th patient after consultation

## Appendix 19: Univariate Descriptive Analysis of Version-5 Scale (45 Items)

UNIVARIATE DESCRIPTIVES Variable	Mean	Confidence Interval (95%)		Variance	Skewness	Kurtosis (Zero centered)
greet	1.855	( 1.78	1.93)	0.373	0.224	0.146
docname	1.929	( 1.84	2.02)	0.483	0.233	-0.479
ptname	1.524	( 1.43	1.62)	0.570	1.180	0.262
soctalk	1.341	( 1.26	1.42)	0.403	1.781	2.295
famtalk	1.402	( 1.31	1.49)	0.454	1.460	0.920
friendliness	1.486	( 1.39	1.58)	0.514	1.418	1.471
respect	2.308	( 2.24	2.38)	0.295	0.138	-0.500
listencompletely	2.954	( 2.88	3.03)	0.319	-0.266	0.947
listenattentively	2.847	( 2.77	2.92)	0.353	-0.741	1.560
examcarefully	2.359	( 2.26	2.46)	0.581	-0.086	-0.481
consentallcase	2.173	( 2.12	2.23)	0.199	0.901	1.242
generalpreventive	1.659	( 1.57	1.74)	0.438	0.614	-0.190
reassurance	1.639	( 1.55	1.73)	0.450	0.627	-0.451
trust	2.995	( 2.93	3.06)	0.224	-0.160	2.081
caringnotbusinesslike	2.977	( 2.91	3.05)	0.307	-0.460	1.801
involveincare	1.107	( 1.06	1.15)	0.136	3.979	18.022
culturalsensitivity	2.211	( 2.14	2.28)	0.289	0.812	1.349
considerses	1.662	( 1.56	1.77)	0.677	0.918	-0.270
understands	1.835	( 1.72	1.95)	0.856	0.547	-1.133
informs	1.331	( 1.25	1.41)	0.359	1.779	2.637
helpses	1.504	( 1.42	1.59)	0.408	0.897	-0.266
followup	1.618	( 1.54	1.70)	0.373	0.446	-0.653
explainall	2.168	( 2.08	2.26)	0.491	0.111	-0.279
explainexplain	2.084	( 2.00	2.17)	0.413	0.211	0.155
explainunderstood	1.511	( 1.42	1.60)	0.509	1.202	0.613
explaincause	1.868	( 1.76	1.97)	0.634	0.515	-0.514
explaindx	1.814	( 1.72	1.91)	0.579	0.465	-0.707
explainprognosis	1.522	( 1.43	1.61)	0.509	1.125	0.319
explainrx	2.056	( 1.95	2.16)	0.694	0.292	-0.701
explainpreventive	1.695	( 1.60	1.79)	0.594	0.719	-0.529
questionall	2.565	( 2.50	2.63)	0.287	-0.161	-1.004
questionencourage	2.771	( 2.68	2.86)	0.446	-0.315	0.203
questionlistenattentively	2.603	( 2.52	2.68)	0.397	-0.118	-0.180
nojargon	3.761	( 3.68	3.84)	0.386	-2.983	8.892
closingall	1.631	( 1.55	1.72)	0.431	0.562	-0.678
prescription	2.219	( 2.15	2.29)	0.288	0.620	0.866
nohierarchy	2.265	( 2.20	2.33)	0.256	0.690	0.234
gendersensitivity	3.061	( 3.01	3.11)	0.139	0.391	5.590
interruption	3.270	( 3.16	3.38)	0.762	-0.898	-0.241
appearance	2.954	( 2.91	3.00)	0.140	-1.667	9.555
nonverbalcomm	2.221	( 2.14	2.30)	0.386	0.127	-0.008
touch	2.117	( 2.01	2.22)	0.673	0.030	-1.013
nocorruption	3.807	( 3.74	3.88)	0.283	-2.786	6.833
humour	1.567	( 1.48	1.66)	0.480	1.002	0.442
confident	2.585	( 2.50	2.67)	0.416	0.422	-0.457



## Appendix 20: Parallel Analysis with Version-5 Scale (45 Items)

PARALLEL ANALYSIS (PA) BASED ON MINIMUM RANK FACTOR ANALYSIS  
(Timmerman & Lorenzo-Seva, 2011)

Implementation details:

Correlation matrices analyzed: Polychoric correlation matrices  
 Number of random correlation matrices: 500  
 Method to obtain random correlation matrices: Permutation of the raw data (Buja & Eyuboglu, 1992)

Variable	Real-data % of variance	Mean of random % of variance	95 percentile of random % of variance
1	19.2*	6.1	6.6
2	7.9*	4.6	4.9
3	6.7*	4.3	4.6
4	6.2*	4.1	4.3
5	4.2*	4.0	4.1
6	3.6	3.8	4.0
7	3.2	3.7	3.8
8	3.1	3.6	3.7
9	3.0	3.4	3.6
10	2.9	3.3	3.5
11	2.7	3.2	3.3
12	2.4	3.1	3.2
13	2.3	3.0	3.1
14	2.3	2.9	3.0
15	2.2	2.8	2.9
16	2.0	2.7	2.8
17	1.8	2.6	2.7
18	1.7	2.5	2.6
19	1.6	2.4	2.5
20	1.6	2.4	2.4
21	1.5	2.3	2.4
22	1.5	2.2	2.3
23	1.3	2.1	2.2
24	1.3	2.0	2.1
25	1.2	1.9	2.0
26	1.2	1.9	1.9
27	1.2	1.8	1.9
28	1.1	1.7	1.8
29	1.0	1.6	1.7
30	0.9	1.5	1.6
31	0.9	1.5	1.6
32	0.8	1.4	1.5
33	0.8	1.3	1.4
34	0.7	1.2	1.3
35	0.6	1.1	1.2
36	0.6	1.0	1.2
37	0.5	0.9	1.1
38	0.5	0.9	1.0
39	0.4	0.8	0.9
40	0.4	0.7	0.8
41	0.3	0.6	0.7
42	0.3	0.4	0.6
43	0.2	0.3	0.5
44	0.1	0.2	0.4
45	0.0	0.0	0.0

\* Advised number of dimensions: 5

**Appendix 21: 1<sup>st</sup> Iteration of EFA with 45 Items and 5 Factors, with Promin Rotation**

OVERALL FACTOR ANALYSIS STATISTICS

Total observed variance = 45  
 Total common variance = 40.362  
 Explained common variance = 19.566 ( 48.48%)  
 Unexplained common variance = 20.797

EIGENVALUES OF THE REDUCED CORRELATION MATRIX

Variable	Eigenvalue	Proportion of Common Variance	Cumulative Proportion of Variance
1	8.53489	0.21146	0.21146
2	3.51195	0.08701	0.29847
3	2.96194	0.07338	0.37185
4	2.72875	0.06761	0.43946
5	1.82803	0.04529	0.48475
6	1.48740	0.03685	
7	1.36256	0.03376	
8	1.31357	0.03254	
9	1.16590	0.02889	
10	1.08525	0.02689	
11	1.05488	0.02614	
12	1.00050	0.02479	
13	0.93109	0.02307	
14	0.90448	0.02241	
15	0.83292	0.02064	
16	0.76016	0.01883	
17	0.69588	0.01724	
18	0.63911	0.01583	
19	0.60504	0.01499	
20	0.59105	0.01464	
21	0.54524	0.01351	
22	0.51400	0.01273	
23	0.49417	0.01224	
24	0.47263	0.01171	
25	0.43494	0.01078	
26	0.43035	0.01066	
27	0.39685	0.00983	
28	0.36613	0.00907	
29	0.33340	0.00826	
30	0.29991	0.00743	
31	0.29042	0.00720	
32	0.26822	0.00665	
33	0.24355	0.00603	
34	0.23223	0.00575	
35	0.21593	0.00535	
36	0.20418	0.00506	
37	0.16354	0.00405	
38	0.13031	0.00323	
39	0.11584	0.00287	
40	0.07597	0.00188	
41	0.06192	0.00153	
42	0.04790	0.00119	
43	0.02892	0.00072	
44	0.00021	0.00001	
45	-0.00000	-0.00000	

## UNROTATED LOADING MATRIX

Variable	F 1	F 2	F 3	F 4	F 5	Communality
greet	0.563	0.301	-0.177	-0.072	-0.039	0.971
docname	0.340	0.011	-0.162	-0.207	0.121	0.610
ptname	0.530	-0.089	-0.147	-0.222	-0.072	0.796
soctalk	0.619	0.080	-0.308	-0.189	-0.351	1.000
famtalk	0.492	0.025	-0.328	-0.240	-0.382	1.000
friendliness	0.549	0.083	-0.320	-0.333	-0.360	1.000
respect	0.565	0.292	-0.107	0.063	0.143	0.789
listencompletely	0.528	0.382	0.052	0.193	0.357	1.000
listenattentively	0.620	0.337	0.116	0.224	0.252	1.000
examcarefully	0.407	0.040	-0.070	0.040	0.197	0.563
consentallcase	0.114	0.134	0.021	-0.058	0.077	0.468
generalpreventive	0.389	-0.325	-0.009	0.248	-0.113	1.000
reassurance	0.612	-0.072	-0.277	-0.175	-0.044	1.000
trust	0.208	0.346	0.522	0.143	-0.421	1.000
caringnotbusinesslike	0.207	0.429	0.528	0.106	-0.418	1.000
involveincare	0.309	-0.552	0.251	-0.402	-0.052	1.000
culturalsensitivity	0.311	0.195	0.026	-0.085	0.088	0.909
considerses	0.331	-0.023	0.636	-0.525	-0.018	1.000
understands	0.378	0.020	0.542	-0.477	0.163	1.000
informses	0.291	-0.467	0.376	-0.394	0.013	1.000
helpses	0.172	-0.024	0.666	-0.390	0.081	1.000
followup	0.461	-0.275	-0.122	-0.051	0.018	1.000
explainall	0.578	-0.396	0.216	0.448	0.059	1.000
explainexplain	0.640	-0.320	0.209	0.446	0.011	1.000
explainunderstood	0.392	-0.272	-0.063	0.021	-0.117	0.912
explaincause	0.401	-0.384	0.181	0.402	-0.221	1.000
explainindx	0.376	-0.424	0.118	0.328	-0.037	1.000
explainprognosis	0.413	-0.481	0.065	0.172	-0.134	1.000
explainrx	0.476	-0.210	-0.055	0.222	-0.018	0.892
explainpreventive	0.421	-0.306	0.051	0.351	0.007	0.833
questionall	0.264	0.137	0.195	-0.092	0.339	0.885
questionencourage	0.647	0.406	-0.032	0.159	0.151	1.000
questionlistenattentively	0.330	0.276	0.171	0.137	0.268	0.629
nojargon	-0.019	0.409	0.237	0.197	-0.273	1.000
closingall	0.556	0.194	-0.236	-0.108	0.051	0.997
prescription	0.405	-0.052	-0.010	0.013	0.134	0.634
nohierarchy	0.305	0.180	-0.177	-0.089	-0.067	0.597
gendersensitivity	0.187	0.283	0.152	0.034	0.107	0.729
interruption	0.080	0.310	-0.013	0.213	-0.205	1.000
appearance	0.065	0.098	0.028	0.069	0.058	0.530
nonverbalcomm	0.765	0.233	0.003	0.040	0.125	1.000
touch	0.487	-0.062	-0.131	0.038	0.237	0.874
nocorruption	-0.096	0.407	0.314	0.314	-0.389	1.000
humour	0.640	0.066	-0.219	-0.265	-0.254	1.000
confident	0.359	0.193	-0.080	-0.138	-0.026	0.740

ROTATED LOADING MATRIX  
 (loadings lower than absolute 0.300 omitted)

variable	F 1	F 2	F 3	F 4	F 5
greet	0.474				0.360
docname					
ptname	0.477				
soctalk	0.820				
famtalk	0.814				
friendliness	0.878				
respect					0.550
listencompletely					0.816
listenattentively					0.753
examcarefully					0.373
consentallcase					
generalpreventive				0.579	
reassurance	0.549				
trust		0.765			
caringnotbusinesslike		0.790			
involveincare			0.614		-0.313
cultural sensitivity					0.311
considerses			0.861		
understandses			0.789		
informses			0.688		
helpses			0.786		
followup				0.316	
explainall				0.840	
explainexplain				0.814	
explainunderstood				0.375	
explaincause				0.785	
explaindx				0.707	
explainprognosis				0.666	
explainrx				0.481	
explainpreventive				0.632	
questionall					0.485
questionencourage					0.691
questionlistenattentively					0.588
nojargon		0.549			
closingall	0.442				0.355
prescription					
nohierarchy	0.366				
gendersensitivity					0.366
interruption		0.340			
appearance					
nonverbalcomm					0.591
touch					0.375
nocorruption		0.706			
humour	0.746				
confident	0.332				

## Appendix 22: Alternative Iteration of EFA with 45 Items and 6 Factors, with Promin Rotation

### UNROTATED LOADING MATRIX

Variable	F 1	F 2	F 3	F 4	F 5	F 6	Communality
greet	0.562	0.300	-0.177	-0.072	-0.039	0.021	0.963
docname	0.340	0.011	-0.163	-0.207	0.121	-0.135	0.613
ptname	0.529	-0.089	-0.147	-0.222	-0.072	-0.012	0.792
soctalk	0.619	0.080	-0.308	-0.189	-0.351	0.286	1.000
famtalk	0.492	0.025	-0.328	-0.240	-0.382	0.327	1.000
friendliness	0.549	0.083	-0.320	-0.332	-0.360	0.034	1.000
respect	0.565	0.292	-0.107	0.063	0.143	0.128	0.790
listencompletely	0.528	0.382	0.052	0.193	0.357	-0.120	1.000
listenattentively	0.620	0.337	0.116	0.224	0.253	0.104	1.000
examcarefully	0.407	0.040	-0.070	0.040	0.198	0.245	0.566
consentallcase	0.114	0.134	0.021	-0.058	0.077	-0.054	0.462
generalpreventive	0.389	-0.326	-0.008	0.248	-0.113	0.300	1.000
reassurance	0.612	-0.072	-0.277	-0.175	-0.044	-0.157	1.000
trust	0.208	0.346	0.522	0.143	-0.421	-0.288	1.000
caringnotbusinesslike	0.207	0.429	0.528	0.106	-0.418	-0.265	1.000
involveincare	0.309	-0.552	0.251	-0.402	-0.052	-0.201	1.000
cultural sensitivity	0.312	0.195	0.026	-0.085	0.088	0.211	0.918
considerses	0.331	-0.023	0.636	-0.525	-0.018	0.139	1.000
understandses	0.378	0.020	0.542	-0.477	0.163	0.209	1.000
informses	0.291	-0.467	0.376	-0.395	0.013	-0.107	1.000
helpses	0.172	-0.023	0.666	-0.390	0.082	0.234	1.000
followup	0.461	-0.275	-0.122	-0.051	0.017	-0.440	1.000
explainall	0.578	-0.396	0.216	0.448	0.059	-0.002	1.000
explainexplain	0.640	-0.321	0.209	0.446	0.011	0.022	1.000
explainunderstood	0.392	-0.272	-0.063	0.021	-0.117	0.145	0.911
explaincause	0.401	-0.384	0.181	0.402	-0.221	0.064	1.000
explaindx	0.376	-0.424	0.118	0.328	-0.037	-0.106	1.000
explainprognosis	0.413	-0.481	0.065	0.172	-0.134	-0.204	1.000
explainrx	0.476	-0.210	-0.055	0.222	-0.018	-0.116	0.891
explainpreventive	0.421	-0.307	0.052	0.351	0.007	0.254	0.837
questionall	0.264	0.137	0.195	-0.092	0.338	-0.033	0.883
questionencourage	0.647	0.406	-0.032	0.160	0.151	-0.120	1.000
questionlistenattentively	0.330	0.276	0.171	0.137	0.268	0.018	0.630
nojargon	-0.019	0.409	0.237	0.197	-0.273	0.182	1.000
closingall	0.556	0.194	-0.235	-0.108	0.050	-0.081	0.994
prescription	0.405	-0.051	-0.010	0.013	0.134	-0.033	0.629
nohierarchy	0.305	0.180	-0.177	-0.089	-0.068	-0.248	0.595
gendersensitivity	0.187	0.283	0.152	0.034	0.107	-0.175	0.727
interruption	0.080	0.309	-0.013	0.214	-0.205	0.051	1.000
appearance	0.065	0.098	0.028	0.069	0.058	0.054	0.525
nonverbalcomm	0.765	0.233	0.003	0.040	0.125	0.006	1.000
touch	0.487	-0.062	-0.131	0.038	0.237	0.151	0.874
nocorruption	-0.096	0.407	0.314	0.314	-0.389	0.100	1.000
humour	0.640	0.066	-0.219	-0.265	-0.254	-0.045	1.000
confident	0.360	0.194	-0.081	-0.139	-0.027	-0.395	0.758

ROTATED LOADING MATRIX  
 (loadings lower than absolute 0.300 omitted)

variable	F 1	F 2	F 3	F 4	F 5	F 6
greet			0.448		0.366	
docname						
ptname			0.448			
soctalk			0.910			
famtalk			0.922			
friendliness			0.845			
respect					0.559	
listencompletely					0.820	
listenattentively					0.763	
examcarefully					0.383	
consentallcase						
generalpreventive				0.491		
reassurance			0.451			0.318
trust						
caringnotbusinesslike		0.818				
involveincare	0.550	0.836			-0.324	0.507
culturalsensitivity					0.321	
considerses	0.871					
understandses	0.816					
informses	0.644					0.366
helpses	0.818					
followup				-0.365		0.699
explainall				0.357		0.646
explainexplain				0.367		0.601
explainunderstood			0.311			
explaincause				0.400		0.529
explaindx						0.642
explainprognosis						0.724
explainrx						0.491
explainpreventive				0.494		
questionall					0.486	
questionencourage					0.695	
questionlistenattentively					0.593	
nojargon		0.479				-0.307
closingall			0.372		0.358	
prescription						
nohierarchy				-0.318		
gendersensitivity					0.365	
interruption		0.310				
appearance						
nonverbalcomm					0.597	
touch					0.381	
nocorruption						
humour		0.654	0.686			
confident				-0.463		

