

Consumer Satisfaction in Social Security Hospital: A Case Study of Punjab Employees Social Security Institution Hospital, Rawalpindi

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1. INTRODUCTION

Over the years, quality of services has assumed far greater importance in health systems of both developed and developing countries. In WHO's framework for health system performance assessment; health, responsiveness and fairness of financing are three major goals of a health system [Murray and Frenk (1999)]. With each component having particular importance, the responsiveness element entails safeguarding the rights of patients to adequate and timely care.¹

With numerous assessment measures, consumer satisfaction—which overlaps responsiveness in various dimensions—is one important evaluation measure of quality and performance of any health system.² Similarly, 'legitimate' expectations about service quality also serve as key tool in understanding patients' aspirations and needs for better health care.³ The evaluation of services *vis-à-vis* consumer satisfaction is, therefore, a dynamic rather than a static process. It provides time continuous information regarding relative improvements (or shortfalls) in health care standards.⁴

Generally, in the case of developing countries, it has been noted that patient satisfaction is not given much importance. It is a self explanatory fact that formal evaluation mechanisms including consumer satisfaction are absent in the health systems of most developing countries. It has been argued that consumer perceptions on health care are largely ignored by health care providers in low income countries [Yildiz (2004)]. Moreover, it is also noted that health being the exclusive industry—unlike others—which ignores its clients. The prehistoric mindset of doctors that only they understand what

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¹Responsiveness is a relatively newer area in health research. It has often been defined, in the context of a system, as the outcome that can be achieved when institutions and institutional relationships are designed in such a manner that these are cognisant and respond appropriately to universal expectations of individuals.

²In addition to evaluation of health status through morbidity and mortality estimates, there has been equal emphasis on quality of care indicators in health systems research [Shaikh and Rabbani (2004)]. Therefore, patient satisfaction can be used as an instrument in health management information system which can improve the quality of services by tracking certain dimensions of quality.

³Legitimate needs are defined as being universal rather than individualistic and conforms to recognised principals or accepted rules and standards.

⁴In developed countries, patient satisfaction surveys are conducted in hospitals on a timely basis as a measure to monitor the performance of health establishments.

should be done ignore patients' inputs, which is not living in reality [White (1999)]. Generally, these arguments appear to hold ground in countries such as Pakistan where patient satisfaction is the ignored element in improving health care quality and HMIS.⁵ It is argued that absence of accredited standards, lack of health care evaluation, and insensitive attitude of management towards patients' needs are few of the factors responsible for low quality of health care in both public and private sectors.⁶

In macro context, low public sector spending on health is also cited as a significant factor for deteriorating quality of health care in Pakistan. With critical social and economic issues including burgeoning population, low nutrition levels, increasing incidence of poverty and disease, widening of income disparities, inflationary pressures, and increasing health costs; government spending on health is miniscule. According to the Economic Survey of Pakistan, in 2005-06, the government spent merely 0.75 percent of GDP on the health sector [*Economic Survey of Pakistan* (2005)]. Therefore, public expenditure on health is abysmally low estimated at \$ 4 per capita [ADB Report (2005)]. Therefore, limited accessibility (equity) and deteriorating standards of health care (efficiency) are key issues for health regime in the country.

With ineffectuality of public sector in health care provision; over the years, private referral and medical treatment has become an increasing phenomenon. Based on 2005 figures, private spending on health (including household expenditures) is estimated at \$ 14 per capita—almost four times more than public health expenditure per capita [ADB Report (2005)]. Akram and Khan (2007) have noted that relatively higher income groups in urban centres despite access to public hospitals and tertiary medical institutions prefer to consult and receive treatment in private hospitals, which are considered as more quality oriented [Akram and Fahim Jehangir (2007)]. Generally, in absence of accreditation of health establishments in Pakistan, studies have noted that for-profit establishments also compromise on quality standards [Shaikh and Rabbani (2004)].

Poor provision of health care services, relevant health indicators unambiguously demonstrate a trend towards increasing impoverishment and vulnerability of the populace. Tightening of fiscal space and limited budget allocations, and underutilisation of public sector development expenditures; 'health for all' appears a distant reality in Pakistan. Therefore, the concept of social protection of health—through risk pooling—appears to have assumed critical importance. The mechanism not only can serve as an important policy instrument to prevent vulnerable households from falling into 'health poverty' but it can also provide them access to health services.

Social protection schemes—with health component—for poor, indigent, and lower income groups exist in Pakistan. However, their efficacy in terms of scope, service delivery, and quality requires comprehensive evaluation. Among others, it presents a strong case to examine the quality of health services provided under these schemes.⁷ This present study is designed with the objective to evaluate quality of health services from consumer perspective at Punjab Employees Social Security Institution's hospital in Rawalpindi.

⁵Presently, in most hospitals in Pakistan, majority of facility-based HMIS systems only track type and quantity of services which are related to improvement in health status indicators.

⁶The concepts of patient satisfaction, patient rights, and protection, therefore, carry little significance in most hospitals and medical establishments of Pakistan.

⁷For a brief review of the health component of social security schemes in Pakistan, see Section 3.

2. REVIEW OF LITERATURE

2.1. Patient as Consumer

The importance of 'patient' perceptions, also referred as consumer, in health care systems from the fact that consumer assessment not only identifies pitfalls in quality but their expectations also provides a way forward to improve the existent status of a health care services [Owens and Batchelor (1996)].⁸ Usually in market-based health systems, among various factors, patients' satisfaction is considered as an important indicator which enhances the reputation of hospitals and medical establishments in health provision. Therefore, it is argued in the literature that traditional term 'patient' needs to be replaced with customer or client for service improvements and also to develop a respectful relationship. It has been stated that term 'consumer' dignifies professional-patient relationship whereas the traditional term represents powerlessness against the medical establishment [Sitzia and Wood (1997)]. In addition, reinventing the term strengthens the importance of patient, consumer rights, and protection.

2.2. Consumer Perceptions: Influences and Variations

With complex nature of human perceptions, patient satisfaction is rather a complex phenomenon. Consumer perceptions represent a diverse mixture of perceived needs, expectations, and experience of health care [Smith (1992)]. They seem to be influenced by various and often diverse factors. For instance socio-demographic factors, economic status, gender, and culture have been found to be significant in influencing perceptions. It is stated: 'The clients' perspective is not simply a matter of individual preferences but is mediated through the social and cultural environment [AbouZahr, *et al.* (1996)]. Therefore, with influence of multiple factors, patients' perceptions have the tendency to vary drastically across individuals, hospitals, regions, or countries.