## Appendix 23: Alternative Iteration of EFA with 45 Items and 4 Factors, with Promin Rotation

### UNROTATED LOADING MATRIX

Variable	F 1	F 2	F 3	F 4	Communality
greet	0.563	0.301	-0.177	-0.072	0.971
docname	0.339	0.011	-0.162	-0.207	0.609
ptname	0.530	-0.089	-0.147	-0.222	0.796
soctalk	0.619	0.080	-0.308	-0.189	1.000
famtalk	0.492	0.025	-0.328	-0.240	1.000
friendliness	0.549	0.083	-0.320	-0.332	1.000
respect	0.565	0.292	-0.107	0.063	0.789
listencompletely	0.528	0.382	0.052	0.193	1.000
listenattentively	0.620	0.337	0.116	0.224	1.000
examcarefully	0.406	0.040	-0.070	0.040	0.562
consentallcase	0.114	0.134	0.021	-0.058	0.471
generalpreventive	0.389	-0.325	-0.008	0.248	1.000
reassurance	0.612	-0.072	-0.277	-0.175	1.000
trust	0.208	0.346	0.522	0.143	1.000
caringnotbusinesslike	0.207	0.429	0.528	0.106	1.000
involveincare	0.309	-0.552	0.251	-0.402	1.000
cultural sensitivity	0.311	0.195	0.026	-0.085	0.908
considerses	0.331	-0.023	0.635	-0.525	1.000
understandses	0.378	0.020	0.542	-0.477	1.000
informses	0.291	-0.467	0.376	-0.395	1.000
helpses	0.172	-0.024	0.666	-0.390	1.000
followup	0.461	-0.275	-0.122	-0.051	1.000
explainall	0.578	-0.396	0.216	0.448	1.000
explainexplain	0.640	-0.320	0.209	0.446	1.000
explainunderstood	0.393	-0.272	-0.063	0.021	0.912
explaincause	0.401	-0.384	0.181	0.402	1.000
explaindx	0.376	-0.424	0.118	0.328	1.000
explainprognosis	0.413	-0.481	0.065	0.172	1.000
explainrx	0.476	-0.210	-0.055	0.222	0.894
explainpreventive	0.421	-0.307	0.052	0.351	0.835
questionall	0.264	0.136	0.195	-0.092	0.878
questionencourage	0.647	0.406	-0.032	0.159	1.000
questionlistenattentively	0.330	0.276	0.171	0.137	0.630
nojargon	-0.019	0.409	0.237	0.197	1.000
closingall	0.556	0.194	-0.236	-0.108	0.997
prescription	0.405	-0.052	-0.010	0.013	0.633
nohierarchy	0.305	0.180	-0.177	-0.089	0.598
gendersensitivity	0.187	0.283	0.152	0.034	0.733
interruption	0.080	0.310	-0.013	0.213	1.000
appearance	0.065	0.098	0.028	0.069	0.534
nonverbalcomm	0.765	0.233	0.003	0.040	1.000
touch	0.487	-0.062	-0.131	0.038	0.872
nocorruption	-0.096	0.407	0.314	0.314	1.000
humour	0.640	0.066	-0.219	-0.265	1.000
confident	0.359	0.193	-0.080	-0.138	0.741

ROTATED LOADING MATRIX  
 (loadings lower than absolute 0.300 omitted)

Variable	F 1	F 2	F 3	F 4
greet			0.317	0.531
docname				0.444
ptname				0.539
soctalk				0.716
famtalk				0.684
friendliness				0.768
respect			0.396	0.398
listencompletely			0.581	
listenattentively			0.618	
examcarefully				
consentallcase				
generalpreventive		0.554		
reassurance				0.665
trust			0.647	-0.353
caringnotbusinesslike			0.702	-0.330
involveincare	0.630		-0.382	
culturalsensitivity				
considerses	0.872			
understandses	0.767			
informses	0.693			
helpses	0.778			
followup		0.302		0.365
explainall		0.869		
explainexplain		0.837		
explainunderstood		0.339		
explaincause		0.751		
explaindx		0.702		
explainprognosis		0.628		
explainrx		0.480		
explainpreventive		0.642		
questionall				
questionencourage			0.588	0.339
questionlistenattentively			0.464	
nojargon			0.511	
closingall				0.586
prescription				
nohierarchy				0.383
gendersensitivity			0.374	
interruption			0.353	
appearance				
nonverbalcomm			0.458	0.430
touch				0.355
nocorruption			0.566	-0.451
humour				0.698
confident				0.365



**Appendix 24: 2<sup>nd</sup> Iteration of EFA with 36 Items and 5 Factors, with Promin Rotation**

OVERALL FACTOR ANALYSIS STATISTICS

Total observed variance = 36  
Total common variance = 32.499  
Explained common variance = 19.392 ( 59.67%)  
Unexplained common variance = 13.107

EIGENVALUES OF THE REDUCED CORRELATION MATRIX

variable	Eigenvalue	Proportion of Common Variance	Cumulative Proportion of Variance
1	9.29528	0.28602	0.28602
2	3.29989	0.10154	0.38756
3	2.76001	0.08493	0.47248
4	2.37105	0.07296	0.54544
5	1.66548	0.05125	0.59669
6	1.28689	0.03960	
7	1.21399	0.03735	
8	1.08433	0.03337	
9	0.89670	0.02759	
10	0.86992	0.02677	
11	0.79311	0.02440	
12	0.72143	0.02220	
13	0.67229	0.02069	
14	0.59735	0.01838	
15	0.55434	0.01706	
16	0.53163	0.01636	
17	0.45580	0.01403	
18	0.43472	0.01338	
19	0.37682	0.01159	
20	0.34886	0.01073	
21	0.32391	0.00997	
22	0.27924	0.00859	
23	0.26013	0.00800	
24	0.25341	0.00780	
25	0.22504	0.00692	
26	0.21677	0.00667	
27	0.18063	0.00556	
28	0.13360	0.00411	
29	0.11673	0.00359	
30	0.10609	0.00326	
31	0.07880	0.00242	
32	0.06573	0.00202	
33	0.02859	0.00088	
34	0.00027	0.00001	
35	0.00014	0.00000	
36	0.00000	0.00000	

UNROTATED LOADING MATRIX

variable	F 1	F 2	F 3	F 4	F 5	Communality
greet	0.588	0.172	-0.284	-0.000	0.016	0.813
ptname	0.554	-0.115	-0.145	0.199	0.046	0.744
soctalk	0.650	-0.060	-0.371	0.122	0.351	1.000
famtalk	0.534	-0.125	-0.356	0.214	0.365	1.000
friendliness	0.579	-0.012	-0.429	0.232	0.291	1.000
respect	0.595	0.183	-0.214	-0.130	-0.170	0.765
listencompletely	0.549	0.316	-0.106	-0.301	-0.296	0.921
listenattentively	0.654	0.318	-0.021	-0.236	-0.195	0.897
examcarefully	0.458	-0.023	-0.086	-0.060	-0.227	0.594
generalpreventive	0.453	-0.298	0.195	-0.166	0.173	0.925
reassurance	0.633	-0.189	-0.297	0.070	0.072	1.000
trust	0.287	0.588	0.310	-0.072	0.439	1.000
caringnotbusinesslike	0.260	0.668	0.259	-0.056	0.461	1.000
considerses	0.390	0.324	0.376	0.673	-0.064	1.000
understands	0.433	0.279	0.292	0.582	-0.252	0.907
informs	0.343	-0.215	0.413	0.588	0.024	1.000
helpses	0.230	0.360	0.437	0.493	-0.202	0.861
followup	0.497	-0.294	0.014	0.076	-0.001	1.000
explainall	0.630	-0.247	0.472	-0.282	-0.028	0.974
explainexplain	0.689	-0.203	0.447	-0.271	0.021	1.000
explainunderstood	0.444	-0.251	0.064	0.031	0.084	0.813
explaincause	0.470	-0.234	0.431	-0.222	0.222	0.908
explaindx	0.443	-0.354	0.375	-0.161	-0.038	0.973
explainprognosis	0.469	-0.384	0.312	-0.046	0.135	0.938
explainrx	0.518	-0.192	0.111	-0.133	-0.001	0.654
explainpreventive	0.481	-0.246	0.259	-0.246	0.044	0.741
questionall	0.311	0.208	0.044	0.058	-0.305	0.578
questionencourage	0.670	0.323	-0.199	-0.272	-0.123	1.000
questionlistenattentively	0.413	0.368	0.039	-0.215	-0.329	0.994
nojargon	-0.033	0.591	0.045	-0.206	0.135	1.000
closingall	0.576	-0.010	-0.290	0.083	-0.124	0.931
nonverbalcomm	0.786	0.207	-0.134	-0.091	-0.118	1.000
touch	0.549	-0.149	-0.108	-0.038	-0.320	0.994
nocorruption	-0.112	0.578	0.211	-0.278	0.277	1.000
humour	0.669	-0.016	-0.313	0.217	0.214	1.000
confident	0.399	0.137	-0.187	0.086	0.028	0.571

ROTATED LOADING MATRIX

(loadings lower than absolute 0.300 omitted)

variable	F 1	F 2	F 3	F 4	F 5
greet		0.391			0.454
ptname					0.461
soctalk					0.854
famtalk					0.847
friendliness					0.866
respect		0.595			
listencompletely		0.782			
listenattentively		0.686			
examcarefully		0.435			
generalpreventive	0.614				
reassurance					0.579
trust				0.818	
caringnotbusinesslike				0.869	
considerses			0.906		
understands			0.843		
informs		-0.325	0.693		
helpses			0.810		
followup	0.323				
explainall	0.871				
explainexplain	0.856				
explainunderstood	0.363				
explaincause	0.808				
explaindx	0.724				
explainprognosis	0.691				
explainrx	0.451				
explainpreventive	0.651				
questionall		0.454			
questionencourage		0.698			
questionlistenattentively		0.698			
nojargon				0.557	
closingall		0.401			0.400
nonverbalcomm		0.601			
touch		0.498		-0.335	
nocorruption				0.709	
humour					0.755
confident					0.350

### Appendix 25: 3<sup>rd</sup> Iteration of EFA with 35 Items and 5 Factors, with Promin Rotation

#### OVERALL FACTOR ANALYSIS STATISTICS

Total observed variance = 35  
Total common variance = 31.626  
Explained common variance = 19.169 ( 60.61%)  
Unexplained common variance = 12.457

#### EIGENVALUES OF THE REDUCED CORRELATION MATRIX

Variable	Eigenvalue	Proportion of Common Variance	Cumulative Proportion of Variance
1	9.20014	0.29090	0.29090
2	3.25245	0.10284	0.39374
3	2.76024	0.08728	0.48102
4	2.36110	0.07466	0.55568
5	1.59495	0.05043	0.60611
6	1.27136	0.04020	
7	1.14674	0.03626	
8	1.02816	0.03251	
9	0.87993	0.02782	
10	0.85892	0.02716	
11	0.72352	0.02288	
12	0.66174	0.02092	
13	0.61473	0.01944	
14	0.57918	0.01831	
15	0.52915	0.01673	
16	0.52235	0.01652	
17	0.45300	0.01432	
18	0.43108	0.01363	
19	0.36431	0.01152	
20	0.34025	0.01076	
21	0.29352	0.00928	
22	0.27776	0.00878	
23	0.25542	0.00808	
24	0.22865	0.00723	
25	0.21671	0.00685	
26	0.17860	0.00565	
27	0.16270	0.00514	
28	0.12415	0.00393	
29	0.11790	0.00373	
30	0.08470	0.00268	
31	0.07612	0.00241	
32	0.03636	0.00115	
33	0.00019	0.00001	
34	0.00011	0.00000	
35	-0.00000	-0.00000	

UNROTATED LOADING MATRIX

Variable	F 1	F 2	F 3	F 4	F 5	Communality
greet	0.591	0.197	-0.273	-0.002	0.070	0.790
ptname	0.557	-0.104	-0.146	-0.199	-0.027	0.743
soctalk	0.654	-0.037	-0.368	-0.124	-0.360	1.000
famtalk	0.539	-0.102	-0.355	-0.216	-0.369	1.000
friendliness	0.580	0.003	-0.429	-0.230	-0.337	1.000
respect	0.597	0.193	-0.213	0.137	0.206	0.820
listencompletely	0.545	0.318	-0.098	0.303	0.320	0.915
listenattentively	0.654	0.330	-0.010	0.236	0.254	0.913
examcarefully	0.456	-0.024	-0.087	0.064	0.234	0.597
generalpreventive	0.460	-0.285	0.196	0.160	-0.120	0.929
reassurance	0.636	-0.175	-0.299	-0.069	-0.067	1.000
trust	0.286	0.604	0.329	0.058	-0.395	1.000
caringnotbusinesslike	0.258	0.683	0.279	0.043	-0.422	1.000
considerses	0.384	0.316	0.376	-0.679	0.103	1.000
understandses	0.422	0.259	0.285	-0.575	0.257	0.876
informses	0.347	-0.214	0.406	-0.596	0.033	1.000
helpses	0.223	0.345	0.437	-0.499	0.215	0.864
followup	0.492	-0.285	0.007	-0.072	-0.025	0.911
explainall	0.632	-0.251	0.473	0.279	0.026	0.987
explainexplain	0.690	-0.204	0.447	0.266	-0.021	1.000
explainunderstood	0.445	-0.246	0.059	-0.033	-0.115	0.778
explaincause	0.473	-0.233	0.432	0.216	-0.247	0.913
explainindx	0.446	-0.361	0.370	0.158	0.000	0.979
explainprognosis	0.473	-0.380	0.304	0.041	-0.152	0.924
explainrx	0.520	-0.190	0.109	0.132	-0.021	0.661
explainpreventive	0.485	-0.243	0.261	0.244	-0.018	0.752
questionencourage	0.666	0.330	-0.189	0.273	0.116	1.000
questionlistenattentively	0.388	0.315	0.037	0.196	0.189	0.744
nojargon	-0.038	0.596	0.060	0.204	-0.104	1.000
closingall	0.579	0.003	-0.294	-0.081	0.161	0.963
nonverbalcomm	0.786	0.222	-0.126	0.090	0.161	1.000
touch	0.549	-0.144	-0.110	0.041	0.356	0.984
nocorruption	-0.115	0.586	0.229	0.270	-0.251	1.000
humour	0.668	-0.005	-0.314	-0.216	-0.259	1.000
confident	0.398	0.146	-0.185	-0.086	-0.026	0.583

ROTATED LOADING MATRIX

(loadings lower than absolute 0.300 omitted)

Variable	F 1	F 2	F 3	F 4	F 5
greet					0.543
ptname				0.415	
soctalk				0.826	
famtalk				0.841	
friendliness				0.863	
respect					0.709
listencompletely					0.875
listenattentively					0.810
examcarefully					0.493
generalpreventive			0.591		
reassurance				0.521	
trust		0.819			
caringnotbusinesslike		0.873			
considerses	0.906				
understandses	0.819				
informses	0.713				
helpses	0.802				
followup			0.320		
explainall			0.860		
explainexplain			0.843		
explainunderstood			0.366		
explaincause			0.811		
explainindx			0.724		
explainprognosis			0.685		
explainrx			0.451		
explainpreventive			0.635		
questionencourage					0.767
questionlistenattentively					0.578
nojargon		0.531			
closingall					0.511
nonverbalcomm					0.719
touch		-0.380			0.599
nocorruption		0.698			
humour				0.748	
confident					

**Appendix 26: 4<sup>th</sup> (Final) Iteration of EFA with 34 Items and 5 Factors, with Promin Rotation**

OVERALL FACTOR ANALYSIS STATISTICS

Total observed variance = 34  
Total common variance = 30.862  
Explained common variance = 18.944 ( 61.38%)  
Unexplained common variance = 11.918

EIGENVALUES OF THE REDUCED CORRELATION MATRIX

Variable	Eigenvalue	Proportion of Common Variance	Cumulative Proportion of Variance
1	9.04398	0.29305	0.29305
2	3.23251	0.10474	0.39779
3	2.72296	0.08823	0.48602
4	2.35252	0.07623	0.56224
5	1.59238	0.05160	0.61384
6	1.15848	0.03754	
7	1.13435	0.03676	
8	1.01623	0.03293	
9	0.88117	0.02855	
10	0.82712	0.02680	
11	0.71607	0.02320	
12	0.65315	0.02116	
13	0.60779	0.01969	
14	0.57917	0.01877	
15	0.53314	0.01727	
16	0.52177	0.01691	
17	0.44444	0.01440	
18	0.40480	0.01312	
19	0.35106	0.01138	
20	0.30214	0.00979	
21	0.28652	0.00928	
22	0.25543	0.00828	
23	0.22393	0.00726	
24	0.21333	0.00691	
25	0.20443	0.00662	
26	0.16774	0.00544	
27	0.12726	0.00412	
28	0.11176	0.00362	
29	0.08631	0.00280	
30	0.07361	0.00239	
31	0.03595	0.00116	
32	0.00034	0.00001	
33	0.00013	0.00000	
34	-0.00000	-0.00000	

UNROTATED LOADING MATRIX

variable	F 1	F 2	F 3	F 4	F 5	Communality
greet	0.576	0.175	-0.270	-0.017	0.065	0.668
ptname	0.552	-0.108	-0.136	-0.202	-0.028	0.688
soctalk	0.655	-0.048	-0.378	-0.150	-0.367	1.000
famtalk	0.540	-0.115	-0.355	-0.239	-0.375	1.000
friendliness	0.576	-0.017	-0.429	-0.255	-0.338	1.000
respect	0.600	0.196	-0.248	0.118	0.208	0.859
listencompletely	0.542	0.321	-0.132	0.294	0.326	0.925
listenattentively	0.654	0.340	-0.045	0.228	0.256	0.935
examcarefully	0.460	-0.019	-0.103	0.053	0.227	0.610
generalpreventive	0.475	-0.262	0.187	0.162	-0.137	0.955
reassurance	0.630	-0.192	-0.284	-0.077	-0.068	1.000
trust	0.280	0.617	0.303	0.068	-0.394	1.000
caringnotbusinesslike	0.252	0.696	0.244	0.046	-0.422	1.000
considerses	0.385	0.332	0.378	-0.673	0.101	1.000
understandses	0.422	0.272	0.284	-0.570	0.253	0.864
informses	0.349	-0.200	0.444	-0.573	0.036	1.000
helpses	0.224	0.366	0.432	-0.491	0.214	0.867
followup	0.491	-0.297	0.038	-0.061	-0.017	0.962
explainall	0.639	-0.216	0.465	0.298	0.027	0.966
explainexplain	0.699	-0.170	0.437	0.284	-0.018	1.000
explainunderstood	0.449	-0.236	0.064	-0.031	-0.117	0.771
explaincause	0.482	-0.202	0.429	0.236	-0.248	0.923
explainindx	0.451	-0.334	0.377	0.178	0.007	0.955
explainprognosis	0.470	-0.357	0.320	0.063	-0.135	0.852
explainrx	0.524	-0.179	0.109	0.138	-0.018	0.664
explainpreventive	0.494	-0.217	0.250	0.251	-0.025	0.745
questionencourage	0.663	0.327	-0.225	0.256	0.117	1.000
questionlistenattentively	0.387	0.324	0.005	0.189	0.191	0.750
nojargon	-0.040	0.604	0.013	0.192	-0.111	1.000
closingall	0.575	-0.014	-0.292	-0.094	0.170	0.981
nonverbalcomm	0.783	0.221	-0.149	0.077	0.158	1.000
touch	0.549	-0.138	-0.113	0.031	0.330	0.922
nocorruption	-0.113	0.604	0.179	0.265	-0.258	1.000
humour	0.661	-0.023	-0.305	-0.229	-0.256	1.000