In literature, perceptions on satisfaction have been identified as relative judgements, based on comparison of perceived performance and patient aspiration, a proposition referred as the 'multiple discrepancy' theory [Michalos (2003)]. It is noted that patient's aspirations can be unrealistic in view of available financial and non-financial resources and performance evaluation can differ significantly. Therefore, it is argued that legitimate rather than individual expectations needs to be accounted for which could assist in reducing measurement discrepancies in patient satisfaction [Carr-Hill (1992)].

2.3. Dimensions of Quality in Consumer Satisfaction

Interestingly, patient satisfaction with quality cannot be examined unless the multidimensionality of quality should be taken into context. It not only entails the technical aspects of health care but also involve non-technical dimensions including physical environment, access to information, courtesy of medical professionals, interpersonal relationships, responsive behaviour, time cost involved, and other miscellaneous aspects. In health care literature, 'structural quality' is defined as dimensions related to

⁸It is suggested that the patient should be defined as a consumer, a rationale that originates from the emphasis on the market mechanism.

continuity of care, costs, accommodation and accessibility. Process quality has been defined to include aspects of courtesy, information, autonomy and competence [Van, *et al.* (1998)]. Similarly, service quality is referred as a set of aspects which include communication, sign posting, information provision and staff interaction with patients [Kenagy, *et al.* (1999)]. Interpersonal aspects of quality, amenities of care, with *technical* aspects comprise the three components of health care quality [Donabedian (1980)]. Interpersonal aspect is defined as the quality of interaction between the patient and the service provider concerning responsiveness, friendliness, and attentiveness [Haas (1994)]. In the literature, various studies therefore have examined quality specific contexts and dimensions.

2.4. Socio-demographic Factors Influencing Consumer Satisfaction

Most studies examining relationship of patient characteristics with hospital satisfaction scores have found certain variables to be significantly related. Most prominently, patient age along with self-reported health status are been noted to be statistically significant. It has been examined in almost every study that these two factors are strongly correlated with hospital satisfaction [Rosenheck, *et al.* (1997) and Young, *et al.* (2000)], whether these variables have been analysed for obstetrical patients [Finkelstein, *et al.* (1998)], for various patient satisfaction measures [Marshall, *et al.* (1996)], and across different countries [Thi (2002)]. Moreover, it has also been noted that there is greater tendency of research studies to concentrate on older patients. It seems to be based on the presumption that old people are the major recipients of health care services. Generally, it has been found that older patients have the tendency to report greater satisfaction while sicker patients tend to be less satisfied [Finkelstein, *et al.* (1998); Young (2000); Rosenheck, *et al.* (1997)]. Other patient characteristics that have been noted to be significantly related to patient satisfaction include race/ethnicity, gender, education, insurance status, income, and past consumer experience in the hospital [Finkelstein, *et al.* (1998); Rosenheck, *et al.* (1997); Hargraves (2001)].

2.5. Measurement of Consumer Satisfaction

Similar to multidimensional nature of quality, its measurement through patient satisfaction also has varied approaches. One factor which account for variation in patient perceptions of hospital care is differences in measures of satisfaction [Barr and Banks (2002)]. Certain measures focus on 'experience of care' while examining problem-oriented approach scrutinising questions concerning what did or did not happen while receiving health care regarding numerous aspects of care [Cleary, *et al.* (1991)]. Other patient satisfaction measures take into account the 'satisfaction with care' approach which involves patients to rate satisfaction with various aspects of care they received [Finkelstein, *et al.* (1998); Marshall, *et al.* (1996)]. These two approaches to assess patients' views on hospital experiences reflect two complementary but often conflicting goals for developing information i.e. quality improvement by hospitals and public reporting for use by consumers [Barr and Banks (2002)]. To assist hospitals in quality improvement measures, specific questions identifying problem areas needs to be used [Cleary, *et al.* (1991)].

2.6. PSQ—Global Approach in Measuring Consumer Satisfaction

In developed countries, interest in measuring patient satisfaction assumed more importance during the mid 1980s, the first health questionnaire was developed almost forty years ago [Engs (1970)]. Some thirty years back Ware, *et al.* (1986) developed a multifaceted and universally applicable approach to measure patient satisfaction through Patient Satisfaction Questionnaire (PSQ) [Ware, *et al.* (1976)]. The goal was to develop a short, self-administered satisfaction survey having application to general population studies yielding reliable and valid measures. These measures should have both theoretical and practical significance for planning, administration, and evaluation of health service programmes [Ware, *et al.* (1986)]. Importantly, the salient feature of PSQ approach is its development of taxonomy of characteristics of health care providers and services which can influence patients' attitudes towards satisfaction with medical care. Since its development, the modified PSQ method has been extensively used by studies to evaluate health care services in specific contexts in various countries. Its validity has been supported by empirical findings since its development [Ware, *et al.* (1986)].⁹

2.7. Scarcity of Consumer Satisfaction Literature in Pakistan

With bulk of international literature on customer satisfaction in health care, it appears to be highly scarce in context of Pakistan. Except for handful project studies conducted by NGOs and few research articles, health care literature on patient satisfaction is grossly lacking. With general absence of information on the subject, we find no evidence on any research conducted on customer satisfaction with health care services, in particular, of health schemes under social protection mechanisms. Therefore, this neglected area provides a broad scope to review health care services not only in terms of customer satisfaction but also coverage and structure of delivery mechanisms. In context of Pakistan, it seems pertinent for both policy analysis and health protection reforms in delivering better health services to citizens of the country.

3. REVIEW OF HEALTH PROTECTION IN PAKISTAN

Before examining the quality of services provided at PESSI hospital, this section briefly reviews the health protection of individuals covered under the various social security schemes in Pakistan. As mentioned earlier, accessibility of health services and health protection of poor, indigent, and vulnerable individuals is the source of social concern in the country; therefore, this section succinctly examines such schemes in particular.

In developing countries; social protection of poor, indigent, and lower income groups is an important policy instrument. In the midst of various protection programmes, health protection of households carries immense significance. Generally, evidence suggests that there is a strong relationship between poverty and health. In particular, poor people have higher probability of having health issues. Conversely, poor health can aggravate household poverty or even bankrupt families through health incidents/accidents of catastrophic dimensions. In Pakistan, evidence seems to suggest that high prevalence of disease among poor is the major factor pushing people into poverty [Mahmood and Ali (2003)].