ROTATED LOADING MATRIX  
(loadings lower than absolute 0.300 omitted)

variable	F 1	F 2	F 3	F 4	F 5
greet	0.342		0.491		
ptname	0.424				
soctalk	0.861				
famtalk	0.852				
friendliness	0.883				
respect			0.685		
listencompletely			0.843		
listenattentively			0.779		
examcarefully			0.467		
generalpreventive				0.584	
reassurance	0.542				
trust		0.818			
caringnotbusinesslike		0.873			
considerses					0.909
understandses					0.818
informses				0.312	0.712
helpses					0.804
followup				0.352	
explainall				0.853	
explainexplain				0.835	
explainunderstood				0.367	
explaincause				0.813	
explainindx				0.729	
explainprognosis				0.693	
explainrx				0.448	
explainpreventive				0.623	
questionencourage			0.731		
questionlistenattentively			0.558		
nojargon		0.537			
closingall	0.329		0.486		
nonverbalcomm			0.679		
touch			-0.355	0.547	
nocorruption			0.704		
humour	0.759				

INTER-FACTORS CORRELATION MATRIX

Factor	F 1	F 2	F 3	F 4	F 5
F 1	1.000				
F 2	-0.094	1.000			
F 3	0.424	0.237	1.000		
F 4	0.399	-0.042	0.429	1.000	
F 5	0.247	0.106	0.223	0.253	1.000

## Appendix 27: Ordinal Alpha Coefficients, Item-Test, and Item-Rest Correlations

```

Reliability analysis
Call: alpha(x = polychor34items$rho)

  raw_alpha std.alpha G6(smc) average_r S/N
    0.91      0.91      0.96      0.22 9.6

Reliability if an item is dropped:
      raw_alpha std.alpha G6(smc) average_r S/N
greet      0.90      0.90      0.95      0.22 9.2
ptname     0.90      0.90      0.95      0.22 9.2
soctalk    0.90      0.90      0.95      0.22 9.1
famtalk    0.90      0.90      0.95      0.22 9.2
friendliness 0.90      0.90      0.95      0.22 9.2
respect    0.90      0.90      0.95      0.22 9.2
listencompletely 0.90      0.90      0.95      0.22 9.3
listenattentively 0.90      0.90      0.95      0.22 9.0
examcarefully 0.90      0.90      0.95      0.22 9.3
generalpreventive 0.90      0.90      0.95      0.22 9.3
reassurance 0.90      0.90      0.95      0.22 9.1
trust      0.91      0.91      0.95      0.23 9.6
caringnotbusinesslike 0.91      0.91      0.95      0.23 9.7
considerses 0.90      0.90      0.95      0.22 9.4
understands 0.90      0.90      0.95      0.22 9.3
informses  0.90      0.90      0.95      0.22 9.4
helpses    0.91      0.91      0.95      0.23 9.7
followup   0.90      0.90      0.95      0.22 9.3
explainall 0.90      0.90      0.95      0.21 9.0
explainexplain 0.90      0.90      0.95      0.21 8.9
explainunderstood 0.90      0.90      0.95      0.22 9.3
explaincause 0.90      0.90      0.95      0.22 9.3
explainidx 0.90      0.90      0.95      0.22 9.3
explainprognosis 0.90      0.90      0.95      0.22 9.3
explainrx   0.90      0.90      0.95      0.22 9.2
explainpreventive 0.90      0.90      0.95      0.22 9.3
questionencourage 0.90      0.90      0.95      0.22 9.1
questionlistenattentively 0.90      0.90      0.95      0.22 9.5
nojargon-  0.91      0.91      0.96      0.23 10.0
closingall 0.90      0.90      0.95      0.22 9.2
nonverbalcomm 0.90      0.90      0.95      0.21 8.8
touch      0.90      0.90      0.95      0.22 9.2
nocorruption- 0.91      0.91      0.95      0.23 9.9
humour     0.90      0.90      0.95      0.21 9.0

```

Item statistics

	r	r.cor	r.drop
greet	0.558	0.548	0.51
ptname	0.561	0.540	0.52
soctalk	0.626	0.628	0.59
famtalk	0.516	0.513	0.47
friendliness	0.540	0.538	0.50
respect	0.550	0.533	0.51
listencompletely	0.502	0.491	0.46
listenattentively	0.634	0.629	0.60
examcarefully	0.479	0.456	0.43
generalpreventive	0.467	0.454	0.42
reassurance	0.609	0.598	0.57
trust	0.286	0.274	0.23
caringnotbusinesslike	0.261	0.253	0.20
considerses	0.434	0.430	0.38
understandses	0.474	0.468	0.43
informses	0.408	0.396	0.36
helpses	0.278	0.266	0.22
followup	0.505	0.487	0.46
explainall	0.645	0.646	0.61
explainexplain	0.704	0.707	0.67
explainunderstood	0.473	0.450	0.43
explaincause	0.494	0.482	0.45
explaindx	0.466	0.449	0.42
explainprognosis	0.501	0.484	0.45
explainrx	0.532	0.515	0.49
explainpreventive	0.508	0.497	0.46
questionencourage	0.624	0.621	0.59
questionlistenattentively	0.393	0.367	0.34
nojargon-	0.089	0.061	0.03
closingall	0.556	0.547	0.51
nonverbalcomm	0.750	0.749	0.72
touch	0.552	0.536	0.51
nocorruption-	0.129	0.109	0.07
humour	0.642	0.642	0.60



**Appendix 28: Inter-Rater Reliability by Intra-Class Correlation Coefficient Method**

```
. icc score34 obsid observerid
```

```
Intraclass correlations  
Two-way random-effects model  
Absolute agreement
```

```
Random effects: obsid      Number of targets =      30  
Random effects: observerid Number of raters   =       3
```

score34	ICC	[95% Conf. Interval]	
Individual	.6384303	.3685502	.8100173
Average	.8411981	.636492	.9274885

```
F test that  
ICC=0.00: F(29.0, 58.0) = 8.86      Prob > F = 0.000
```

Note: ICCs estimate correlations between individual measurements and between average measurements made on the same target.

**Appendix 29: Correlation between Responsiveness Score and Consultation Time**

```
. corr scorescale34 consultationtime_i
(obs=393)
```

	scores~4	consul~i
scorescale34	<b>1.0000</b>	
consultati~i	<b>0.5081</b>	<b>1.0000</b>

Comparison of mean responsiveness score between public and private sector physicians

```
. ttest scorescale34, by (setting)
```

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Public s	<b>195</b>	<b>1.983409</b>	<b>.0208647</b>	<b>.2913602</b>	<b>1.942258</b>	<b>2.02456</b>
Private	<b>198</b>	<b>2.161765</b>	<b>.0209028</b>	<b>.2941288</b>	<b>2.120543</b>	<b>2.202987</b>
combined	<b>393</b>	<b>2.073267</b>	<b>.0154213</b>	<b>.3057146</b>	<b>2.042949</b>	<b>2.103586</b>
diff		<b>-.178356</b>	<b>.0295363</b>		<b>-.2364258</b>	<b>-.1202862</b>

```
diff = mean(Public S) - mean(Private)          t = -6.0385
Ho: diff = 0                                   degrees of freedom = 391

Ha: diff < 0                                Ha: diff != 0                                Ha: diff > 0
Pr(T < t) = 0.0000                          Pr(|T| > |t|) = 0.0000                          Pr(T > t) = 1.0000
```

## Appendix 30: ROP-Scale in the form of Structured Observation Tool

### Understanding and Measuring Responsiveness of Human Resources for Health in Rural Bangladesh

#### 1. General Identification Questions

**Instruction to the observer:** Fill out these information's just before starting the interview with the doctor and structured observation. Take the first photo of the consultation room (with patients and the doctor if possible) during this time. Take the second photo after the consultation.

2. Observation ID

3. Observer ID

4. Date of observation

5. Location of observation

6. Observation setting: Public sector/private sector

7. Type of provider (in case of private sector): Exclusively Private/ both public and private but observed in private setting only/ both public and private and observed in both settings

8. Geospatial data (longitude/ latitude) [This is best captured in open space]

9. Starting time of observation

10. Ending time of observation

#### 11. Questions for the Doctor

**Instruction to the observer:** Ensure you have obtained the consent from both the patients and the doctor. Greet the doctor; introduce yourself, and record this information.

12. ID of the doctor [Write the name, which will be replaced by a numeric ID later]

13. Age of doctor [in years]

14. Gender

15. Degrees [E.g., MBBS, FCPS (Medicine)]

16. Medical College [E.g., Khulna Medical College]

17. Year of graduation

18. Number of months in practice [Including internship]

19. Number of months working in this upazila

20. Number of months working in rural settings

21. Is the doctor originally from this area? [Yes/ No]

22. How many patients does the doctor attend on an average in a typical day (if the observation is in public sector, doctor should give an estimate of patients attended per day in public sector setting and vice versa)?

#### 23. Observation Items

**Instruction to the observer:** Be present while consulting with 11 patients. Do not record first 10 observations. Fill out the tool on the basis of last (11th) observation.

#### Exclusion Criteria:

Do not include the following patients in your observation: Those who are below 18 years, suffering from gynecological diseases, venereal diseases, emergency patients and patients suffering from diseases where it is necessary to examine private parts (i.e. where extra privacy is required).

#### **Beginning part**

24. Patients expect that the doctor will greet and welcome the patient, make the patient feel comfort, accept the patient cordially, reply the patient's greetings and ask the patient's well being. Assess the role of the doctor in this regard by 1 to 4 where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor started writing the prescription without any greeting. If the	The doctor expressed minimum greetings to the patient. If the patient greeted first, doctor responded to the patient's greetings indirectly (by	The doctor greeted and welcomed the patient; however, it was not enough to make the patient easy or friendly. If the patient greeted first, doctor gave his answer in words when the patient gave salam.	The doctor greeted warmly and welcomed the patient friendly and became easy with him. If the patient greeted first, doctor cordially answered the patient's and also exchanged greeting. <b>Following greetings among the</b>

patient greeted first, the doctor even did not respond to the greetings of the patient.	shaking head, lifting eyes, shaking hand etc.). <b>Following greetings among the traditional greetings in this country might have been included:</b> asking the name of the patient, asking him to take a seat etc.	<b>Following greetings among the traditional greetings in this country might have been included:</b> giving salam to the patient (Saying Adab/Nomoskar to the Hindus and others as per their religion), asking the name of the patient, asking his well beings (how are you/what's the matter), appropriate salutation like mother, father, brother, sister, sister-in-law, asking to take a seat, exchange smiles etc.	<b>traditional greetings in this country might have been included:</b> giving salam to the patient (Saying Adab/Nomoskar to the Hindus and others as per their religion), asking the name of the patient and calling in his name, asking his well beings (how are you/what's the matter), appropriate salutation like mother, father, brother, sister, sister-in-law, saluting 'Babu' (in case of children), Sweetie etc. Asking to take a seat, asking whether he had his breakfast, asking about his residence and profession, smiling at him; to shake hands with him; showing respect to the aged person by standing up etc.
---	--	---	--

25. Patients expect that the doctor will ask patient's name at least and will treat the patient as a person. Assess the role of the doctor in this regard by 1 to 4 where 1-completely unsatisfactory and 4-completelysatisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor did not consider asking the name of the patient as necessary or just asked the name for writing in the prescription.	The doctor asked the name of the patient but it was not seemed that he listened to the patient by giving importance or attention.	The doctor asked the name of the patient and listened attentively. But did not call her/ him in that name.	The doctor asked the name of the patient, listened attentively and also called her/ him in that name.

26. The patient expects that the doctor will not only listen to his problem but also do some social talks and listen to the patient if he does any social talk. Assess the role of the doctor in this regard by 1 to 4 where 1-completely unsatisfactory and 4-completelysatisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor did not do any social talk with patient. Even he stopped the patient when the patient started to do some social talks.	The doctor did minimum social talk or responded when the patient started social talk. <b>In this case following social talks might have been included:</b> Who are there in the family etc.	The doctor did some social talk or responded when the patient started social talk. <b>In this case following social talks might have been included:</b> The patient's profession, family members etc.	The doctor got involved completely into social talk or if the patient started, he participated satisfactorily into social talks. <b>In this case following social talks might have been included:</b> The patient's profession, education, children, family members, weather etc.

27. The patient expects that doctor will also ask about his family. Assess the role of the doctor in this regard by 1 to 4 where 1-completely unsatisfactory and 4-completelysatisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor did not ask anything about the family of the patient or there was nothing in this regard during his consultation.	The doctor did not want to know anything about the family of the patient but there were some talking regarding this in his advice. That means it was a part of his treatment but not a social talk.	The doctor wanted to know about the family of the patient but not in details. That was not a part of the treatment rather a part of social talk. <b>For example:</b> how many members are there in his family, how many children, are they all well etc.	The doctor wanted to know about the family of the patient in details cordially. That was not a part of the treatment rather a part of social talk. <b>For example:</b> how many members are there in his family, how many children, are they all well etc.

28. Patients expect that the doctor will be friendly. Assess the role of the doctor in this regard by 1 to 4 where 1-completely unsatisfactory and 4-completelysatisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor was not friendly.	The doctor was friendly at a minimum level.	The doctor was somewhat friendly.	The doctor was fully friendly.
<b>The example of friendliness may be:</b> remembering the name and face of the patient and calling him by name (here ‘calling by name’ means calling by name of the patient in a friendly manner); asking or making comment about an event of the patient’s family; praising the patient (about clothing or anything else); asking for an opinion of the patient about anything (weather, politics etc.)			

29. Patients do not expect misbehave rather expect good behavior from the doctor. Assess the role of the doctor in this regard by 1 to 4 where 1-completely unsatisfactory and 4-completelysatisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor misbehaved with the patient.	The doctor neither misbehaved nor behaved well with the patient.	The doctor showed least but not much respect. <b>As for example:</b> replying salam and good-bye, talking softly with the patient etc.	The doctor showed respect to the patient perfectly. <b>The example of showing respect to the patient perfectly may be:</b> giving honor to an aged patient by standing up, helping an aged patient to sit down, giving Salam or at least replying when patients give Salam, talking softly with the patient etc.
<b>Examples of behavior showing disrespect might be:</b> Bargaining for money, using bad words, denying to provide treatment etc.; stopping the patient in the middle; talking in an authoritative tone, misbehaving, scolding etc.; getting the patient out of the room; “Do you know more than me? Then why did not you become a doctor?”- Telling such etc.			

### History Taking

30. Patients expect that the doctors will start writing the prescription after listening to the symptoms in detail and completely. Assess the role of the doctor in this regard by 1 to 4 where 1-completely unsatisfactory and 4-completelysatisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor did not listen to the patient attentively. The doctor stopped the patient while describing his complains.	The doctor listened to some of the patient's complaints, but at some stage doctor stopped the patient either by verbal or non-verbal cues. Doctor had gone to the next step (examining, prescribing, etc.) before the patient finished describing his complains.	The doctor listened to patient's complaints, did not stop the patient in the middle. But doctor had gone to the next step (examining, prescribing, etc.) before the patient finished describing his complaints.	The doctor heard the patient up to the end, did not interrupt (except necessary questions). He started next step only when the patient completed the description of the disease in details.

31. Patients expect that the doctor will listen to them attentively with patience and that would be expressed by his behavior. Assess the role of the doctor in this regard by 1 to 4 where 1-completely unsatisfactory and 4-completelysatisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor did not show attentiveness and patience in his behavior and language.	The doctor showed at least minimum attentiveness and patience in his behavior and language (e.g., At least one of the following things, <b>but did not ask questions</b> )	The doctor showed attentiveness and patience in his behavior and language to some extent (e.g., <b>Asking questions to learn more</b> and any two of the following).	The doctor showed attentiveness and patience clearly and fully by his behavior and language (all or most of the following).
<b>Behaviors indicating attentiveness and patience may be:</b> shaking head while talking, looking at the patient, asking questions to learn more, variation in tone, smiling face, some interest expressing words (e.g., Ok, hm etc.)etc.			

### Examination

32. Patients expect that the doctor would do the necessary physical examination with care. Assess the role of the doctor in this regard by 1 to 4 where 1-completely unsatisfactory and 4-completelysatisfactory. Possible observations are as follows: **[Use ‘N/A’ if the patient does not come with a problem which require physical examination or if it is not clear whether the problem requires physical examination. If it is seemed that the problem requires physical examination, but doctor does not examine, fill in the field '1'.Do not fill in 'N/A' field if the doctor conducted any physical examination.]**

NA-----1-----2-----3-----4			
The doctor did not examine the patient any more.	The doctor examined the patient at least once (only measured body temperature or pulse rate etc.).	The doctor measured the body temperature, blood pressure, pulse rate etc. (which were necessary) with some care.	The doctor measured the body temperature, blood pressure, pulse rate etc. and did all with care.
The example of examining the patient physically may be: telling the patient politely to fold up his sleeves, telling the patient that what he is going to do etc.			