⁹Shorter versions of PSQ have been designed and utilised for conducting two national surveys in the United States and was also used in RAND's Health Insurance Experiment [Ware, *et al.* (1986)].

In case of serious health contingencies, it has been noted that when poor households are not health protected, they have the tendency to borrow or reallocate expenditures towards health care from other important consumption items such as food. This also adversely impacts the health status through low nutrition levels.

With no significant ‘trickle down’ impact of economic growth coupled with low public sector spending on health, financial costs of health care services has been shifting to households in Pakistan. Therefore, it appears indispensable to devise a broad based social health protection mechanism in the country.

4. RATIONALE OF THE STUDY

The rationale for conducting this study is based by taking into context the following considerations:

- (i) Literature on patient perceptions to evaluate the quality of health care is scarce in Pakistan.
- (ii) There is no previous study which has examined quality dimensions of health risk-pooling model in Pakistan. Therefore, quality evaluation of Provincial Employees Social Security Institution (PESSI) hospital *vis-à-vis* patient satisfaction provides this research opportunity.
- (iii) Based on review of existing literature, we find no evidence that PSQ technique has been used by any research study in Pakistan.
- (iv) Assessment of the quality dimension of health risk financing will hopefully guide in formulating recommendations about improving the system of health care delivery.

5. AIM AND OBJECTIVES OF THE STUDY

The primary aim of the study is suggest improvements in health care services at PESSI hospital.

The objectives of the study are to:

- (i) Construct health care scales for examination of various health care services provided at PESSI hospital, Rawalpindi.
- (ii) Examine the influence of socio-economic factors on multiple quality scale at the hospital.
- (iii) Propose recommendations for improvement in health care services at the hospital.

6. STUDY DESIGN, SAMPLE SELECTION AND SIZE, AND DATA COLLECTION METHODOLOGY, DATA RELIABILITY, ETHICAL CONSIDERATION IN DATA COLLECTION AND LIMITATION OF THE STUDY

6.1. Study Design

This cross-sectional study is designed on the basis of PSQ approach [Ware, *et al.* 1976]. It represents a relatively shorter version of the approach comprising 40 questions.

These are related to different aspects of health care services provided at the PESSI hospital, Rawalpindi.

On the basis of these questions (or items), seven broad scales have been constructed representing key dimensions of services provided by the hospital. These broad scales are: (i) general satisfaction (ii) technical quality (iii) interpersonal aspects (iv) communication (v) financial aspects (vi) time spent with the doctor, and (vii) access and availability aspects. In each scale, consumer responses on items have been captured through five relative scores (Likert scales) which represent consumers' relative judgements on quality of health care service received at the hospital (see Table 1 below).

Table 1

Likert Scales of Consumer Responses

	Value	Explanation
Strongly Agree	1	Indicates highest level of satisfaction with hospital services.
Agree	2	Indicates high level of satisfaction with hospital services.
Neither Agree Nor Disagree	3	Indicates medium level of satisfaction with hospital services.
Disagree	4	Indicates low level of satisfaction with hospital services.
Strongly Disagree	5	Indicates lowest level of satisfaction with hospital services.

The pre-coded responses were recoded to attain higher item scores for favourably worded items i.e., indicating greater satisfaction in numeric values. For example, numeric value of 'strongly agreed' in the questionnaire was recoded from 1 to 5, and numeric value of 'agreed' in the questionnaire was recoded from 2 to 4. Likewise, similar procedure of recoding was adopted for the remaining three Likert scales.

After attaining relative numeric values of satisfaction for each item and doing their recoding, the number of items under each of the 7 quality measurement scales were summed up to attain aggregate score for each scale. For instance, the quality scale of general satisfaction comprising eight items (i.e., PSQ1, PSQ2, PSQ3, PSQ4, PSQ5, PSQ6, PSQ7, and PSQ8) were added up to receive the total grand score of general satisfaction.

In consumer satisfaction studies, categorisation of numeric values of scales measuring quality has been extensively used in various studies for relative analysis of satisfaction. For instance, [see Theodosopoulou, *et al.* (2007)]. To facilitate comparative analysis of consumer perceptions, aggregate scale scores have been classified into three broad categories which are: (i) High level of satisfaction, (ii) Medium level of satisfaction, and (iii) Low level of satisfaction. Distinction between these categories (or satisfaction ranges), for instance in low satisfaction, is calculated by taking average point of minimum cumulated value of dissatisfaction score and minimum cumulated value of neither agree nor disagree scale. For example, in general satisfaction scale, the minimum cumulative score of dissatisfaction is 16 whereas the minimum cumulative score of

uncertainly is twenty four.¹⁰ Therefore, the average point is estimated as 20. All summated values which are ≤ 20 represent low satisfaction ranking.

On a similar note, the minimum cumulative point of neither agree nor disagree and minimum cumulative point of satisfaction have been averaged to estimate the point that differentiates between medium and high satisfaction levels (or ranges). For example, under this method, 28 being the average point, all summated values $>$ than 28 represent relatively higher levels of satisfaction whereas scores ≤ 28 , but $>$ than 20 represent medium levels of satisfaction (see Table 2). Similar technique is applied for categorisation of consumer satisfaction levels for other scales.

Table 2

Levels of Consumer Satisfaction (General Satisfaction)

Level	Range
High Level of Satisfaction	Summated Scores $>$ than 28
Medium Level of Satisfaction	Summated Scores from 21 and 28
Low Level of Satisfaction	Summated Scores from 8 and 20

6.2. Sample Selection and Size

At PESSI hospital, Rawalpindi; around 37,000 workers are registered under the health protection scheme. In addition, approximately 200,000 dependents (of registered workers) are recipients of health services at the hospital. Based on hospital estimates, on average, 400 customers visit the premises each day. Broadly, there are two types of patients: (i) OPD patients, and (iii) Inpatients. As an inclusion criterion, the survey exclusively involves interviews with the first type of patients. Inpatient perceptions of care, therefore, are not under the purview of the study.

In addition, respondents with minimum age of 18 years (i.e. adults) were selected for the study sample. It is based on the presumption that children possess little comprehension about complex medical procedures and quality of hospital services. The purpose of excluding children from the survey, therefore, was to increase the response rate. The sample, however, makes no distinction on the basis of registration status of respondents i.e. whether if they are employed workers (registered with PESSI) or dependents of registered workers.