### Prescription Writing

33. Patients expect that the doctor would not only treat the disease but also suggest some measures on disease prevention and health promotion. It may be or may not be directly related to the patient's disease. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[This information is about common disease prevention and health promotion measures; specific prevention measures are given later]**

NA-----1-----2-----3-----4			
The doctor did not ask anything about the disease prevention and health promotion did not suggest anything in this regard.	Doctor indirectly told about some disease prevention and health promotion measures; but that came as part of the patient's disease condition. (The doctor told at least one of the following measures.)	The doctor asked the patient about the disease prevention and health promotion and also gave some suggestions in this regard. (The doctor told more than one of the following measures)	The doctor asked the patient about disease prevention and health promotion. He also advised the patient for leading a healthier life in details.
<b>Disease prevention and health promotion measures may be:</b> using sanitary latrines, habit of hand washing, vaccinating children, giving breast milk to the infants, physical activity or exercise, giving up smoking, general cleanliness, avoiding fatty foods, using germ-free water, eating nutritious food etc.			

34. Patient wants courage and assurance from the doctor. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor neither said anything nor behaved in such a way that expressed reassurance.	The doctor reassured either verbally or nonverbally (speech or behavior).	The doctor reassured both verbally and nonverbally. (There should be both speech and behavior).	The doctor showed most of the reassurance expressing speech or behavior (there should be both speech and behavior).
<b>Reassurance expressing speech and behavior may be:</b> You have no problem; you will be all right; nothing has happened to you; there is nothing to be worried; I would be able to cure your disease, inshallah, etc.-such type of speech; putting hands on the shoulder of the patient, giving him courage by holding his hand, giving courage by putting hand on the body-such type of behavior.			

35. Patients want to have trust on the doctor. The doctor should not tell or do anything, which might breach the trust; rather he should behave for earning trust. Here ‘trust’ means **“The doctor advised for maximizing the patient's benefit, not for maximizing his own benefit.”**In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
Most of the behaviors (at least two) of the doctor were such that might break the trust of the patient.	Some behaviors (at least one) of the doctor were trust breaking.	The doctor did not behave such that might cause breach of trust of the patient. However, he also did not do anything for earning the trust of the patient.	The doctor did not behave such that might cause breach of trust of the patient. However, he tried to earn the trust of the patient.

**Examples of such behavior that may cause breach of trust:** telling the patient to do test from any specific diagnostic center (but if the patient himself asks where to do the test and the doctor tells the name in response, then it will not be considered as breach of trust), encouraging to buy medicines of a specific pharmaceutical company, telling the patient under consultation of a govt. doctor to go to a private clinic, seeing private patients by a public doctor during office hour (moonlighting) etc.

**Examples of activities to gain the trust:** Explaining the necessity to the patient if any test has been given.

36. Patients expect service-oriented attitude from the doctor and consider business-oriented attitude as unwanted. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
Most of the behaviors (at least two) of the doctor were such that the patient might think those as business oriented attitude.	Some behaviors (at least one) of the doctor might be considered as of business oriented to the patient.	The doctor did not do anything that might be considered as business oriented to the patient. However, the doctor's behavior was not service oriented also.	The doctor did not do anything that might be considered as business oriented to the patient. Rather, the doctor's behavior was service oriented.
<p><b>Behaviors expressing business oriented attitude may be:</b> telling the patient to do test from any specific diagnostic center, encouraging to buy medicines of a specific pharmaceutical company, taking money from patients forcibly, telling the patient under consultation of a govt. doctor to go to a private clinic, etc.</p> <p><b>Examples of service-oriented attitudes may be:</b> asking the patient's ability to bear the cost of treatment, if necessary assisting the patient in getting low-cost medical care and so on.</p>			

37. Patients expect that the doctors would consider the financial strength of the patients and help the patients to get treatment within their ability. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[Fill in the 'Not Applicable' field if all treatment is provided at free of cost or if the treatment is very cheap (Diarrhea, common cold and fever etc.).]**

NA-----1-----2-----3-----4			
None of the three steps of financial assistance to the patient was followed. The doctor even did not help the patient when needed; he did not explain the patient and even he did not show sympathy.	One of the three steps of financial assistance to the patient (examples are given below) was followed. Even he helped the patient when needed (at least one of the following helps); the doctor explained when he could not help and showed sympathy.	Two among three steps of financial assistance to the patient (examples are given below) were partially followed. Even he helped the patient when needed (at least one of the following helps); the doctor explained when he could not help and showed sympathy.	Two among three steps of financial assistance to the patient (examples are given below) were fully followed. Even he helped the patient when needed (more than one of the following helps); the doctor explained when he could not help and showed sympathy.
<p><b>It is necessary to follow three steps for providing financial assistance to the patient:</b> Trying to understand the financial condition of the patient; giving idea about treatment cost; helping the patient if necessary.</p> <p><b>Example of trying to understand the financial condition of the patient may be:</b> Asking the patient directly about his income or whether he would be able to bear the treatment cost; Asking him indirectly (such as asking his profession); if the patient tells. Beside these, it might be guessed by observing the patient's conversation, behavior and clothing or the doctor might have idea about local people-however, but it is difficult to understand through observation.</p> <p><b>Example of giving idea about cost of treatment may be:</b> How much would be needed to complete the treatment; how long the treatment may continue; what impact the patient would be able to put on his ability of income during and after receiving treatment.</p> <p><b>Example of helping the poor patient may be:</b> Prescribing low cost antibiotics; taking less or no consultation fee (in case of private doctors); helping patients from 'poor fund'; helping forgetting free medicines from the hospital (in case of government doctors);giving time and advice to collect money; focusing on the history and physical examination to avoid investigation; prescribing the essential tests only; cutting the commission paid to the doctor for each test; recommending that treatment method to the patient which saves money (meeting the nutritional needs from domestic sources, suggesting</p>			

the pregnant woman to spend money for nutritious food instead of repeated ultrasonography etc.) and so on.

38. Patients expect that the doctor would try to understand the socio-economic condition of the patient before providing treatment. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[Fill in the 'Not Applicable' field if the patient is visibly financially solvent or if treatment is given at free of cost or if treatment cost of the disease is smaller amount (diarrhea, common cold and fever etc.).]**

NA-----1-----2-----3-----4			
The doctor did not try to understand the patient's financial condition.	The doctor heard and understood when the patient told willingly.	The doctor indirectly asked him (such as, he asked the profession of the patient) that whether he would be able to bear the cost of the treatment.	The doctor directly asked him that whether he would be able to bear the cost of the treatment.

39. Patients expect that the doctors would give them idea about treatment cost before starting treatment. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[If all medications are given free of cost, or if the treatment is very cheap (diarrhea, common cold) then fill in the 'NA' field]**

NA-----1-----2-----3-----4			
The doctor did not give any idea about the cost of treatment to the patient, even if the patient asked.	The doctor gave minimum idea to the patient about the treatment cost and did so when patient wanted to know. <b>Examples might be:</b> how much will it cost to complete the treatment.	The doctor gave rough idea to the patient about the treatment cost or did so when the patient asked. <b>In this case examples of giving idea might be:</b> how much will it cost to complete the treatment, how long treatment may continue on etc.	The doctor himself told the patient in details about the treatment cost. <b>Examples of giving idea might be:</b> how much will it cost to complete the treatment, how long treatment may continue on and what would be the impact on the earning ability of the patient after completion of the treatment etc.

40. Patients expect that the doctor would help them if they become unable to bear the cost of the treatment. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[If the patient is visibly affluent, or the doctor confirmed his ability to bear the cost by asking the patient, then fill in the 'NA' field.]**

NA-----1-----2-----3-----4			
The doctor did not help the patient by any means.	The doctor did minimum helps from the following list (at least one) to the patient.	The doctor did some helps from the following list (at least two) to the patient.	The doctor did almost all helps from following list to the patient.
<b>The examples of helping the poor patient may be:</b> Prescribing low cost antibiotics, taking less or no consultation fee (in case of private doctors), providing financial assistance to the poor patients, helping in getting free medicines from the hospital (in case of government doctors), giving time and advice to obtain money for treatment, trying to focus on the history and physical examination to avoid investigation, prescribing the essential tests only, deducting the commission paid to the doctor for each test, recommending the treatment method that saves money (to meet the nutritional needs from domestic sources, suggesting the pregnant woman to spend money for nutritious food instead of repeated ultrasonography etc.) and so on.			

41. Patients expect that the doctors would facilitate post treatment follow-up and give them a follow-up plan. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor did not give any follow-up plan to the patient.	The doctor gave <b>minimum</b> follow-up plan to the patient. <b>At least</b> he told when to come to the doctor again and what would be the cost of follow-up.	The doctor gave the patient a somewhat fair follow-up plan. At least he told when to come to the doctor again and what would be the cost of follow-up. Beside this, at least one of the following points	The doctor willingly gave the patient a complete follow-up plan. Almost all of the following points were



	was included.	included.
<p><b>Complete follow-up plan could be:</b> When the patient would meet the doctor again; in which case the patient should contact the doctor before; if necessary, how the patient can reach the doctor; providing mobile number to the patient; telling about follow-up costs; follow-up should be at free of cost; to write down what the patient should come up with at the time of follow-up (or at least tell); telling to inform the doctor immediately if any of the side effects of treatment arise etc.</p> <p><b>Note:</b> Often doctors suggest the patients to meet them again after doing any test. It would not be regarded as follow-up because it is not a part of sensitivity but a part of the treatment process.</p>		

### Explanations and Questions

42. Patients expect that the doctor would explain everything to them, such as cause of the disease, diagnosis (at least the name of the disease), prognosis and severity, treatment (at least explaining the prescription), side effects of the medicines (if any), report of diagnostic tests (if any), preventive measures of disease (Diet) etc.; he would do it by himself (that means he would not give this responsibility to his assistant or pharmacist, rather he would tell it) and ask the patient whether he has understood. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[Follow two steps for answering this question: at first, guess a score on the basis of three parameters of giving explanation. Later, adjust the score on the basis of the number and quality of explained issues.]**

NA-----1-----2-----3-----4			
Explained, he himself explained, asked whether understood – no one of these three points is positive.	Explained, he himself explained, asked whether understood –one of these three points is positive.	Explained, he himself explained, asked whether understood-two of these three issues are positive.	Explained, he himself explained, asked whether understood- all of these three issues are positive.

43. Patients expect the doctor would explain everything to them, such as cause of the disease, diagnosis (at least the name of the disease), prognosis and severity, treatment (at least explaining prescription), the side effects of the drugs (if any), the result of diagnostic tests (if any), preventive measures of disease (Diet) etc. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor did not explain anything to the patient. He only wrote the prescription.	The doctor explained at least one thing to the patient. Such as: diagnosis (at least the name of the disease), treatment (at least explaining prescription) etc.	The doctor explained many issues to the patient. Such as: diagnosis (at least the name of the disease), treatment (at least explaining prescription), the result of diagnostic tests (if any), preventive measures of disease (Diet) etc.	The doctor explained everything to the patient. Such as: cause of the disease, diagnosis (at least the name of the disease), treatment (at least explaining prescription), the side effects of the drugs (if any), the result of diagnostic tests (if any), preventive measures of disease (Diet) etc.

44. It is extremely important that the patient understands all suggestions or explanations given by the doctor. The doctor should be sure that the patient understands him. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[If the doctor does not explain anything, then fill in the ‘Not Applicable’ field; because there is no question of understanding, if he does not explain anything.]**

NA-----1-----2-----3-----4			
The doctor did not ask the patient about his understanding after explaining him the cause of the disease, diagnosis (name of the disease), prognosis, treatment etc.	The doctor asked the patient about his understanding after explaining him at least one (especially name of the disease and/or treatment) of the following issues, such as, cause of the disease, diagnosis (name of the disease), prognosis, treatment etc.	The doctor asked the patient about his understanding after explaining him at least two or more of the following issues, such as, cause of the disease, diagnosis (name of the disease), prognosis, treatment etc.	The doctor asked the patient about his understanding after explaining him each of the following issues, such as, cause of the disease, diagnosis (name of the disease), prognosis, treatment etc.

45. Patients expect that the doctor would explain the cause of the disease like why the disease occurred, what may be the causes of the disease, etc., he would do it on his own (that means he would not give responsibility to his assistant, pharmacist, rather he would tell it) and would ask whether the patient has understood. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[If no patient comes with such diseases like injury, common cold and fever, etc., where it is necessary to tell the causes, fill in the ‘Not Applicable’ field.]****[Follow two steps for answering this question: at first, guess a score on the basis of three parameters of giving explanation. Later, adjust the score on the basis of quality of explained issues.]**

NA-----1-----2-----3-----4			
Explained the cause of the disease, he himself explained, asked whether understood – none of these three points is positive.	Explained the cause of the disease, he himself explained, asked whether understood –one of these three points is positive.	Explained the cause of the disease, he himself explained, asked whether understood- two of these three issues are positive.	Explained the cause of the disease, he himself explained, asked whether understood- all of these three issues are positive.

46. Patients expect that the doctor would explain in details about the diagnosis (that means the name of the disease) of their diseases (However, it should be told in such a way that it does not create panic). In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[If no patient comes with such diseases like injury, common cold and fever etc. where it is necessary to tell about the diagnosis, fill in the ‘Not Applicable’ field.]****[Follow two steps for answering this question: at first, guess a score on the basis of three parameters of giving explanation. Later, adjust the score on the basis of quality of explained issues.]**

NA-----1-----2-----3-----4			
Explained about diagnosis, he himself explained, asked whether understood – none of these three points is positive.	Explained about diagnosis, he himself explained, asked whether understood –one of these three points is positive.	Explained about diagnosis, he himself explained, asked whether understood- two of these three issues are positive.	Explained about diagnosis, he himself explained, asked whether understood- all of these three issues are positive.

47. Patients expect that the doctor would explain the severity of the disease, prognosis (recovery, consequence etc.) etc. in details. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[If no patient comes with such diseases like common cold and fever etc. where it is necessary to tell about the prognosis, fill in the ‘Not Applicable’ field.]****[Follow two steps for answering this question: at first, guess a score on the basis of three parameters of giving explanation. Later, adjust the score on the basis of quality of explained issues.]**

NA-----1-----2-----3-----4			
Explained about severity and prognosis, he himself explained, asked whether understood – none of these three points is positive.	Explained about severity and prognosis, he himself explained, asked whether understood –one of these three points is positive.	Explained about severity and prognosis, he himself explained, asked whether understood- two of these three issues are positive.	Explained about severity and prognosis, he himself explained, asked whether understood- all of these three issues are positive.

48. Patients expect that the doctor would explain about the treatment of their diseases like which medicines have been given and why, how to take those medicines etc. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[Fill in the ‘Not applicable’ field if no treatment is given (such as, if patient is referred or admitted in the hospital).]** **[Follow two steps for answering this question: at first, guess a score on the basis of three parameters of giving explanation. Later, adjust the score on the basis of quality of explained issues.]**

NA-----1-----2-----3-----4			
Explained about treatment, he himself explained, asked whether understood – none of these three points is positive.	Explained about treatment, he himself explained, asked whether understood –one of these three points is positive.	Explained about treatment, he himself explained, asked whether understood- two of these three issues are positive.	Explained about treatment, he himself explained, asked whether understood- all of these three issues are positive.

49. Patient expects that the doctor along with the treatment of the disease would also explain in details about diet, which foods are allowed and which are forbidden, prevention of the disease for which he has gone to the doctor, how to remain away from it etc. as well as lifestyle modification, preventive advice etc. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[If no patient comes with such issues or if it is not clear whether it is necessary to tell such things, fill in the ‘Not Applicable’ field.]****[Follow two steps for answering this question: at first, guess a score on the basis of three parameters of giving explanation. Later, adjust the score on the basis of quality of explained issues.]**

NA-----1-----2-----3-----4			
Explained about diet, he himself explained, asked whether understood – none of these three points is positive.	Explained about diet, he himself explained, asked whether understood –one of these three points is positive.	Explained about diet, he himself explained, asked whether understood- two of these three issues are positive.	Explained about diet, he himself explained, asked whether understood- all of these three issues are positive.
<b>Examples of lifestyle modification related advices may be:</b> In case of diarrheal patients, how diarrhea spreads and how to escape from the diarrhea (hand washing, use of sanitary latrines, etc.); protecting the child from catching cold who is suffering from pneumonia; advising the patient suffering from venereal diseases to use condom; maintaining cleanliness and drinking more water in case of UTI; eating less spicy food, drinking more water in case of PUD's; avoiding sweet foods in case of Diabetic patients; avoiding oily food, weight loss, eating less, taking precautions for preventing common fever and cold (wearing warm clothes, drinking warm water) in case of cardiac diseases and so on.			

50. Some of the behavior of the doctor discourages patients to ask questions. Patients expect that they would not be discouraged by any behavior of the doctor; rather the doctor would behave such that would provide courage and encourage them to ask questions. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The patients were greatly discouraged to ask questions by the words or behavior of the doctor. <b>Examples of discouraging behavior may be:</b> repeatedly looking at the clock, giving reminder to the patient to be short, writing prescription while answering the question, ultra-seriousness, answering very shortly (in one word), answering in nagging tone, remaining many patients together at the queue, "you understand more," or "you are the doctor" - telling such neglectful words etc.	The patients might be slightly discouraged to ask questions by the words or behavior of the doctor. <b>Examples of such behavior could be:</b> repeatedly looking at the clock, writing prescription while answering the question, answering very shortly (in one word), waiting many patients at the queue, etc.	The words or behavior of the doctor did not discourage patients to ask question. However, the doctor also did not behave in such way to provide courage or to encourage the patients for asking questions. <b>Example of encouraging conduct may be:</b> smile answered, carefully listening to the questions, etc.	The words or behavior of the doctor did not discourage patients to ask question; rather the doctor behaved in such way that provided courage or encouraged the patients for asking questions. <b>Example of encouraging conduct may be:</b> smile answered, carefully listening to the questions, etc.

51. Patients expect that the doctor not only listen to their disease with patience and attention, but also listen to their questions with patience and attention. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[If the patient does not have any questions, fill in the ‘Not Applicable’ field.]**

NA-----1-----2-----3-----4			
When the patient asked question, the doctor did not show attention and patience through his behavior and words.	When the patient asked question, the doctor showed least attention and patience through his behavior and words. (as for example, at least any of	When the patient asked question, the doctor showed some attention and patience through his behavior and words. (as for example, asking question to hear more and any two of the	When the patient asked question, the doctor showed clear and full attention and patience through his behavior and words. (most or all of the following

	the following issues)	following issues)	issues)
<b>Behavior expressing attention and patience might be:</b> Shaking head while listening, looking at the patient, asking question to hear more, the nuances of voice, smiling, some interest revealing words (e.g., Well, hmm, etc.) and so on.			

52. One of the most important impediments for patients to understand doctor's advice is the medical terminology (jargon), professional language etc. So, the doctor should avoid such language or explain it if used. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[If the doctor does not say any word to the patient, fill in the 'Not Applicable' field.]**

NA-----1-----2-----3-----4			
The doctor used many medical terminologies, and did not explain it to the patient.	The doctor used many medical terminologies, and explained some of those to the patient.	The doctor used one or two medical terminologies, and also explained.	The doctor did not use any medical terminology.
<b>Example of medical terms:</b> Pus cell (puj), absorb (digestion), nebulize (providing gas)			

### Leaving

53. Saying good-bye is also as important part of consultation as greetings. In this regard, doctor should tell the summary of consultation, verify whether the patient has understood everything properly, tell the patient how to communicate with the doctor if any problem arises later and say goodbye with smile. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor did not say good-bye; even when patient said goodbye he did not reply.	The doctor hardly said good-bye to the patient. When patient said goodbye to the doctor, he replied by using gesture (by nutation, eye contact, waving hand etc.).	The doctor said good-bye to the patient but it was not complete or enough. When patient said good-bye, the doctor replied him verbally. <b>Examples may be:</b> saying walaikumassalam; ok, you may go; be well etc.	The doctor said goodbye to the patient properly. When patients said good-bye, the doctor responded warmly. <b>As a good practice, following issues might be included:</b> summarizing the whole consultation; verifying whether the patient has understood everything properly or not; telling the patient how to communicate with the doctor if any problem arises later and saying goodbye with smile (assalamualaikum, khodahafez, be well, etc.)

### Throughout Consultation

54. Patients expect that doctors would do non-verbal communication, such as keeping hand on the body (for assuring the patient), eye contact, etc. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor did not do any non-verbal communication with the patients.	Shaking head while talking, eye contact with the patients, etc.	Shaking head while talking, eye contact with the patients, variation of pitch, smiling face, etc.	Shaking head while talking, eye contact with the patients, variation of pitch, smiling face, holding patient's hand, keeping hand on the patient's shoulder, rubbing on the head, sitting lean forward, etc.

55. Patients expect that doctors would touch them. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor did not even touch the patient.	The doctor touched the patient at least once for physical examination or for providing consolation or reliance.	The doctor touched the patient more than once for physical examination or for providing consolation or reliance.	The doctor touched the patient several times for various purposes. As for example, for examining, for providing consolation or reliance.

56. Patients do not want to see the doctor involved in illegal or unethical activity, especially if it is related with their treatment. The doctor should remain away from such type of activity. Assess the role of the doctor for remaining away from visualized immoral activities by 1-4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows: **[Fill in the "N/A" field if the thing could not be observed for any reason.]**

NA-----1-----2-----3-----4			
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The doctor was involved with various illegal activities.	The doctor was involved with at least one illegal activity.	The doctor was not directly involved with any illegal activity. However, such kind of activities happened in front of him and he remained silence that means he had tacit support. Examples: ignoring presence of brokers (inside the room), behavior with medical representatives seen to be over treated etc.	The doctor was not involved with any illegal activity and he was not seen to support any such activities either directly or indirectly.
<b>Examples of such illegal activities may be:</b> Taking money from patients against free services; bringing patients with the help of brokers; presence of brokers around the chamber (Doctors did not take any step to stop this); collusion with diagnostic centers. Accepting gift from medical representative (and prescribing medicine of that company); taking advantage from brokers (utilizing in hospital, utilizing for personal work) and so on.			

57. Patients expect that the doctor would have sense of humor and would provide treatment by becoming easy with patients using his sense of humor. In this regard, assess the role of the doctor by 1 to 4, where 1-completely unsatisfactory and 4-completely satisfactory. Possible observations are as follows:

NA-----1-----2-----3-----4			
The doctor was in serious mood. He did not have any kind of humor.	The doctor was smiling or he had some humor.	The doctor was smiling and he had some humor.	The doctor was smiling all the time and made the patient feel comfortable by joking.
Examples of humor may be ( <b>examples from my participant observation</b> ): When a young lady asked for vitamin syrup, the doctor replied, "Leave these baby foods". After doing ultra sonogram the doctor told the child patient, "Go and run now". During ultra sonogram the doctor told a female patient, "I see that you have eaten very well at noon".			

58. Record the consultation time (in seconds) using a stop watch.

**59. Questions for 11th Patient**

**Instruction to the observer:** When the patient leaves the room, please leave the room along with the patient and record the following information.

- 60. Age of the patient
- 61. Gender of the patient
- 62. Educational background of the patient





. **sdtest** scorerespecting10, by (setting)

Variance ratio test

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Public s	195	2.21641	.0276431	.3860151	2.161891	2.27093
Private	198	2.514646	.026863	.3779958	2.461671	2.567622
combined	393	2.366667	.0206658	.409683	2.326037	2.407296

ratio = sd(Public s) / sd(Private) f = 1.0429  
 Ho: ratio = 1 degrees of freedom = 194, 197

Ha: ratio < 1                      Ha: ratio != 1                      Ha: ratio > 1  
 Pr(F < f) = 0.6154                      2\*Pr(F > f) = 0.7691                      Pr(F > f) = 0.3846

. **ttest** scorerespecting10, by (setting)

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Public s	195	2.21641	.0276431	.3860151	2.161891	2.27093
Private	198	2.514646	.026863	.3779958	2.461671	2.567622
combined	393	2.366667	.0206658	.409683	2.326037	2.407296
diff		-.2982362	.0385394		-.3740066	-.2224658

diff = mean(Public s) - mean(Private) t = -7.7385  
 Ho: diff = 0 degrees of freedom = 391

Ha: diff < 0                      Ha: diff != 0                      Ha: diff > 0  
 Pr(T < t) = 0.0000                      Pr(|T| > |t|) = 0.0000                      Pr(T > t) = 1.0000



. **sdtest** scorereinformingguiding10, by (setting)

Variance ratio test

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Public s	195	1.683077	.0333019	.465036	1.617397	1.748757
Private	198	1.914141	.028499	.4010165	1.857939	1.970344
combined	393	1.799491	.0226279	.4485802	1.755004	1.843978

ratio = sd(Public S) / sd(Private) f = 1.3448  
 Ho: ratio = 1 degrees of freedom = 194, 197

Ha: ratio < 1 Ha: ratio != 1 Ha: ratio > 1  
 Pr(F < f) = 0.9806 2\*Pr(F > f) = 0.0389 Pr(F > f) = 0.0194

. **ttest** scorereinformingguiding10, by (setting) unequal

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Public s	195	1.683077	.0333019	.465036	1.617397	1.748757
Private	198	1.914141	.028499	.4010165	1.857939	1.970344
combined	393	1.799491	.0226279	.4485802	1.755004	1.843978
diff		-.2310645	.0438316		-.3172467	-.1448823

diff = mean(Public S) - mean(Private) t = -5.2716  
 Ho: diff = 0 Satterthwaite's degrees of freedom = 380.98

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0  
 Pr(T < t) = 0.0000 Pr(|T| > |t|) = 0.0000 Pr(T > t) = 1.0000

. sdtest scoreregaintrust4, by (setting)

Variance ratio test

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Public s	195	3.447436	.0202572	.2828766	3.407483	3.487389
Private	198	3.323232	.0305642	.4300757	3.262957	3.383507
combined	393	3.38486	.0186314	.3693535	3.34823	3.42149

ratio = sd(Public s) / sd(Private) f = 0.4326  
 Ho: ratio = 1 degrees of freedom = 194, 197

Ha: ratio < 1 Ha: ratio != 1 Ha: ratio > 1  
 Pr(F < f) = 0.0000 2\*Pr(F < f) = 0.0000 Pr(F > f) = 1.0000

. ttest scoreregaintrust4, by (setting) unequal

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Public s	195	3.447436	.0202572	.2828766	3.407483	3.487389
Private	198	3.323232	.0305642	.4300757	3.262957	3.383507
combined	393	3.38486	.0186314	.3693535	3.34823	3.42149
diff		.1242036	.0366677		.0520803	.1963268

diff = mean(Public s) - mean(Private) t = 3.3873  
 Ho: diff = 0 Satterthwaite's degrees of freedom = 341.226

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0  
 Pr(T < t) = 0.9996 Pr(|T| > |t|) = 0.0008 Pr(T > t) = 0.0004

. **sdtest** scorefinsensitivity4, by (setting)

Variance ratio test

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Public S	195	1.652564	.0455236	.6357021	1.562779	1.742349
Private	198	1.513889	.0380252	.5350616	1.4389	1.588878
combined	393	1.582697	.0297869	.5905016	1.524135	1.641259

ratio = sd(Public S) / sd(Private) f = 1.4116  
 Ho: ratio = 1 degrees of freedom = 194, 197

Ha: ratio < 1 Pr(F < f) = 0.9919  
 Ha: ratio != 1 2\*Pr(F > f) = 0.0163  
 Ha: ratio > 1 Pr(F > f) = 0.0081

. **ttest** scorefinsensitivity4, by (setting) unequal

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Public S	195	1.652564	.0455236	.6357021	1.562779	1.742349
Private	198	1.513889	.0380252	.5350616	1.4389	1.588878
combined	393	1.582697	.0297869	.5905016	1.524135	1.641259
diff		.1386752	.0593153		.0220458	.2553046

diff = mean(Public S) - mean(Private) t = 2.3379  
 Ho: diff = 0 Satterthwaite's degrees of freedom = 377.96

Ha: diff < 0 Pr(T < t) = 0.9900  
 Ha: diff != 0 Pr(|T| > |t|) = 0.0199  
 Ha: diff > 0 Pr(T > t) = 0.0100

## Appendix 32: Variance Inflation Factor, Simple Linear Regression and Multiple Linear Regression Models

. vif

Variable	VIF	1/VIF
gradyear1	31.88	0.031370
agedoc	31.30	0.031947
workmonthr~1	5.19	0.192497
workmonthu~a	3.25	0.307605
setting	1.38	0.723294
sexdoc	1.36	0.736491
edupt_i	1.33	0.750845
agept_i	1.33	0.752766
sexpt_i	1.22	0.819805
localorigin	1.07	0.930801
Mean VIF	7.93	

. vif

Variable	VIF	1/VIF
agedoc	3.65	0.274154
workmonthr~1	3.36	0.297596
setting	1.37	0.732169
agept_i	1.33	0.753147
edupt_i	1.33	0.754354
sexdoc	1.32	0.755953
sexpt_i	1.22	0.822563
localorigin	1.06	0.947633
Mean VIF	1.83	

. vif

variable	VIF	1/VIF
setting	1.36	0.732698
agept_i	1.33	0.753151
edupt_i	1.32	0.754905
agedoc	1.31	0.761371
sexdoc	1.31	0.761659
sexpt_i	1.21	0.825022
localorigin	1.04	0.957155
Mean VIF	1.27	

. regress scorescale34 setting

Source	SS	df	MS
Model	3.12523383	1	3.12523383
Residual	33.5116345	391	.085707505
Total	36.6368683	392	.093461399

Number of obs = 393  
 F( 1, 391) = 36.46  
 Prob > F = 0.0000  
 R-squared = 0.0853  
 Adj R-squared = 0.0830  
 Root MSE = .29276

scorescale34	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
setting	.178356	.0295363	6.04	0.000	.1202862 .2364258
_cons	1.805053	.0468078	38.56	0.000	1.713026 1.897079

. regress scorescale34 setting agedoc sexdoc localorigin agept\_i sexpt\_i edupt\_i

Source	SS	df	MS
Model	3.3366327	7	.476661815
Residual	33.3002356	385	.086494118
Total	36.6368683	392	.093461399

Number of obs = 393  
 F( 7, 385) = 5.51  
 Prob > F = 0.0000  
 R-squared = 0.0911  
 Adj R-squared = 0.0745  
 Root MSE = .2941

scorescale34	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
setting	.1680204	.0346639	4.85	0.000	.0998662 .2361746
agedoc	-.0002128	.0015651	-0.14	0.892	-.00329 .0028643
sexdoc	-.0458649	.0412881	-1.11	0.267	-.1270432 .0353134
localorigin	-.0119485	.0321671	-0.37	0.711	-.0751937 .0512967
agept_i	-.0007397	.001131	-0.65	0.513	-.0029634 .001484
sexpt_i	.0264352	.0333826	0.79	0.429	-.0391998 .0920703
edupt_i	.0014072	.0036157	0.39	0.697	-.0057018 .0085161
_cons	1.884141	.1373741	13.72	0.000	1.614043 2.154238



. mvreg

Equation	Obs	Parms	RMSE	"R-sq"	F	P
scorefrien~6	393	2	.458957	0.0992	43.03766	0.0000
scoreresp~10	393	2	.3819957	0.1328	59.88401	0.0000
scorerein~10	393	2	.4339628	0.0665	27.85279	0.0000
scoreregai~4	393	2	.3645473	0.0283	11.40427	0.0008
scorefinse~4	393	2	.5871558	0.0138	5.480222	0.0197

	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
scorefrien~6						
2.setting	.3037685	.046304	6.56	0.000	.2127325	.3948044
_cons	1.340171	.0328666	40.78	0.000	1.275554	1.404788
scoreresp~10						
2.setting	.2982362	.0385394	7.74	0.000	.2224658	.3740066
_cons	2.21641	.0273553	81.02	0.000	2.162628	2.270192
scorerein~10						
2.setting	.2310645	.0437823	5.28	0.000	.1449863	.3171427
_cons	1.683077	.0310767	54.16	0.000	1.621979	1.744175
scoreregai~4						
2.setting	-.1242036	.036779	-3.38	0.001	-.196513	-.0518942
_cons	3.447436	.0261058	132.06	0.000	3.396111	3.498761
scorefinse~4						
2.setting	-.1386752	.0592379	-2.34	0.020	-.2551399	-.0222105
_cons	1.652564	.0420471	39.30	0.000	1.569897	1.735231

. candisc scorefriendliness6 scorererespecting10 sumscoreinformingguiding10 scoreregaintrust4 scor  
> efinsensitivity4, group (setting)

Canonical linear discriminant analysis

Fcn	Canon. Corr.	Eigen-value	Variance Prop.	Variance Cumul.	Like-lihood Ratio	F	df1	df2	Prob>F
1	0.4948	.324253	1.0000	1.0000	0.7551	25.097	5	387	0.0000 e

Ho: this and smaller canon. corr. are zero;

e = exact F

Standardized canonical discriminant function coefficients

	function1
scorefrien~6	-.3461004
scoreresp~10	-.6700041
sumscorei~10	-.2324342
scoreregai~4	.4463959
scorefinse~4	.4571889

Canonical structure

	function1
scorefrien~6	-.5826318
scoreresp~10	-.6872667
sumscorei~10	-.46871
scoreregai~4	.2999188
scorefinse~4	.2079069

Group means on canonical variables

	setting
group1	Public sector
group2	Private Sector

	function1
group1	<b>.5723335</b>
group2	<b>-.5636618</b>

Resubstitution classification summary

Key		Classified		Total
True		group1	group2	
group1	<b>141</b> <b>72.31</b>	<b>54</b> <b>27.69</b>	<b>195</b> <b>100.00</b>	
group2	<b>50</b> <b>25.25</b>	<b>148</b> <b>74.75</b>	<b>198</b> <b>100.00</b>	
Total	<b>191</b> <b>48.60</b>	<b>202</b> <b>51.40</b>	<b>393</b> <b>100.00</b>	
Priors	<b>0.5000</b>	<b>0.5000</b>		

## On subscale Friendliness

. tabstat ptname soctalk famtalk friendliness reassurance humour, by (setting) stat (n mean sd)

Summary statistics: N, mean, sd  
by categories of: setting (Observation Setting)

setting	ptname	soctalk	famtalk	friend-s	reassu-e	humour
Public sector	195 1.287179 .6003347	195 1.225641 .537615	195 1.312821 .6418319	195 1.364103 .6387355	195 1.420513 .6155961	195 1.430769 .6251407
Private sector	198 1.757576 .819693	198 1.454545 .7020308	198 1.489899 .6961817	198 1.606061 .7715524	198 1.853535 .6559084	198 1.70202 .7315209
Total	393 1.524173 .7559633	393 1.340967 .6354944	393 1.402036 .6747607	393 1.486005 .7181556	393 1.638677 .6713756	393 1.56743 .6933781

. corr ptname soctalk famtalk friendliness reassurance humour  
(obs=393)

	ptname	soctalk	famtalk	friend-s	reassu-e	humour
ptname	1.0000					
soctalk	0.3439	1.0000				
famtalk	0.3110	0.6849	1.0000			
friendliness	0.2861	0.4856	0.3907	1.0000		
reassurance	0.2786	0.2955	0.2426	0.3969	1.0000	
humour	0.2925	0.4572	0.2963	0.6384	0.4196	1.0000

. manova ptname soctalk famtalk friendliness reassurance humour = setting

Number of obs = 393

W = Wilks' lambda      L = Lawley-Hotelling trace  
P = Pillai's trace      R = Roy's largest root

Source	Statistic	df	F(df1, df2) =	F	Prob>F	
setting	W	0.8408	1	6.0	386.0	12.19 0.0000 e
	P	0.1592		6.0	386.0	12.19 0.0000 e
	L	0.1894		6.0	386.0	12.19 0.0000 e
	R	0.1894		6.0	386.0	12.19 0.0000 e
Residual		391				
Total		392				

e = exact, a = approximate, u = upper bound on F



. mvreg

Equation	Obs	Parms	RMSE	"R-sq"	F	P
<b>ptname</b>	393	2	.7192664	0.0970	42.01994	0.0000
<b>soctalk</b>	393	2	.6258758	0.0325	13.14133	0.0003
<b>famtalk</b>	393	2	.6697668	0.0173	6.867388	0.0091
<b>friendliness</b>	393	2	.7087712	0.0284	11.4492	0.0008
<b>reassurance</b>	393	2	.6362262	0.1043	45.50982	0.0000
<b>humour</b>	393	2	.6808198	0.0384	15.59501	0.0001