Of total OPD patients who represent the sampling frame, following formula has been used to select sample size.

$$\text{Sample size} = \pi (1-\pi)/e^2$$

Where

π = proportion

e = required size of standard error

It is assumed that $\pi = 0.5$ whereas $e = 0.05$ (at 95 percent confidence interval). The total sample size was estimated to be 100 patients (or respondents). To adjust for non-

¹⁰In general satisfaction scale comprising eight items, the minimum score of strong dissatisfaction is eight.

participation (or non-responsiveness) factor of consumers, 120 individuals were interviewed in total.¹¹

6.3. Data Collection Methodology

Data collection was done by a structured questionnaire comprised of forty questions (or items) related to different aspects of hospital services. As mentioned previously, the questionnaire was designed using PSQ-III as a reference point. A pilot survey of ten respondents was conducted before carrying out the complete hospital survey. To overcome difficulties in identifying OPD patients from the consumer list, respondents were identified through 'random selection' process on days when data was collected. Since consumers were interviewed in hospital's premises, the data collection procedure was time-efficient and convenient while keeping all the survey requirements of the study.

6.4. Data Reliability

In psychometric studies, estimation of data reliability is a requisite procedure. In literature on perception studies (including consumer satisfaction), it is indicated that multi-item scales generally meet the reliability criteria when exceeds the 0.50 value for group comparisons.¹² Among various techniques, we have estimated Cronbach α , the most frequently used in international studies. Item reliability is estimated at 0.80 whereas scales reliability comes to be 0.74.

6.5. Ethical Considerations in Data Collection

During data collection, all methodological and ethical considerations were taken care of. Before each interview, patient was informed about the purpose and objectives of the study. The anticipated participants were also informed about keeping strict confidentiality of data that will be provided by them. Therefore, after receiving personal consent, the data was collected from each survey participant. It was also strictly made sure that interview process is carried out in privacy not affected by presence of hospital staff, management, or any other interference. After execution of the survey, patient data was entered in SPSS 15 and before conducting analysis, it was thoroughly cleaned for errors.

6.6. Limitations of the Study

Despite the fact that the present study is a benchmark on estimating patient satisfaction at the PESSI hospital, it has certain limitations. These are as following:

- It exclusively examines the perceptions of patients to evaluate the quality of health services at the hospital. It has not incorporated the views of the medical staff.
- It is a particular case study of patient satisfaction at the PESSI hospital, Rawalpindi. Its findings, therefore, cannot be generalised to other PESSI hospitals in Pakistan.

¹¹The response rate of the sample is estimated to be 97 percent.

¹²However, some studies have estimated less than 0.40 reliability values which do not infer insignificance. Such data estimates are reliable but relatively weak at high confidence intervals.

- It exclusively takes into account perceptions provided by OPD patients at the hospital. The findings do not apply to perceptions of inpatients who are admitted at the hospital.

7. RESULTS

7.1. Socio-economic Characteristics of Study Sample

Table 3 given below presents descriptive statistics of the sample. In the study sample (N = 116), 56 percent of respondents were males whereas 44 percent were females. In sub-sample of males, 92 percent were employed workers (registered) with a miniscule share of male dependents (8 percent). On the other hand, in sub-sample of females, only 9 percent of respondents were employed workers (registered) while majority 91 percent includes dependents. The average age of respondents is estimated to be 37 years. By age classification of sample, concentration of respondents is in the age group of 31-45 years (48.3 percent) followed by 18-30 years (33.6 percent) and 46 and above (18 percent).

On average, education of respondents was found to be abysmally low i.e. 6 years of schooling. According to categories, around 28 percent of respondents were illiterate, 16 percent had receive education from Grade I-VIII, 38 percent were matriculates (high school education), whereas 18 percent were college graduates.

In the sample, average household income per month, is estimated to be significantly low i.e. Rs 5,938 (or \$ 87.3). If this mean value is taken as the cut-off point, it is estimated that 61 percent of households had monthly income below the mean value whereas remaining 39 percent of households had incomes above this point. These results clearly suggests that majority of respondents in the sample belong to poor income strata.

The range of utilising health services, in terms of years, at the hospital is fairly large (2-30 years). Its average value is estimated as 7 years. In terms of time duration of services availed from the hospital by category; majority of respondents were found using health services for < than 5 years (47 percent). It was followed by 5-9 years (28 percent), and 10 years and more (25 percent). The descriptive statistics of socio-economic indicators are presented in Table 3 below.

Table 3

Descriptive Statistics of Sample

Variables	Min	Max	Mean	Standard Deviation (S.D)
Age	18	77	37	11.43
Years of Education	0	14	6.4	4.77
Monthly Income (in Rs)	3,000	24,000	5,883	2,520
Number of Years availing PESSI Services	2	30	7	5.69

Consumer satisfaction literature presents mixed response to estimating either single item responses or multiple-item scales of satisfaction with services. For analysing psychological attributes of consumer perceptions, potential weakness of using single item approach has been discussed. It is argued that this approach can result in random measurement error as individual item lack scope. Therefore, it is very unlikely that an item can fully represent a complex theoretical concept. Hence, summated scores have been perceived as better indices to apply in studies pertaining to consumer perceptions on satisfaction. On the contrary, studies on consumer satisfaction have also adopted single item analysis with meaningful significance in inferential statistics.

With benefits of each approach in interpreting data, we have examined individual item statistics as well as summated scales of quality to evaluate hospital services.

7.2 (a) Descriptive Statistics of Scale Items

(i) General Satisfaction

The GS scale primarily entails physical environment of the hospital. It includes items related to consumers' level of comfort in diverse hospital premises. In terms of consumer satisfaction, cleanliness and airy waiting area was highly ranked (mean = 4.06). It is closely followed by cleanliness of doctor's room and moderately maintained temperature of waiting area (mean values of 4.03). Comfort of laboratory rooms was also found to be skewed towards relatively higher satisfaction (mean= 4.0). Relatively, ease in getting the seat (mean= 3.26) and spacious sitting area (mean= 3.17) were found to have lower satisfaction ranking compared to above items. These values tend to suggest that despite cleanliness in hospital waiting area for consumers, there is some evidence of physical congestion signified by bulk of patients who wait in the area before referral. The congestion can also be explained not only in terms of load of consumers waiting for referral but partly also due to number of caregivers (or attendants) which accompany them. However, overall OPD satisfaction as well as medical care satisfaction was ranked higher by consumers (see Table 4).