	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
<b>ptname</b>						
2.setting	.4703963	.0725665	6.48	0.000	.3277269	.6130656
_cons	1.287179	.0515077	24.99	0.000	1.185913	1.388446
<b>soctalk</b>						
2.setting	.2289044	.0631444	3.63	0.000	.1047595	.3530494
_cons	1.225641	.0448199	27.35	0.000	1.137523	1.313759
<b>famtalk</b>						
2.setting	.1770785	.0675725	2.62	0.009	.0442276	.3099294
_cons	1.312821	.047963	27.37	0.000	1.218523	1.407118
<b>friendliness</b>						
2.setting	.241958	.0715076	3.38	0.001	.1013705	.3825456
_cons	1.364103	.0507562	26.88	0.000	1.264313	1.463892
<b>reassurance</b>						
2.setting	.4330225	.0641886	6.75	0.000	.3068245	.5592205
_cons	1.420513	.0455611	31.18	0.000	1.330937	1.510088
<b>humour</b>						
2.setting	.271251	.0686876	3.95	0.000	.1362077	.4062943
_cons	1.430769	.0487545	29.35	0.000	1.334915	1.526623

. candisc ptname soctalk famtalk friendliness reassurance humour, group (setting)

Canonical linear discriminant analysis

Fcn	Canon. Corr.	Eigen-value	Variance Prop.	Cumul.	Like-lihood Ratio	F	df1	df2	Prob>F
1	0.3991	.189412	1.0000	1.0000	0.8408	12.185	6	386	0.0000 e

Ho: this and smaller canon. corr. are zero;

e = exact F

standardized canonical discriminant function coefficients

	function1
ptname	<b>.6104808</b>
soctalk	<b>.1323932</b>
famtalk	<b>-.0922242</b>
friendliness	<b>-.0667211</b>
reassurance	<b>.6472916</b>
humour	<b>.0681971</b>

Canonical structure

	function1
ptname	<b>.7532446</b>
soctalk	<b>.4212384</b>
famtalk	<b>.3045118</b>
friendliness	<b>.3931841</b>
reassurance	<b>.7839004</b>
humour	<b>.4588821</b>

Group means on canonical variables

	setting
group1	Public sector
group2	Private sector

	function1
group1	<b>-.4374321</b>
group2	<b>.4308044</b>

Resubstitution classification summary

Key
Number
Percent

True	Classified		Total
	group1	group2	
group1	<b>153</b> <b>78.46</b>	<b>42</b> <b>21.54</b>	<b>195</b> <b>100.00</b>
group2	<b>91</b> <b>45.96</b>	<b>107</b> <b>54.04</b>	<b>198</b> <b>100.00</b>
Total	<b>244</b> <b>62.09</b>	<b>149</b> <b>37.91</b>	<b>393</b> <b>100.00</b>
Priors	<b>0.5000</b>	<b>0.5000</b>	

## On subscale Respecting

```
. tabstat greet respect listencompletely listenattentively examcarefully questionencourage questionlis
> tenattentively closingall nonverbalcomm touch, by (setting) stat (n mean sd)
```

```
Summary statistics: N, mean, sd
by categories of: setting (Observation Setting)
```

setting	n	greet	respect	lis~tely	lis~vely	examca~y	questi~e	questi~y	closin~l	nonv
Public Sector	195	1.692308	2.225641	2.882051	2.769231	2.123077	2.610256	2.610256	1.446154	2.0
Private Sector	198	2.015152	2.388889	3.025253	2.924242	2.590909	2.929293	2.59596	1.813131	2.38
Total	393	1.854962	2.307888	2.954198	2.847328	2.358779	2.770992	2.603053	1.631043	2.22

setting	touch
Public Sector	1.748718 .7621429
Private Sector	2.479798 .7103984
Total	2.117048 .8216083

```
. corr greet respect listencompletely listenattentively examcarefully questionencourage questionlisten
> attentively closingall nonverbalcomm touch
(obs=393)
```

	greet	respect	lis~tely	lis~vely	examca~y	questi~e	questi~y	closin~l	nonver~m	touch
greet	1.0000									
respect	0.4416	1.0000								
listencomp~y	0.2833	0.3368	1.0000							
listenatte~y	0.4014	0.3824	0.5557	1.0000						
examcarefu~y	0.1991	0.2558	0.2511	0.2837	1.0000					
questionen~e	0.3737	0.4261	0.4716	0.4759	0.2762	1.0000				
questionli~y	0.1478	0.2606	0.3424	0.3205	0.2064	0.4429	1.0000			
closingall	0.4944	0.3401	0.2702	0.2598	0.1932	0.3410	0.1318	1.0000		
nonverbal~m	0.4196	0.4317	0.4425	0.5531	0.3319	0.5512	0.3024	0.3249	1.0000	
touch	0.2521	0.3076	0.2588	0.3288	0.4576	0.2903	0.1489	0.2171	0.4133	1.00

```
. manova greet respect listencompletely listenattentively examcarefully questionencourage questionlist
> enattentively closingall nonverbalcomm touch = setting
```

Number of obs = 393

W = Wilks' lambda      L = Lawley-Hotelling trace  
P = Pillai's trace      R = Roy's largest root

Source	Statistic	df	F(df1, df2)	F	Prob>F
setting	W	0.7148	1 10.0 382.0	15.24	0.0000 e
	P	0.2852	10.0 382.0	15.24	0.0000 e
	L	0.3989	10.0 382.0	15.24	0.0000 e
	R	0.3989	10.0 382.0	15.24	0.0000 e
Residual		391			
Total		392			

e = exact, a = approximate, u = upper bound on F

. mvreg

Equation	Obs	Parms	RMSE	"R-sq"	F	P
<b>greet</b>	393	2	.5908358	0.0698	29.33314	0.0000
<b>respect</b>	393	2	.5378924	0.0226	9.049225	0.0028
<b>listencomple</b>	393	2	.5612393	0.0161	6.395944	0.0118
<b>listenattent</b>	393	2	.5908056	0.0170	6.763116	0.0097
<b>examcareful</b>	393	2	.7274483	0.0941	40.6334	0.0000
<b>questionenc</b>	393	2	.6503778	0.0570	23.6405	0.0000
<b>questionlisten</b>	393	2	.6317601	0.0001	.0503131	0.8226
<b>closingall</b>	393	2	.6321936	0.0781	33.10441	0.0000
<b>nonverbalcomm</b>	393	2	.6009536	0.0694	29.16469	0.0000
<b>touch</b>	393	2	.7365267	0.1984	96.79661	0.0000

		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
<b>greet</b>	2.setting	.3228438	.0596092	5.42	0.000	.2056492	.4400384
	_cons	1.692308	.0423106	40.00	0.000	1.609123	1.775492
<b>respect</b>	2.setting	.1632479	.0542677	3.01	0.003	.0565548	.269941
	_cons	2.225641	.0385193	57.78	0.000	2.14991	2.301372
<b>listencompletely</b>	2.setting	.1432012	.0566232	2.53	0.012	.0318772	.2545253
	_cons	2.882051	.0401912	71.71	0.000	2.803033	2.961069
<b>listenattentively</b>	2.setting	.1550117	.0596061	2.60	0.010	.037823	.2722003
	_cons	2.769231	.0423085	65.45	0.000	2.68605	2.852411
<b>examcarefully</b>	2.setting	.4678322	.073392	6.37	0.000	.3235399	.6121244
	_cons	2.123077	.0520937	40.75	0.000	2.020658	2.225496
<b>questionencourage</b>	2.setting	.3190365	.0656164	4.86	0.000	.1900315	.4480415
	_cons	2.610256	.0465745	56.04	0.000	2.518689	2.701824
<b>questionlistenattentively</b>	2.setting	-.0142968	.063738	-0.22	0.823	-.1396089	.1110153
	_cons	2.610256	.0452413	57.70	0.000	2.52131	2.699203
<b>closingall</b>	2.setting	.3669775	.0637818	5.75	0.000	.2415794	.4923756
	_cons	1.446154	.0452723	31.94	0.000	1.357146	1.535161
<b>nonverbalcomm</b>	2.setting	.3274281	.06063	5.40	0.000	.2082266	.4466296
	_cons	2.05641	.0430352	47.78	0.000	1.971801	2.14102
<b>touch</b>	2.setting	.73108	.0743079	9.84	0.000	.5849871	.877173
	_cons	1.748718	.0527438	33.15	0.000	1.645021	1.852415

```
. candisc greet respect listencompletely listenattentively examcarefully questionencourage questionlis
> tenattentively closingall nonverbalcomm touch, group (setting)
```

Canonical linear discriminant analysis

Fcn	Canon. Corr.	Eigen-value	Variance Prop.	Variance Cumul.	Like-lihood Ratio	F	df1	df2	Prob>F
1	<b>0.5340</b>	<b>.398905</b>	<b>1.0000</b>	<b>1.0000</b>	<b>0.7148</b>	<b>15.238</b>	<b>10</b>	<b>382</b>	<b>0.0000 e</b>

Ho: this and smaller canon. corr. are zero;

e = exact F

Standardized canonical discriminant function coefficients

	function1
greet	-.247302
respect	.1900838
listencomp-y	.0369126
listenatte-y	.2509821
examcarefu-y	-.264077
questionen-e	-.3068356
questionli-y	.3093375
closingall	-.2912136
nonverbalc-m	-.115005
touch	-.7039791

Canonical structure

	function1
greet	-.4336669
respect	-.24087
listencomp-y	-.202502
listenatte-y	-.2082334
examcarefu-y	-.5104093
questionen-e	-.3893187
questionli-y	.0179605
closingall	-.4607018
nonverbalc-m	-.4324199
touch	-.7877838

Group means on canonical variables

	setting
group1	Public sector
group2	Private Sector

	function1
group1	.6348075
group2	-.6251892

Resubstitution classification summary

Key		Classified		Total
True	Number	group1	group2	
group1	141	54	195	
	72.31	27.69	100.00	
group2	49	149	198	
	24.75	75.25	100.00	
Total	190	203	393	
	48.35	51.65	100.00	
Priors	0.5000	0.5000		

## On subscale Informing and guiding

```
. tabstat generalpreventive followup explainall explainexplain explainunderstood explaincause explained
> x explainprognosis explainrx explainpreventive, by (setting) stat (n mean sd)
```

Summary statistics: N, mean, sd  
by categories of: setting (Observation Setting)

setting	generalpreventive	followup	explainall	explainexplain	explainunderstood	explaincause	explained	explainprognosis	explainrx	explainpreventive
Public Sector	195	195	195	195	195	195	195	195	195	195
195	1.507692	1.405128	2.025641	1.974359	1.466667	1.8	1.697436	1.441026	1.9	1.9
4359	.6451183	.5226561	.7422166	.6614253	.7340515	.8470689	.770422	.7110026	.868	.868
6388										
Private Sector	198	198	198	198	198	198	198	198	198	198
198	1.808081	1.828283	2.308081	2.191919	1.555556	1.934343	1.929293	1.60101	2.16	2.16
6667	.6479451	.6217774	.6300716	.6075125	.6940241	.740923	.73702	.7106149	.785	.785
3351										
Total	393	393	393	393	393	393	393	393	393	393
393	1.659033	1.618321	2.167939	2.083969	1.511145	1.867684	1.814249	1.521628	2.0	2.0
5598	.6629988	.6118475	.7015217	.6433114	.71464	.7971883	.7617116	.7144038	.83	.83
4169										

setting	explainpreventive
Public Sector	195 1.569231 .7924105
Private Sector	198 1.818182 .7316435
Total	393 1.694656 .7715588

```
. corr generalpreventive followup explainall explainexplain explainunderstood explaincause explainedx e
> xplainprognosis explainrx explainpreventive
(obs=393)
```

	generalpreventive	followup	explainall	explainexplain	explainunderstood	explaincause	explainedx	explainprognosis	explainrx	explainpreventive
generalpreventive	1.0000									
followup	0.1940	1.0000								
explainall	0.3483	0.2983	1.0000							
explainexp-n	0.3843	0.3150	0.7713	1.0000						
explainund-d	0.1752	0.1617	0.2353	0.2393	1.0000					
explaincause	0.2475	0.1577	0.4960	0.4893	0.1997	1.0000				
explainedx	0.1167	0.2252	0.4309	0.4692	0.2593	0.4804	1.0000			
explainpro-s	0.2041	0.2349	0.3592	0.4096	0.2756	0.4350	0.3848	1.0000		
explainrx	0.1684	0.3169	0.4809	0.4096	0.3284	0.2567	0.2854	0.2120	1.0000	
explainpre-e	0.5141	0.1416	0.4485	0.4424	0.2331	0.2908	0.2331	0.2388	0.2803	1.00

```
. manova generalpreventive followup explainall explainexplain explainunderstood explaincause explainedx
> explainprognosis explainrx explainpreventive = setting
```

Number of obs = 393

W = Wilks' lambda L = Lawley-Hotelling trace  
P = Pillai's trace R = Roy's largest root

Source	Statistic	df	F(df1, df2)	F	Prob>F
setting	W 0.8407	1	10.0 382.0	7.24	0.0000 e
	P 0.1593		10.0 382.0	7.24	0.0000 e
	L 0.1895		10.0 382.0	7.24	0.0000 e
	R 0.1895		10.0 382.0	7.24	0.0000 e
Residual		391			
Total		392			

e = exact, a = approximate, u = upper bound on F

. mvreg

Equation	Obs	Parms	RMSE	"R-sq"	F	P
generalpreventive	393	2	.6465441	0.0514	21.20692	0.0000
followup	393	2	.5747378	0.1199	53.25568	0.0000
explainall	393	2	.6880025	0.0406	16.5569	0.0001
explainexplain	393	2	.6348346	0.0287	11.53838	0.0008
explainunderstood	393	2	.7141647	0.0039	1.521968	0.2181
explaincause	393	2	.7953613	0.0071	2.802923	0.0949
explainindx	393	2	.7537779	0.0232	9.295248	0.0025
explainprognosis	393	2	.7108073	0.0126	4.976902	0.0263
explainrx	393	2	.827716	0.0179	7.135984	0.0079
explainpreventive	393	2	.7623995	0.0261	10.47538	0.0013

	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
generalpreventive	.3003885	.0652296	4.61	0.000	.1721439	.4286331
2.setting	1.507692	.0463	32.56	0.000	1.416664	1.59872
_cons						
followup	.4231546	.0579851	7.30	0.000	.3091531	.5371561
2.setting	1.405128	.0411578	34.14	0.000	1.32421	1.486047
_cons						
explainall	.2824398	.0694123	4.07	0.000	.1459718	.4189078
2.setting	2.025641	.0492689	41.11	0.000	1.928776	2.122506
_cons						
explainexplain	.2175602	.0640482	3.40	0.001	.0916383	.3434822
2.setting	1.974359	.0454615	43.43	0.000	1.88498	2.063738
_cons						
explainunderstood	.0888889	.0720518	1.23	0.218	-.0527685	.2305463
2.setting	1.466667	.0511424	28.68	0.000	1.366118	1.567215
_cons						
explaincause	.1343434	.0802437	1.67	0.095	-.0234196	.2921065
2.setting	1.8	.056957	31.60	0.000	1.68802	1.91198
_cons						
explainindx	.231857	.0760483	3.05	0.002	.0823422	.3813719
2.setting	1.697436	.0539792	31.45	0.000	1.59131	1.803562
_cons						
explainprognosis	.1599845	.0717131	2.23	0.026	.018993	.3009759
2.setting	1.441026	.050902	28.31	0.000	1.34095	1.541101
_cons						
explainrx	.2230769	.0835079	2.67	0.008	.0588962	.3872577
2.setting	1.94359	.059274	32.79	0.000	1.827054	2.060125
_cons						
explainpreventive	.248951	.0769182	3.24	0.001	.0977261	.400176
2.setting	1.569231	.0545966	28.74	0.000	1.461891	1.67657
_cons						

```
. candisc generalpreventive followup explainall explainexplain explainunderstood explaincause explaind
> x explainprognosis explainrx explainpreventive, group (setting)
```

Canonical linear discriminant analysis

Fcn	Canon. Corr.	Eigen-value	Variance Prop.	Variance Cumul.	Like-lihood Ratio	F	df1	df2	Prob>F
1	0.3991	.189497	1.0000	1.0000	0.8407	7.2388	10	382	0.0000 e

Ho: this and smaller canon. corr. are zero;

e = exact F

Standardized canonical discriminant function coefficients

	function1
generalpre-e	-.41901
followup	-.7805417
explainall	-.3139523
explainexp-n	.2464484
explainund-d	.0938389
explaincause	.1589146
explaindx	-.2493137
explainpro-s	.0034942
explainrx	.0470227
explainpre-e	-.0917131

Canonical structure

	function1
generalpre-e	-.534994
followup	-.8477993
explainall	-.4727152
explainexp-n	-.3946232
explainund-d	-.143322
explaincause	-.1944982
explaindx	-.3541935
explainpro-s	-.2591729
explainrx	-.3103395
explainpre-e	-.3760063

Group means on canonical variables

	setting
group1	Public sector
group2	Private Sector

	function1
group1	.4375311
group2	-.4309018

Resubstitution classification summary

Key		Classified		Total
True		group1	group2	
group1		133 68.21	62 31.79	195 100.00
group2		62 31.31	136 68.69	198 100.00
Total		195 49.62	198 50.38	393 100.00
Priors		0.5000	0.5000	



## On subscale Gaining trust

`. tabstat trust caringnotbusinesslike nojargon nocorruption, by (setting) stat (n mean sd)`

summary statistics: N, mean, sd  
by categories of: setting (Observation Setting)

setting	trust	caring~e	nojargon	nocorr~n
Public Sector	195 3.051282 .3328042	195 3.082051 .4104761	195 3.784615 .661745	195 3.871795 .4173732
Private Sector	198 2.939394 .5756159	198 2.873737 .6523812	198 3.737374 .5803178	198 3.742424 .6205599
Total	393 2.994911 .4737761	393 2.977099 .5551105	393 3.760814 .6217088	393 3.806616 .5328562

`. corr trust caringnotbusinesslike nojargon nocorruption`  
(obs=393)

	trust	caring~e	nojargon	nocorr~n
trust	1.0000			
caringnotb~e	0.6688	1.0000		
nojargon	0.1604	0.1393	1.0000	
nocorruption	0.2184	0.3300	0.1988	1.0000

`. manova trust caringnotbusinesslike nojargon nocorruption = setting`

Number of obs = 393

W = Wilks' lambda      L = Lawley-Hotelling trace  
P = Pillai's trace      R = Roy's largest root