Table 4

Descriptive Statistics of General Satisfaction Scale Items

Items	Min	Max	Mean	S.D
Spacious Sitting Area with Appropriate Sitting Arrangement	1.00	5.00	3.17	1.12
Clean/Airy Waiting Area	2.00	5.00	4.06	0.33
Ease in Getting Seat	1.00	5.00	3.26	1.10
Moderately Maintained Temperature in Waiting Area	4.00	5.00	4.03	0.18
Cleanliness in Doctor's Office	3.00	5.00	4.03	0.23
Comfort of Laboratories	2.00	5.00	4.00	0.48
Overall OPD visit Satisfaction	1.00	5.00	3.97	0.79
Satisfaction from Medical Care Received	1.00	5.00	3.99	0.79

(ii) Technical Quality

Consumers evaluated highest satisfaction with efficacy of medicine under the technical quality scale (mean= 4.07). Simply, this suggests that majority of patients were satisfied with the doctor prescriptions of drugs at the hospital. It was followed by

satisfaction with efficient laboratory examination (mean= 3.89), and careful examination by the hospital doctor (mean= 3.65). Compared to other dimensions, monitoring weight of under 5 years old children (mean= 3.14) was also found to be relatively low in terms of consumer satisfaction.

(iii) *Interpersonal Aspects*

The IP scale mainly takes into account consumer relationship with hospital staff. It includes aspects such as general courteous behaviour, caring attitude, and personal respect for the consumer while he/she is in diverse situations while receiving health care. In the midst of various scale items, courteous nature of reception staff received the highest rank from consumers (mean= 4.19). It was proceeded by high consumer satisfaction with doctors treating patients with respect (mean= 4.0), doctors respect for patients' privacy (mean= 3.79), and courteous attitude of laboratory staff (mean= 3.73).

Contrary to above estimates, average response of consumers tends to suggest that consumers, in general, were relatively dissatisfied with laboratory examination (mean= 2.96). The estimate indicates that while queuing for laboratory examination, patients are not treated on first come first serve basis which results in wastage of time. It may also be inferred that queuing for laboratory checks lack discipline and often favouritism in bestowed by laboratory staff to certain consumers over others.

Doctor's familiarity with patient history also received a low ranking by consumers in general (mean = 2.84) in addition to their knowledge of treatment (mean= 2.67). These estimates tend to suggest that, although, doctors are careful in examining patients, they generally do not refer to consumer's previous medical history and earlier diagnosis done by another doctor. This seems to suggest that mostly doctors prefer their own way of treatment rather than adhering to previous medical history and diagnosis of the patient. These estimates require further exploration of such practices from doctors' perceptions, which is beyond the purview of this study (for details of other statistics of IP scale, see Table 5).

Table 5

Descriptive Statistics of Interpersonal Aspects Scale Items

Items	Min	Max	Mean	S.D
Reception Staff was Courteous	4	5	4.19	0.39
Doctor Respect for Patient Privacy	1	5	3.79	0.84
Doctor Treat Patient with Respect	1	5	4.04	0.55
Doctor's Familiar with Patient's Recent Medical History	1	5	2.84	1.27
Doctor's Knowledge about Change in Patient's Treatment	1	5	2.67	1.01
Attitude of Nurses and Ancillary Staff was Good	1	5	3.44	1.02
Attitude of Laboratory Staff was Courteous	1	5	3.73	0.80
Laboratory Staff Examined on First Come First Basis (Fair Queuing)	1	5	2.96	1.07

(iv) *Communication*

In COM scale, seven out of eight items examine consumer satisfaction while doing communication with the doctor, primarily regarding diagnosis. Generally, the mean values of responses of items indicate mixed satisfaction. Use of complicated medical terminologies by doctors not understandable to the patient received highest dissatisfaction

from the patients (mean= 4.16).¹³ It can be partly explained that since most of the consumers in the sample are lowly educated, therefore, it seems difficult for them to comprehend simple or more sophisticated medical terms used by doctors. It was also noted that doctors explanation to consumers about dosage of medicine was given a relatively moderate ranking (mean= 3.06), it appears that doctors do not bother much if the patient has understood the dosage. It received a very low satisfaction score (mean= 1.47). These descriptive seem to suggest existence of communication gap between doctor and consumer partly explained by low education of consumers and may be doctors' reluctance to explain these aspects in detail. In addition, most of the patients indicated that they do not receive any published material from the doctor pertaining to their disease or issues of general healthcare (mean= 1.24). Conversely, doctors giving further medical appointment (mean= 3.86), and doctors' willingness to listen to patient's health issues (mean= 3.73) received relatively high consumer satisfaction ranking.

Table 6

Descriptive Statistics of Communication Scale Items

Items	Min	Max	Mean	S.D
Doctor Show Willingness to Listen to Patient	1	5	3.73	0.96
Doctor Inform Patient about Health Condition	1	5	2.25	1.28
Use of Medical Terminology while Explaining to Patient	1	5	4.16	1.20
Doctor Guides Patient about Dosage of Medicine	1	5	3.06	1.18
Reassurance by Doctor about Understanding of Dosage	1	5	1.47	1.04
Doctor Tell Patient When to Come for Next Follow Up	1	5	3.86	1.15
Patient Get General Health Education about Weight of the Child	1	5	2.68	0.98
Doctor gives Patients Take Away Written Material about Health Care	1	5	1.24	0.68

(v) Financial Aspect

An important estimate that has come out of descriptive analysis is the satisfaction of patients with financial health protection at the hospital. With average value of 4.78, it is apparent that most consumers are very highly satisfied with the financial aspect. In proportional terms, a staggering 97 percent of consumers indicated high level of satisfaction with financial protection they receive from PESSI. A miniscule 3 percent consumers mentioning dissatisfaction with the financial aspect of health care service provided by PESSI.

(vi) Time Spent

Similar to relatively high satisfaction with willingness of doctor to listen to patient, time spent with doctor was ranked relatively higher by consumers (mean= 3.66).

(vii) Access and Availability

The descriptive statistics of AA are presented in Table 7. The scale is a representative of mixture items concerning access and availability aspects. It represents physical accessibility to the hospital, facilities, and miscellaneous services

¹³It is a negatively worded item. See methodology for negative and positive worded items in the questionnaire.

provided at the hospital. Interestingly, availability of medicines from hospital's pharmacy received a high satisfaction ranking by consumers (mean= 4.23). It is followed by accessibility to radiography and laboratory facilities (mean= 4.16), and having appointments for these medical facilities (mean = 4.14). In addition, outside signage to assist patients and caregivers about health care departments and other hospital premises was also found to be highly helpful by consumers (mean=3.88). It is noted that consumers have to spent significant time before having access to referral (mean= 2.80). Based on earlier argument, it also partly indicates burden of patients visiting the hospital on a daily basis. Moreover, accessibility to clean toilets and availability of clean drinking water at the hospital were other key concerns of consumers at the hospital (mean values of 1.91). It tends to indicate cleanliness and hygiene in washrooms is one of the major issues of the hospital along with inaccessibility of clean drinking water. It may be inferred that partly cleanliness in toilets are not maintained by the janitors and might be due to excessive burden of individuals using these facilities.