Source	Statistic	df	F(df1, df2) =	F	Prob>F	
setting	W	0.9606	1	4.0	388.0	3.98 0.0036 e
	P	0.0394		4.0	388.0	3.98 0.0036 e
	L	0.0410		4.0	388.0	3.98 0.0036 e
	R	0.0410		4.0	388.0	3.98 0.0036 e
Residual		391				
Total		392				

e = exact, a = approximate, u = upper bound on F

. mvreg

Equation	Obs	Parms	RMSE	"R-sq"	F	P
trust	393	2	.4710545	0.0140	5.542846	0.0191
caringnotb~e	393	2	.5459233	0.0353	14.30476	0.0002
nojargon	393	2	.6220527	0.0014	.5666344	0.4521
nocorruption	393	2	.5295815	0.0148	5.862908	0.0159

		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
trust	2.setting	-.1118881	.0475245	-2.35	0.019	-.2053236	-.0184526
	_cons	3.051282	.0337329	90.45	0.000	2.984961	3.117603
caringnotbusinesslike	2.setting	-.2083139	.055078	-3.78	0.000	-.3166	-.1000279
	_cons	3.082051	.0390944	78.84	0.000	3.00519	3.158913
nojargon	2.setting	-.0472416	.0627586	-0.75	0.452	-.1706283	.076145
	_cons	3.784615	.0445461	84.96	0.000	3.697036	3.872195
nocorruption	2.setting	-.1293706	.0534293	-2.42	0.016	-.2344152	-.024326
	_cons	3.871795	.0379241	102.09	0.000	3.797234	3.946356

. candisc trust caringnotbusinesslike nojargon nocorruption, group(setting)

Canonical linear discriminant analysis

Fcn	Canon. Corr.	Eigen-value	Variance		Like-likelihood Ratio	F	df1	df2	Prob>F
			Prop.	Cumul.					
1	0.1984	.040991	1.0000	1.0000	0.9606	3.9761	4	388	0.0036 e

Ho: this and smaller canon. corr. are zero;

e = exact F

Standardized canonical discriminant function coefficients

	function1
trust	.0688514
caringnotb~e	-.8818691
nojargon	-.0137998
nocorruption	-.3385534

Canonical structure

	function1
trust	<b>-.588079</b>
caringnotb~e	<b>-.9447339</b>
nojargon	<b>-.1880272</b>
nocorruption	<b>-.6048195</b>

Group means on canonical variables

	setting
group1	Public Sector
group2	Private Sector

	function1
group1	<b>-.2034931</b>
group2	<b>.2004099</b>

Resubstitution classification summary

Key
Number
Percent

True	Classified		Total
	group1	group2	
group1	<b>173</b> <b>88.72</b>	<b>22</b> <b>11.28</b>	<b>195</b> <b>100.00</b>
group2	<b>140</b> <b>70.71</b>	<b>58</b> <b>29.29</b>	<b>198</b> <b>100.00</b>
Total	<b>313</b> <b>79.64</b>	<b>80</b> <b>20.36</b>	<b>393</b> <b>100.00</b>
Priors	<b>0.5000</b>	<b>0.5000</b>	

## On subscale Financial sensitivity

**. tabstat considers understands informs helps, by (setting) stat (n mean sd)**

Summary statistics: N, mean, sd  
by categories of: setting (observation setting)

setting	consid~s	unders~s	inform~s	helpses
Public sector	195 1.774359 .8969358	195 1.902564 .9663107	195 1.323077 .6034529	195 1.610256 .6900601
Private sector	198 1.550505 .7300475	198 1.767677 .8821787	198 1.338384 .5974917	198 1.39899 .5676552
Total	393 1.661578 .8237387	393 1.834606 .9261636	393 1.330789 .5997394	393 1.503817 .6393641

**. corr considers understands informs helps**  
(obs=393)

	consid~s	unders~s	inform~s	helpses
considers	1.0000			
understand~s	0.6688	1.0000		
informs	0.4441	0.3697	1.0000	
helpses	0.5764	0.5073	0.2562	1.0000

**. manova considers understands informs helps = setting**

Number of obs = 393

W = Wilks' lambda      L = Lawley-Hotelling trace  
P = Pillai's trace      R = Roy's largest root

Source	Statistic	df	F(df1, df2) =	F	Prob>F	
setting	W	0.9621	1	4.0	388.0	3.83 0.0046 e
	P	0.0379		4.0	388.0	3.83 0.0046 e
	L	0.0394		4.0	388.0	3.83 0.0046 e
	R	0.0394		4.0	388.0	3.83 0.0046 e
Residual		391				
Total		392				

e = exact, a = approximate, u = upper bound on F

. mvreg

Equation	Obs	Parms	RMSE	"R-sq"	F	P
considerses	393	2	.8171229	0.0185	7.3733	0.0069
understand~s	393	2	.924879	0.0053	2.08968	0.1491
informses	393	2	.6004569	0.0002	.0638438	0.8007
helpses	393	2	.6313613	0.0274	11.00051	0.0010

	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
<b>considerses</b>						
2.setting	-.2238539	.0824392	-2.72	0.007	-.3859335	-.0617744
_cons	1.774359	.0585154	30.32	0.000	1.659315	1.889403
<b>understandses</b>						
2.setting	-.1348873	.0933107	-1.45	0.149	-.3183407	.0485661
_cons	1.902564	.066232	28.73	0.000	1.772349	2.032779
<b>informses</b>						
2.setting	.0153069	.0605798	0.25	0.801	-.1037961	.1344099
_cons	1.323077	.0429996	30.77	0.000	1.238538	1.407616
<b>helpses</b>						
2.setting	-.2112665	.0636978	-3.32	0.001	-.3364995	-.0860335
_cons	1.610256	.0452127	35.62	0.000	1.521366	1.699147

. candisc considerses understandses informses helpses, group(setting)

Canonical linear discriminant analysis

Fcn	Canon. Corr.	Eigen-value	Variance Prop.	Cumul.	Like-likelihood Ratio	F	df1	df2	Prob>F
<b>1</b>	<b>0.1948</b>	<b>.03944</b>	<b>1.0000</b>	<b>1.0000</b>	<b>0.9621</b>	<b>3.8257</b>	<b>4</b>	<b>388</b>	<b>0.0046 e</b>

Ho: this and smaller canon. corr. are zero; e = exact F

Standardized canonical discriminant function coefficients

	function1
considerses	.6673386
understand~s	-.2720274
informses	-.4525726
helpses	.7217358

Canonical structure

	function1
considerses	<b>.6914685</b>
understand~s	<b>.3681132</b>
informses	<b>-.0643429</b>
helpses	<b>.8445936</b>

Group means on canonical variables

	setting
group1	Public sector
group2	Private sector

	function1
group1	<b>.1996078</b>
group2	<b>-.1965835</b>

Resubstitution classification summary

Key		Classified		Total
Number	Percent	group1	group2	
True				
group1		<b>89</b>	<b>106</b>	<b>195</b>
		<b>45.64</b>	<b>54.36</b>	<b>100.00</b>
group2		<b>67</b>	<b>131</b>	<b>198</b>
		<b>33.84</b>	<b>66.16</b>	<b>100.00</b>
Total		<b>156</b>	<b>237</b>	<b>393</b>
		<b>39.69</b>	<b>60.31</b>	<b>100.00</b>
Priors		<b>0.5000</b>	<b>0.5000</b>	

## Appendix 34: Tests of Normality

On full dataset (including both public and private sector samples)

. **sktest** scorescale34

Skewness/Kurtosis tests for Normality					
Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adj chi2(2)	joint Prob>chi2
scorescale34	393	0.0009	0.5107	10.35	0.0056

. **sktest** scorescale34, noadjust

Skewness/Kurtosis tests for Normality					
Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	chi2(2)	joint Prob>chi2
scorescale34	393	0.0009	0.5107	11.40	0.0034

. **swilk** scorescale34

Shapiro-wilk w test for normal data					
Variable	Obs	w	v	z	Prob>z
scorescale34	393	0.98786	3.289	2.831	0.00232

. **sfrancia** scorescale34

Shapiro-Francia w' test for normal data					
Variable	Obs	w'	v'	z	Prob>z
scorescale34	393	0.98885	3.225	2.540	0.00555

Responsiveness score in full dataset is not normally distributed

On public sector physicians' sample only

. **sktest** scorescale34

Skewness/Kurtosis tests for Normality					
Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adj chi2(2)	joint Prob>chi2
scorescale34	195	0.0006	0.0719	12.89	0.0016

. **swilk** scorescale34

Shapiro-wilk w test for normal data					
Variable	Obs	w	v	z	Prob>z
scorescale34	195	0.97490	3.664	2.984	0.00142

. **sfrancia** scorescale34

Shapiro-Francia w' test for normal data					
Variable	Obs	w'	v'	z	Prob>z
scorescale34	195	0.97450	4.017	2.883	0.00197

Responsiveness score in dataset of public sector physicians is not normally distributed

**On private sector physicians' sample only**

**. sktest scorescale34**

skewness/kurtosis tests for Normality

Variable	obs	Pr(Skewness)	Pr(Kurtosis)	adj chi2(2)	joint Prob>chi2
scorescale34	<b>198</b>	<b>0.0674</b>	<b>0.7183</b>	<b>3.51</b>	<b>0.1726</b>

**. swilk scorescale34**

Shapiro-wilk w test for normal data

Variable	obs	w	V	z	Prob>z
scorescale34	<b>198</b>	<b>0.99162</b>	<b>1.239</b>	<b>0.492</b>	<b>0.31121</b>

**. sfrancia scorescale34**

Shapiro-Francia w' test for normal data

Variable	obs	w'	V'	z	Prob>z
scorescale34	<b>198</b>	<b>0.99154</b>	<b>1.351</b>	<b>0.639</b>	<b>0.26155</b>

Responsiveness score in dataset of private sector physicians is normally distributed

**On full dataset after log-transforming the responsiveness score**

**. gen trscore34 = ln(scorescale34)**

**. sktest trscore34**

skewness/kurtosis tests for Normality

Variable	obs	Pr(Skewness)	Pr(Kurtosis)	adj chi2(2)	joint Prob>chi2
trscore34	<b>393</b>	<b>0.9077</b>	<b>0.4461</b>	<b>0.60</b>	<b>0.7414</b>

**. swilk trscore34**

Shapiro-wilk w test for normal data

Variable	obs	w	V	z	Prob>z
trscore34	<b>393</b>	<b>0.99774</b>	<b>0.612</b>	<b>-1.169</b>	<b>0.87872</b>

**. sfrancia trscore34**

Shapiro-Francia w' test for normal data

Variable	obs	w'	V'	z	Prob>z
trscore34	<b>393</b>	<b>0.99873</b>	<b>0.367</b>	<b>-2.268</b>	<b>0.98834</b>

Log-transformed responsiveness score in full dataset is normally distributed



## Appendix 35: Sensitivity Analyses

For comparing mean responsiveness score between public and private sector physicians using non-parametric Wilcoxon rank-sum (Mann-Whitney) test

```
. ranksum scorescale34, by (setting)
```

Two-sample wilcoxon rank-sum (Mann-whitney) test

setting	obs	rank sum	expected
Public secto	<b>195</b>	<b>31722</b>	<b>38415</b>
Private Sect	<b>198</b>	<b>45699</b>	<b>39006</b>
combined	<b>393</b>	<b>77421</b>	<b>77421</b>

unadjusted variance **1267695.00**

adjustment for ties **-1297.48**

adjusted variance **1266397.52**

Ho: scores~4(setting==Public sector) = scores~4(setting==Private sector)

z = **-5.948**  
Prob > |z| = **0.0000**

```
. ranksum scorefriendliness6, by (setting)
```

Two-sample wilcoxon rank-sum (Mann-whitney) test

setting	obs	rank sum	expected
Public secto	<b>195</b>	<b>30402</b>	<b>38415</b>
Private Sect	<b>198</b>	<b>47019</b>	<b>39006</b>
combined	<b>393</b>	<b>77421</b>	<b>77421</b>

unadjusted variance **1267695.00**

adjustment for ties **-30626.78**

adjusted variance **1237068.22**

Ho: scoref~6(setting==Public sector) = scoref~6(setting==Private sector)

z = **-7.204**  
Prob > |z| = **0.0000**

```
. ranksum scorerespecting10, by (setting)
```

Two-sample wilcoxon rank-sum (Mann-whitney) test

setting	obs	rank sum	expected
Public Secto	<b>195</b>	<b>29858</b>	<b>38415</b>
Private Sect	<b>198</b>	<b>47563</b>	<b>39006</b>
combined	<b>393</b>	<b>77421</b>	<b>77421</b>

```
unadjusted variance 1267695.00  
adjustment for ties -7284.61
```

```
adjusted variance 1260410.39
```

```
Ho: scorer..(setting==Public sector) = scorer..(setting==Private sector)  
z = -7.622  
Prob > |z| = 0.0000
```

```
. ranksum scorereinformingguiding10, by (setting)
```

Two-sample wilcoxon rank-sum (Mann-whitney) test

setting	obs	rank sum	expected
Public Secto	<b>195</b>	<b>32032.5</b>	<b>38415</b>
Private Sect	<b>198</b>	<b>45388.5</b>	<b>39006</b>
combined	<b>393</b>	<b>77421</b>	<b>77421</b>

```
unadjusted variance 1267695.00  
adjustment for ties -7969.06
```

```
adjusted variance 1259725.94
```

```
Ho: scorer..(setting==Public sector) = scorer..(setting==Private sector)  
z = -5.687  
Prob > |z| = 0.0000
```

```
. ranksum scoreregaintrust4, by (setting)
```

Two-sample wilcoxon rank-sum (Mann-whitney) test

setting	obs	rank sum	expected
Public secto	<b>195</b>	<b>41601</b>	<b>38415</b>
Private Sect	<b>198</b>	<b>35820</b>	<b>39006</b>
combined	<b>393</b>	<b>77421</b>	<b>77421</b>

unadjusted variance **1267695.00**

adjustment for ties **-220431.71**

adjusted variance **1047263.29**

Ho: scoreregaintrust4(setting==Public sector) = scoreregaintrust4(setting==Private sector)

z = **3.113**  
Prob > |z| = **0.0019**

```
. ranksum scorefinsensitivity4, by (setting)
```

Two-sample wilcoxon rank-sum (Mann-whitney) test

setting	obs	rank sum	expected
Public Secto	<b>195</b>	<b>40473.5</b>	<b>38415</b>
Private Sect	<b>198</b>	<b>36947.5</b>	<b>39006</b>
combined	<b>393</b>	<b>77421</b>	<b>77421</b>

unadjusted variance **1267695.00**

adjustment for ties **-65031.44**

adjusted variance **1202663.56**

Ho: scorefinsensitivity4(setting==Public sector) = scorefinsensitivity4(setting==Private sector)

z = **1.877**  
Prob > |z| = **0.0605**

All the test results correspond with the tests presented in the main dissertation

**For comparing mean responsiveness score between public and private sector physicians using-test after log-transforming the data**

**. sdtest trscore34, by (setting)**

Variance ratio test

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Public S	195	.6743799	.0103274	.1442137	.6540116	.6947483
Private	198	.7617342	.0096745	.1361321	.7426554	.7808131
combined	393	.7183905	.0073996	.1466915	.7038426	.7329384

ratio = sd(Public S) / sd(Private) f = 1.1223  
 Ho: ratio = 1 degrees of freedom = 194, 197

Ha: ratio < 1 Pr(F < f) = 0.7898  
 Ha: ratio != 1 2\*Pr(F > f) = 0.4205  
 Ha: ratio > 1 Pr(F > f) = 0.2102

**. ttest trscore34, by (setting)**

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Public S	195	.6743799	.0103274	.1442137	.6540116	.6947483
Private	198	.7617342	.0096745	.1361321	.7426554	.7808131
combined	393	.7183905	.0073996	.1466915	.7038426	.7329384
diff		-.0873543	.0141447		-.1151635	-.059545

diff = mean(Public S) - mean(Private) t = -6.1757  
 Ho: diff = 0 degrees of freedom = 391

Ha: diff < 0 Pr(T < t) = 0.0000  
 Ha: diff != 0 Pr(|T| > |t|) = 0.0000  
 Ha: diff > 0 Pr(T > t) = 1.0000

**. sdtest trscorefriendliness6, by (setting)**

Variance ratio test

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Public S	195	.250983	.0198106	.2766403	.2119111	.2900548
Private	198	.4557929	.0203598	.2864882	.4156417	.495944
combined	393	.3541696	.0151022	.2993902	.3244781	.3838611

ratio = sd(Public S) / sd(Private) f = 0.9324  
 Ho: ratio = 1 degrees of freedom = 194, 197

Ha: ratio < 1 Pr(F < f) = 0.3128  
 Ha: ratio != 1 2\*Pr(F < f) = 0.6256  
 Ha: ratio > 1 Pr(F > f) = 0.6872

**. ttest trscorefriendliness6, by (setting)**

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Public S	195	.250983	.0198106	.2766403	.2119111	.2900548
Private	198	.4557929	.0203598	.2864882	.4156417	.495944
combined	393	.3541696	.0151022	.2993902	.3244781	.3838611
diff		-.2048099	.0284151		-.2606753	-.1489445

diff = mean(Public S) - mean(Private) t = -7.2078  
 Ho: diff = 0 degrees of freedom = 391

Ha: diff < 0 Pr(T < t) = 0.0000  
 Ha: diff != 0 Pr(|T| > |t|) = 0.0000  
 Ha: diff > 0 Pr(T > t) = 1.0000

**. sdtest trscorerespecting10, by (setting)**

Variance ratio test

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Public s	195	.7803085	.0128357	.1792413	.754993	.805624
Private	198	.910062	.0113082	.1591205	.8877613	.9323626
combined	393	.8456804	.0091417	.1812279	.8277075	.8636534

ratio = sd(Public s) / sd(Private) f = 1.2689  
 Ho: ratio = 1 degrees of freedom = 194, 197

Ha: ratio < 1 Ha: ratio != 1 Ha: ratio > 1  
 Pr(F < f) = 0.9517 2\*Pr(F > f) = 0.0966 Pr(F > f) = 0.0483