Physical accessibility to hospital (in terms of distance covered) also received low satisfaction ranking by consumers (mean= 2.5). The estimate suggests that hospital for most consumers is not in close vicinity of their residences. Therefore majority of patients have to travel considerable distances to avail health facilities. Since the hospital is the only medical establishment in the region which covers a large circumference of rural as well as urban areas, congestion of consumers at the hospital may also be explained by it being the lone facility in the area.

Table 7

Descriptive Statistics of Access and Availability Scale Items

	Min	Max	Mean	S.D
Hospital is easily approachable	1	5	2.50	1.26
Outside signage	1	5	3.88	0.66
Kept waiting for long to see doctor	1	5	2.80	1.23
Clean and separate WC	1	4	1.91	1.07
Clean drinking water for patients	1	4	1.91	0.98
Easy to get medicine from the hospital	2	5	4.23	0.91
Easy to get appointment at radiography and lab	1	5	4.14	0.64
Confident for choosing days to perform radiography examination	1	5	3.19	1.13
Usually kept waiting for lab and radiography examination	1	5	2.79	1.21
Easy to approach radiography and laboratory examination	2	5	4.16	0.49

Table 8 presents descriptive statistics of scales. As estimates suggest GS scale indicates skewed distribution from medium to high level of satisfaction. Average values and frequency distribution of technical quality and interpersonal aspects tends to indicates increasing concentration from high to medium satisfaction. Communication scale is highly skewed towards medium to low satisfaction levels (see Table 8 for descriptive statistics).

Table 8

Descriptive Statistics of Scales

Scale	No. of Items	Min	Max	Mean	S.D
General Satisfaction (GS)	8	24	39	30.5	2.94
Technical Quality (TQ)	4	8	19	14.7	2.11
Interpersonal Aspects (IP)	8	15	36	27.7	3.56
Communication (COM)	8	14	35	22.4	4.18
Financial Aspect (FA)	1	1	5	4.8	0.67
Time Spent with Doctor (TD)	1	1	5	3.7	1.02
Access and Availability (AA)	10	19	41	31.5	3.67

7.2 (b) Socio-economic Factors in Measuring Comparative Perceptions

The study has examined socio-economic factors such as gender, education, age groups, income, and registration status of respondents i.e. registered worker or dependent affects on measuring comparative perceptions.

Gender

As indicated earlier, financial aspect (comprised of one item) is the most highly ranked aspect. In overall sample, a staggering proportion of patients indicated high levels of satisfaction with health protection at PESSI (around 97 percent). With no statistical significant variation across gender ($P > 0.05$), female consumers expressed relatively complete satisfaction with the scale compared to 94 percent of male consumers. In total, more than three-fourths of patients indicated high satisfaction with 'time spent with doctor'. Female patients expressed high satisfaction with the scale (84.3 percent) compared to males (70.8 percent). This difference is not found statistically significant with greater variation by gender ($P > 0.05$). However, interestingly, a noticeable proportion of consumers (more than one fifth) in overall sample expressed dissatisfaction with the scale, which is mainly influenced by male consumers ranking of the scale (26.2 percent).

In total, general satisfaction scale also represents high level of satisfaction (66.4 percent of consumers) whereas a noticeable one-third of patients also ranked it in medium level of satisfaction. No significant variation in perceptions was found by gender i.e. chi square is $P=0.197$. Overall, most patients ranked communication scale in terms of medium satisfaction (62.1 percent). Male consumers appear more satisfied than females in communication, which represent a noticeable share of low satisfaction (35.3 percent) with $P=0.663$. More than three-tenths of consumers also ranked low satisfaction level with communication scale which is mainly influenced by female estimates. Mixed responses were noted in interpersonal aspects with almost equally proportionate responses in medium to high levels of patient satisfaction. Female consumers were found to be relatively less satisfied compared to male consumers. Conversely, under technical quality, female consumers expressed high satisfaction than males (68.6 and 58.5 percent respectively) whereas noticeable share of medium satisfaction was also estimated across females and males (29.4 and 33.8 percent respectively). All differences by gender were statistically not significant in technical quality. Access and availability was ranked medium level in quality with no statistical significant variation by gender $P=0.131$. For detailed statistics, see Table 9 below.

Table 9

Levels of Consumer Satisfaction by Gender (in Percentage)

	Male (65)			Female (51)			Total (116)			Chi-Sq
	High	Med	Low	High	Med	Low	High	Med	Low	
GS	42 64.6%	23 35.4%		35 68.6%	16 31.4%		77 66.4%	39 33.6%		0.65
TQ	38 58.5%	22 33.8%	5 7.7%	35 68.6%	15 29.4%	1 2.0%	73 62.9%	37 31.9%	6 5.2%	0.292
IPA	32 49.2%	32 49.2%	1 1.5%	23 45.1%	26 51.0%	2 3.9%	55 47.4%	58 50.0%	3 2.6%	0.688
COM	5 7.7%	42 64.6%	18 27.7%	3 5.9%	30 58.8%	18 35.3%	8 6.9%	72 62.1%	36 31.0%	0.663
FA	61 93.8%	1 1.5%	3 4.6%	51 100.0%	0 0.0%	0 0.0%	112 96.6%	1 0.9%	3 2.6%	0.197
TS	46 70.8%	2 3.1%	17 26.2%	43 84.3%	0 0.0%	8 15.7%	89 76.7%	2 1.7%	25 21.6%	0.157
AA	10 15.4%	53 81.5%	2 3.1%	2 3.9%	47 92.2%	2 3.9%	12 10.3%	100 86.2%	4 3.4%	0.131

Education

Consumer satisfaction ranking with respect to education are given in Table 10. Excluding financial aspect, ranked consistently high with no significant variation by education $P=0.148$, technical quality was the highest ranked scale of satisfaction across education followed by medium ranking. There was significant variation in perceptions in technical quality having no statistical significance by education having $P = 0.167$. High ranking of technical quality is estimated to be inversely related to successive years of education till high school educated consumers. Generally, GS scale mostly represents high consumer satisfaction (with greater proportion of respondents) across education whereas noticeable share of patients across all education groups also noted as ranking the scale with low levels of satisfaction. The lower rankings are mainly influenced by college and illiterate categories. In our data, high satisfaction with Interpersonal aspects shows a consistent inverse relationship with each successive increase of education group. It declines from 60.6 percent to 40 percent between college educated consumers and illiterates. However, no statistically significant variation was estimated in responses by education.