**. tttest trscorerespecting10, by (setting)**

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Public s	195	.7803085	.0128357	.1792413	.754993	.805624
Private	198	.910062	.0113082	.1591205	.8877613	.9323626
combined	393	.8456804	.0091417	.1812279	.8277075	.8636534
diff		-.1297535	.017091		-.1633552	-.0961518

diff = mean(Public s) - mean(Private) t = -7.5919  
 Ho: diff = 0 degrees of freedom = 391

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0  
 Pr(T < t) = 0.0000 Pr(|T| > |t|) = 0.0000 Pr(T > t) = 1.0000

**. sdtest trscorereinformingguiding10, by (setting)**

Variance ratio test

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Public s	195	.484242	.0192898	.2693668	.4461975	.5222866
Private	198	.627805	.014822	.2085635	.5985749	.6570351
combined	393	.5565715	.0126546	.2508681	.531692	.5814509

ratio = sd(Public s) / sd(Private) f = 1.6681  
 Ho: ratio = 1 degrees of freedom = 194, 197

Ha: ratio < 1 Ha: ratio != 1 Ha: ratio > 1  
 Pr(F < f) = 0.9998 2\*Pr(F > f) = 0.0004 Pr(F > f) = 0.0002

**. tttest trscorereinformingguiding10, by (setting) unequal**

Two-sample t test with unequal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Public s	195	.484242	.0192898	.2693668	.4461975	.5222866
Private	198	.627805	.014822	.2085635	.5985749	.6570351
combined	393	.5565715	.0126546	.2508681	.531692	.5814509
diff		-.143563	.0243266		-.1914008	-.0957251

diff = mean(Public s) - mean(Private) t = -5.9015  
 Ho: diff = 0 Satterthwaite's degrees of freedom = 365.305

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0  
 Pr(T < t) = 0.0000 Pr(|T| > |t|) = 0.0000 Pr(T > t) = 1.0000

**. sdtest trscoregaintrust4, by (setting)**

Variance ratio test

Group	obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Public s	195	1.233946	.0063253	.0883284	1.22147	1.246421
Private	198	1.191367	.0102421	.1441187	1.171169	1.211565
combined	393	1.212494	.0061271	.1214644	1.200448	1.22454

ratio = sd(Public s) / sd(Private) f = 0.3756  
 Ho: ratio = 1 degrees of freedom = 194, 197

Ha: ratio < 1                      Ha: ratio != 1                      Ha: ratio > 1  
 Pr(F < f) = 0.0000                      2\*Pr(F < f) = 0.0000                      Pr(F > f) = 1.0000

**. ttest trscoregaintrust4, by (setting) unequal**

Two-sample t test with unequal variances

Group	obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Public s	195	1.233946	.0063253	.0883284	1.22147	1.246421
Private	198	1.191367	.0102421	.1441187	1.171169	1.211565
combined	393	1.212494	.0061271	.1214644	1.200448	1.22454
diff		.0425788	.0120378		.0188975	.06626

diff = mean(Public s) - mean(Private) t = 3.5371  
 Ho: diff = 0 Satterthwaite's degrees of freedom = 327.547

Ha: diff < 0                      Ha: diff != 0                      Ha: diff > 0  
 Pr(T < t) = 0.9998                      Pr(|T| > |t|) = 0.0005                      Pr(T > t) = 0.0002

**. sdtest trscorefinsensitivity4, by (setting)**

Variance ratio test

Group	obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Public s	195	.4309207	.0270207	.377323	.3776287	.4842127
Private	198	.3570705	.0238001	.334897	.3101349	.4040062
combined	393	.3937137	.0180606	.3580376	.358206	.4292215

ratio = sd(Public s) / sd(Private) f = 1.2694  
 Ho: ratio = 1 degrees of freedom = 194, 197

Ha: ratio < 1                      Ha: ratio != 1                      Ha: ratio > 1  
 Pr(F < f) = 0.9520                      2\*Pr(F > f) = 0.0960                      Pr(F > f) = 0.0480

**. ttest trscorefinsensitivity4, by (setting)**

Two-sample t test with equal variances

Group	obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Public s	195	.4309207	.0270207	.377323	.3776287	.4842127
Private	198	.3570705	.0238001	.334897	.3101349	.4040062
combined	393	.3937137	.0180606	.3580376	.358206	.4292215
diff		.0738502	.0359751		.0031214	.144579

diff = mean(Public s) - mean(Private) t = 2.0528  
 Ho: diff = 0 degrees of freedom = 391

Ha: diff < 0                      Ha: diff != 0                      Ha: diff > 0  
 Pr(T < t) = 0.9796                      Pr(|T| > |t|) = 0.0408                      Pr(T > t) = 0.0204

All the test results correspond with the tests presented in the main dissertation

**For comparing mean responsiveness score between public and private sector physicians using multiple linear regression after log-transforming the data**

```
. regress trscore34 setting agedoc sexdoc localorigin agept_i sexpt_i edupt_i
```

Source	SS	df	MS	Number of obs =	393
Model	.797623978	7	.113946283	F( 7, 385) =	5.74
Residual	7.63758409	385	.019837881	Prob > F =	0.0000
Total	8.43520807	392	.021518388	R-squared =	0.0946
				Adj R-squared =	0.0781
				Root MSE =	.14085

trscore34	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
setting	.0812157	.0166009	4.89	0.000	.048576 .1138555
agedoc	-.0000357	.0007495	-0.05	0.962	-.0015094 .0014379
sexdoc	-.0233567	.0197733	-1.18	0.238	-.0622339 .0155204
localorigin	-.0041982	.0154052	-0.27	0.785	-.034487 .0260906
agept_i	-.0003181	.0005416	-0.59	0.557	-.001383 .0007469
sexpt_i	.0104277	.0159873	0.65	0.515	-.0210056 .041861
edupt_i	.0008295	.0017316	0.48	0.632	-.0025751 .004234
_cons	.6244613	.0657899	9.49	0.000	.4951088 .7538137

Test result corresponds with the test presented in the main dissertation

**For comparing mean responsiveness score between public and private sector physicians using MANOVA after log-transforming the data**

```
. manova trscorefriendliness6 trscorerespecting10 trscoreinformingguiding10 trscoregaintrust4 trscorefinsensit
> ivity4 = setting
```

Number of obs = 393

w = Wilks' lambda      L = Lawley-Hotelling trace  
P = Pillai's trace      R = Roy's largest root

Source	Statistic	df	F(df1, df2) =	F	Prob>F			
setting	W	<b>0.7464</b>	<b>1</b>	<b>5.0</b>	<b>387.0</b>	<b>26.30</b>	<b>0.0000</b>	<b>e</b>
	P	<b>0.2536</b>		<b>5.0</b>	<b>387.0</b>	<b>26.30</b>	<b>0.0000</b>	<b>e</b>
	L	<b>0.3397</b>		<b>5.0</b>	<b>387.0</b>	<b>26.30</b>	<b>0.0000</b>	<b>e</b>
	R	<b>0.3397</b>		<b>5.0</b>	<b>387.0</b>	<b>26.30</b>	<b>0.0000</b>	<b>e</b>
Residual		<b>391</b>						
Total		<b>392</b>						

e = exact, a = approximate, u = upper bound on F

Test result corresponds with the test presented in the main dissertation

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Zaman, S. (2004). Poverty and violence, frustration and inventiveness: hospital ward life in Bangladesh. *Social Science & Medicine (1982)*, 59(10), 2025–36. doi:10.1016/j.socscimed.2004.03.007

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Zumbo, B. D., Gadermann, A. M., & Zeisser, C. (2007). Ordinal Versions of Coefficients Alpha and Theta for Likert Rating Scales. *Journal of Modern Applied Statistical Methods*, 6(1), 21–29. doi:10.1107/S0907444909031205

## Curriculum Vitae

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### Educational Qualification

Year	Degree	Institution	Area of Study/ Department
2015	Doctorate in Public Health (DrPH)	Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA	International Health
2010	Diploma in International Health and Policy Evaluation (Dip. IHPE)	Erasmus University, Rotterdam, The Netherlands	Health Policy, International Health
2008	Master in Public Health (MPH)	James P Grant School of Public Health, BRAC University, Bangladesh	Public Health
2006	Bachelor of Medicine and Bachelor of Surgery (MBBS)	Dinajpur Medical College, Rajshahi University, Bangladesh	Medicine, Surgery, Obstetrics and Gynecology and other allied subjects

### Dissertation

Understanding and measuring responsiveness of human resources for health in rural Bangladesh

### Awards and Fellowships

Award	Organization	Feat	Year
Health Systems Program Doctoral Research Award	Health Systems Program, Department of International Health, Johns Hopkins Bloomberg School of Public Health	Best doctoral research proposal	2014
Fogarty International Fellowship	Johns Hopkins Bloomberg School of Public Health		2011
Emerging Voices for Global Health	Institute of Tropical Medicine, Antwerp, Belgium	For winning the international scientific essay competition on universal health coverage	2010
Allan Rosenfield Award	James P. Grant School of Public Health, BRAC University	Best overall performance	2008

## Professional Experience

Position	Organization	Duration
Graduate Research Assistant	Project: Child Health Target Impact Study, Department of International Health, Johns Hopkins Bloomberg School of Public Health	July 2013 to October 2013
Lecturer	James P. Grant School of Public Health, BRAC University	September, 2010 onwards
Research Associate		January, 2009 to September, 2010

## Research Projects

Title	Researchers	Funding	Period
Understanding and Measuring Responsiveness of Human Resources for Health in Rural Bangladesh (Doctoral dissertation)	Taufique Joarder (Researcher) Asha George (Adviser)	REACHOUT Project, James P. Grant School of Public Health, BRAC University and Health Systems Program Doctoral Research Award, Johns Hopkins Bloomberg School of Public Health	2014-2015
Policy Analysis on Rural Retention Policies of Health Workforce in Bangladesh	Taufique Joarder, Lal Rawal, Tim Evans, Syed Masud Ahmed, Aftab Uddin, Viroj Tangcharoensathien (International Coordinator)	WHO Bangladesh	2013
Health Professional education Situation Analysis (5 countries)	Tim Evans, Syed Masud Ahmed, Kawkab Mahmud, Lal Rawal, Taufique Joarder	Rockefeller Foundation	2011-2013
Revitalizing Health for All: Developing a Comprehensive Primary Health Care Model for Bangladesh (Multi country project)	Ronald Labonte and David Sanders (International Mentors), Anwar Islam (Local Mentor) Taufique Joarder (Lead Researcher), Aftab Uddin (Research User)	IDRC, Canada	2008-2011
Health of the garment workers in Bangladesh: Impact of global economic recession (Multi country project)	Soonman Kwon (International Mentor), Anwar Islam (Local Mentor),	SEARO, WHO	2009

	Taufique Joarder (Country Focal Point, Lead Researcher), Shafiun Nahin (Co- Investigator)		
Globalization as a Social Determinant of Health: Influences on Patterns of Food Consumption among Young People in Bangladesh (Multi country project)	Shahaudduz Zaman (Principal Investigator), Nasima Selim (Co- Investigator, Lead Researcher) Taufique Joarder (Co- Investigator)	SEARO, WHO	2009
Socio-cultural Dynamics in an Upazila Health Complex: An Exploration (MPH thesis)	Taufique Joarder (Researcher), Shahaduz Zaman (Supervisor)	James P. Grant School of Public Health, BRAC University	2008
Meaning of death: Perception of the elderly and its impact on their well-being (Qualitative study as part of MPH course)	Taufique Joarder (Researcher), Alicia Cooper (Researcher), Shahaduz Zaman (Supervisor)	James P Grant School of Public Health, BRAC University	2008

### Pedagogic Experience

Institution	Level	Topic
James P. Grant School of Public Health, BRAC University	MPH	<ul style="list-style-type: none"> <li>• Introduction to Public Health: Plagiarism, Referencing, Literature Search Using HINARI and PubMed, Data Sources for Public Health Practice, Brief History of Public Health, Critical Evaluation of Literature</li> <li>• Qualitative research method: Focus Group Discussion, Qualitative data analysis using Atlas Ti. and manual coding</li> <li>• Medical Anthropology: Anthropology of Infectious Diseases, Cultural Perspective of Ageing (Cross-cultural Gerontology)</li> <li>• Health Systems: Integration of Public Health knowledge in Health Systems field research, Revitalizing Health for All: Developing a Comprehensive Primary Health Care Model for Bangladesh</li> <li>• Health Communication: Health Education, PRECEDE-PROCEED Model</li> <li>• Infectious Disease Epidemiology</li> </ul>
	Bachelor of Architecture	<ul style="list-style-type: none"> <li>• Research Methodology: Qualitative Research Methods, In-depth</li> </ul>

		Interview, Focus Group Discussion, Content Analysis
	Executive Certificate in Public Health Management	<ul style="list-style-type: none"> <li>• Evolution of Primary Health Care, Revitalizing Health for All: Developing a Comprehensive Primary Health Care Model for Bangladesh</li> </ul>
BRAC Training Division	Health Program Management Course (for government high officials)	<ul style="list-style-type: none"> <li>• Health Financing in the Realm of Health Systems</li> </ul>
UN Youth and Students Association of Bangladesh	Short course on Research Methodology	<ul style="list-style-type: none"> <li>• Research Methodology: Introduction to Qualitative Methods, In-depth Interview, Focus Group Discussion, Participant Observation, Qualitative Data Analysis</li> </ul>
Johns Hopkins Bloomberg School of Public Health	Teaching Assistantship in graduate level courses	<ul style="list-style-type: none"> <li>• Primary Health Care Study Circle: Revitalizing Health for All: Developing a Comprehensive PHC Model for Bangladesh</li> <li>• Introduction to International Health: Comparison of health and development indicators across different countries</li> <li>• Health Systems in Low and Middle Income Countries: Result Based Financing</li> <li>• Managing NGOs in the Health Sector</li> <li>• Health for All (Coursera)</li> <li>• Live talk on urban health care and Manoshi in Urban Health course</li> <li>• Health Information System (online course)</li> </ul>

#### **Conferences/Seminars/Workshops/Symposiums**

- National Public Health Seminar 2014: Transforming Evidence for Best Public Health Practices; organized by National Institute of Preventive and Social Medicine (NIPSOM), and World Health Organization, Bangladesh
- Prince Mahidol Award Conference 2014: Transformative Learning for Health Equity; organized by Royal Thai Government and other co-hosts
- Health Systems in Asia: Equity, Governance and Social Impact 2013; organized by Lee Kwan Yew School of Public Policy, NUS; Elsevier
- Asia-Pacific Network for Health Professional Education Reform (ANHER) Workshop 2013; organized by Hanoi School of Public Health
- Intersession Activity Workshop on Rural Retention Policy Analysis, Bangkok, 2013; organized by Asia Pacific Action Alliance on Human Resources for Health (AAAH)

- International Scientific Workshop on Measuring the Performance of Health Workforce, Dhaka, 2013; organized by James P Grant School of Public Health, BRAC University
- First National Public Health Conference, Bangladesh; organized by Institute of Epidemiology Disease Control and Research, Ministry of Health and Family Welfare, Bangladesh
- Second Global Symposium on Health Systems Research, Beijing, 2012; organized by Health Systems Global
- Global Health Research Initiative: Teasdale-Corti Program Symposium, Canada, 2012; organized by Global Health Research Initiative, Canada
- Forum 2012: Youth in Motion, South Africa, 2012; organized by COHRED/Global Forum for Health Research
- Revitalizing Health for All: Comprehensive Primary Health Care and the Quest for Health Equity, Canada, 2011; organized by University of Ottawa and International Development Research Center (IDRC), Canada
- 13<sup>th</sup> Annual Scientific Conference (ASCON XIII), Bangladesh, 2011; organized by International Center for Diarrheal Disease Research, Bangladesh (icddr,b)
- 3<sup>rd</sup> Asian Comprehensive Primary Health Care Meeting, Sri Lanka, 2011; organized by Peoples Health Movement, India and Sri Lanka
- First Global Symposium on Health Systems Research, Switzerland, 2010; organized by WHO, TDR, Alliance for Health Policy and Systems Research, HRP, Global Forum for Health Research
- 52<sup>nd</sup> Annual Colloquium: Health Research towards Universal Coverage, Belgium, 2010; organized by Institute of Tropical Medicine, Antwerp
- 4th Asia Pacific Action Alliance on Human Resources for Health (AAAH) Conference: “Getting committed health workers to the underserved areas: a challenge for the health systems”, Vietnam, 2009; organized by AAAH, WHO, MoH of Vietnam, Global Health Workforce Alliance

## **Publications**

1. Rawal, L.B., Joarder, T., Islam, S.M.S., Uddin, A., & Ahmed, S.M.A. (2015). Developing effective policy strategies to retain health workers in rural Bangladesh: a policy analysis. *Human Resources for Health*, 13(36).
2. Joarder, T., Cooper, A., & Zaman, S. (2014). Meaning of death: an exploration of perception of elderly in a Bangladeshi village. *Journal of cross-cultural gerontology*, 29(3), 299-314.

3. Joarder, T., & Sarker, M. (2014). Achieving universal health coverage through community empowerment: a proposition for Bangladesh. *Indian journal of community medicine*, 39(3), 129
4. Zaman, S., Selim, N., & Joarder, T. (2013). McDonaldization without a McDonald's: globalization and food culture as social determinants of health in urban Bangladesh. *Food, Culture and Society*, 16(4), 551-568.
5. Joarder, T., Uddin, A., & Islam, A. (2013). Achieving universal health coverage: state of community empowerment in Bangladesh. *Global Health Governance*, 6(2).
6. Joarder, T. (2013). New perspective on inter-sectoral actions on health. *Newsletter: International Health Policies*. <http://e.itg.be/ihp/archives/intersectoral-action-health-searching-inclusive-approach/>
7. Sarker, M., & Joarder, T. (2012). Intersectoral collaboration: a novel path to promote community health promotion. *Global health promotion*, 19(4), 7-8.
8. Joarder, T. (2012). A critical perspective on the policy process in a developing country. *Newsletter: International Health Policies*, 152. <http://e.itg.be/ihp/archives/ihpnews-152-Knowledge-Translation-Developing-Countries>

### **Other Information**

**Reviewer:** Social Science and Medicine, International Journal of Social Economics

**Software:** MS Office, Atlas ti, Stata, FACTOR, SPSS, ArcGIS, UCINet

**Languages:** Bengali (native), English (fluent), Persian (proficient), French (proficient), Hindi (working knowledge), Urdu (working knowledge)