Across education, communication scale was primarily ranked in medium satisfaction category; however, it also represents highest proportion of consumers who expressed dissatisfaction with the scale (low ranking). College educated consumers expressed highest proportion of dissatisfaction compared to other education groups.

The interesting finding is that, excluding access and availability scale, illiterate consumers expressed high levels of satisfaction with all scales compared to other education groups. These comparative estimates tend to suggest that consumers with no education have low aspirations; little comprehension about quality of services due to confined exposure to other health facilities, and resultantly has high satisfaction levels.

Table 10

Level of Consumer Satisfaction by Education (in Percentage)

	Illet(33)			Liter(17)			High School(46)			College(20)			Total(116)			CHI-SQ
	High	Med	Low	High	Med	Low	High	Med	Low	High	Med	Low	High	Med	Low	
GS	23	10		10	7		33	13		11	9		77	39		0.503
	69.7%	30.3%		58.8%	41.2%		71.7%	28.3%		55.0%	45.0%		66.4%	33.6%		
TQ	24	9	0	10	4	3	26	18	2	13	6	1	73	37	6	0.167
	72.7%	27.3%	0.0%	58.8%	23.5%	17.6%	56.5%	39.1%	4.3%	65.0%	30.0%	5.0%	62.9%	31.9%	5.2%	
IPA	20	13	0	8	9	0	19	25	2	8	11	1	55	58	3	0.525
	60.6%	39.4%	0.0%	47.1%	52.9%	0.0%	41.3%	54.3%	4.3%	40.0%	55.0%	5.0%	47.4%	50.0%	2.6%	
COM	1.7%	8.6%	6.9%	1	10	6	1	32	13	2	10	8	8	72	36	0.556
	4	20	9	5.9%	58.8%	35.3%	2.2%	69.6%	28.3%	10.0%	50.0%	40.0%	6.9%	62.1%	31.0%	
FAC	33	0	0	17	0	0	43	0	3	19	1	0	112	1	3	0.148
	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	93.5%	0.0%	6.5%	95.0%	5.0%	0.0%	96.6%	0.9%	2.6%	
TS	27	0	6	12	0	5	35	2	9	15	0	5	89	2	25	0.663
	81.8%	0.0%	18.2%	70.6%	0.0%	29.4%	76.1%	4.3%	19.6%	75.0%	0.0%	25.0%	76.7%	1.7%	21.6%	
ACC	3	28	2	3	14	0	5	39	2	1	19	0	12	100	4	0.710
	9.1%	84.8%	6.1%	17.6%	82.4%	0.0%	10.9%	84.8%	4.3%	5.0%	95.0%	0.0%	10.3%	86.2%	3.4%	

Age Groups

Almost every study has estimated significance of patient age along with self-reported health status. In particular, older patients have drawn more research interest in consumer perceptions. It seems to be based on the proposition that older populations (usually > 60 years) are the most frequent recipient of health care services. It has also been noted as a consistent finding that older patients tend to be more satisfied with their health care [Thiedke (2007)]. The study estimates appear to confirm these findings.¹⁴

As the statistics *indicate*, almost across all scales (excluding communication), consumers with ages of 46 years and above, ranked high satisfaction compared to other age categories. Under general satisfaction, 90.5 percent of older consumers expressed satisfaction with health care services followed by 18-30 years age group (69 percent). Likewise, with technical quality, 71 percent of older consumers expressed high levels of satisfaction, which is estimated as a consistent decline across younger consumer groups. In interpersonal aspects, a significant proportion of consumers across all age groups expressed medium levels of satisfaction whereas in communication scale, a noticeable proportion of consumers expressed dissatisfaction with services provided under the scale. This was found consistent across all age groups. Similar to interpersonal aspects, access and availability was predominantly ranked in medium satisfaction category across age groups.

Table 11

Level of Consumer Satisfaction by Age (in Percentage)

	18-30 Years (39)			31-45 Years (56)			46 & above (21)			Total (116)			Chi-Sq
	High	Med	Low	High	Med	Low	High	Med	Low	High	Med	Low	
GS	27	12		31	25		19	2		77	39		0.013
	69.2%	30.8%		55.4%	44.6%		90.5%	9.5%		66.4%	33.6%		
TQ	22	14	3	36	18	2	15	5	1	73	37	6	0.752
	56.4%	35.9%	7.7%	64.3%	32.1%	3.6%	71.4%	23.8%	4.8%	62.9%	31.9%	5.2%	
IPA	15	23	1	28	26	2	12	9	0	55	58	3	0.575
	38.5%	59.0%	2.6%	50.0%	46.4%	3.6%	57.1%	42.9%	0.0%	47.4%	50.0%	2.6%	
COM	3	25	11	4	33	19	1	14	6	8	72	36	0.956
	7.7%	64.1%	28.2%	7.1%	58.9%	33.9%	4.8%	66.7%	28.6%	6.9%	62.1%	31.0%	
FA	38	0	1	55	0	1	19	1	1	112	1	3	0.273
	97.4%	0.0%	2.6%	98.2%	0.0%	1.8%	90.5%	4.8%	4.8%	96.6%	0.9%	2.6%	
TS	28	1	10	44	1	11	17	0	4	89	2	25	0.882
	71.8%	2.6%	25.6%	78.6%	1.8%	19.6%	81.0%	0.0%	19.0%	76.7%	1.7%	21.6%	
ACC	4	34	1	4	49	3	4	17	0	12	100	4	0.466
	10.3%	87.2%	2.6%	7.1%	87.5%	5.4%	19.0%	81.0%	0.0%	10.3%	86.2%	3.4%	

Household Income

As mentioned earlier, industrial workers earning up to Rs 5,000 per month (and their dependents) are eligible for registration and medical benefits at PESSI hospitals over all Pakistan. For analysis of data, we have categorised income groups on the basis of

¹⁴Although, in our study sample, only 12 percent of the respondents were greater than fifty years. Only 3 percent consumers had a minimum age of sixty years compared to international studies where older patients comprise significant proportions.

this income level. Based on tests of significance, variation in satisfaction levels by income groups have been estimated to be significant.

Consumers by both income categories apparently ranked technical quality as the most highly satisfied scale. It was followed by general satisfaction scale i.e., 72.2 percent of consumers (monthly household income > Rs 5,000) expressed higher satisfaction compared to around 55 percent with monthly household income < Rs 5,000. However, there is a significant proportion in both categories which also ranked GS as medium satisfaction scale. In both categories, medium satisfaction with access and availability, and interpersonal aspects is noted for the scale.

Table 12

	<i>Level of Consumer Satisfaction by Household Income (in Percentage)</i>									Chi-Sq
	Income > 5000(54)			Income > 5000(62)			Total (116)			
	High	Med	Low	High	Med	Low	High	Med	Low	
GS	36	18		41	21		77	39		0.951
	66.7%	33.3%		66.1%	33.9%		66.4%	33.6%		
TQ	39	14	1	34	23	5	73	37	6	0.097
	72.2%	25.9%	1.9%	54.8%	37.1%	8.1%	62.9%	31.9%	5.2%	
IPA	29	22	3	26	36	0	55	58	3	0.049
	53.7%	40.7%	5.6%	41.9%	58.1%	0.0%	47.4%	50.0%	2.6%	
COM	4	35	15	4	37	21	8	72	36	0.776
	7.4%	64.8%	27.8%	6.5%	59.7%	33.9%	6.9%	62.1%	31.0%	
FAC	51	1	2	61	0	1	112	1	3	0.431
	94.4%	1.9%	3.7%	98.4%	0.0%	1.6%	96.6%	0.9%	2.6%	
TS	42	1	11	47	1	14	89	2	25	0.956
	77.8%	1.9%	20.4%	75.8%	1.6%	22.6%	76.7%	1.7%	21.6%	
ACC	7	46	1	5	54	3	12	100	4	0.490
	13.0%	85.2%	1.9%	8.1%	87.1%	4.8%	10.3%	86.2%	3.4%	

Registration Status

According to estimates (Table 13), across all scales, dependents were found to be more satisfied with services provided at the hospital. In general satisfaction scale, 72.5 percent of dependents expressed high level of satisfaction. Almost, 39 percent of secured workers indicated medium level of satisfaction. Similarly, more than two-thirds of dependents indicated high satisfaction with aspects of technical quality (29.4 percent indicated medium satisfaction) whereas more than one thirds of secured workers mentioned medium satisfaction. In interpersonal and communication scales, high satisfaction with quality of services is estimated to be relatively lower mainly concentrated in medium satisfaction scale. Almost similar results have been estimated for access and availability scale.

Table 13

Level of Consumer Satisfaction by Registration Status (in Percentage)

	Secured (65)			Dependent (61)			Total (116)			Chi-Sq
	High	Med	Low	High	Med	Low	High	Med	Low	
GS	40 61.5%	25 38.5%		37 72.5%	14 27.5%		77 66.4%	39 33.6%		0.213
TQ	38 58.5%	22 33.8%	5 7.7%	35 68.6%	15 29.4%	1 2.0%	73 62.9%	37 31.9%	6 5.2%	0.292
IPA	27 41.5%	36 55.4%	2 3.1%	28 54.9%	22 43.1%	1 2.0%	55 47.4%	58 50.0%	3 2.6%	0.355
COM	3 4.6%	41 63.1%	21 32.3%	5 9.8%	31 60.8%	15 29.4%	8 6.9%	72 62.1%	36 31.0%	0.544
FA	61 93.8%	1 1.5%	3 4.6%	51 100.0%	0 0.0%	0 0.0%	112 96.6%	1 0.9%	3 2.6%	0.197
TS	45 69.2%	2 3.1%	18 27.7%	44 86.3%	0 0.0%	7 13.7%	89 76.7%	2 1.7%	25 21.6%	0.073
ACC	10 15.4%	53 81.5%	2 3.1%	2 3.9%	47 92.2%	2 3.9%	12 10.3%	100 86.2%	4 3.4%	0.131

8. DISCUSSION, CONCLUSION AND RECOMMENDATION

Recent research considers consumer perceptions with health care services as an essential part of understanding and assessing quality. In market-based health systems, most notably in developed countries, patient satisfaction has become an integral part in evaluating quality of health services. It is principally based on recognition of patient as a consumer and also payer of services has acknowledged rights and protection. In addition, the importance of consumer satisfaction also stems from the fact that quality perceptions are one of the important indicators which measure the reputation of hospitals and thereby draws more consumers if the reputation of services is high.

Many studies have explored patient's perceived satisfaction for outpatient services from different dimensions, such as waiting times, courtesy and interpersonal skills, professionalism and so on. However, in Pakistan, such evaluation of services is rare in Pakistan and particularly for PESSI hospitals, they are non-existent. In this study, we have examined outpatient satisfaction in terms of isolated items representing services as well as perceptions on quality of scales. Furthermore, socio-economic characteristics of patients have been examined in influencing ranking of quality of scales. Both methodologies have been important in explaining the influence of multiple factors on satisfaction. For this present study, we have only focussed on patient perceptions about satisfaction level; however, it is felt that there is room for further analysis in terms of understanding customer expectation about health services in context of socio-economic characteristics of patients.

Regarding patients satisfaction in terms of education, it has been observed that illiterate patients generally expressed higher satisfaction with quality of scales compared to other education groups. In our study we have illiterate (36.4 percent), literate (14.5 percent), matriculate (34.5 percent) and above metric (14.5 percent) patients showing high level of satisfaction. Further in our analysis, satisfaction levels of females generally were found to be higher for most scales in comparison to males. This may be due to the

sub-sample of females which predominantly comprise dependents. Being dependents in social context of Pakistan, women have presumably limited exposure to variety of services available in the health market. Being economically subjugated as dependents, they also have little aspirations. It may be inferred that, partly due to influence of these factors, women generally tend to have higher satisfaction. Interestingly, patient satisfaction may not necessarily mean that quality is good; it may only indicate that expectations are low

Over all, based on evaluation of services at PESSI hospital through customer satisfaction, it is noted that there is good evidence available that the hospital offers certain benefits to its customers which are usually lacking in most government sector hospitals. First and foremost is the aspect of social health protection in terms of financial security that has been given to registered workers and their dependents. In a country like Pakistan where health protection is a luxury for majority of population, risk pooling mechanism of the hospital offers considerable fiscal relief to its recipients. Other aspects like free availability of medicines, relatively better treatment of doctors, generally courteous behaviour of medical staff including doctors, accessibility of radiographic facilities, and relatively comfortable physical environment are some other significant benefits which are offered by the hospital.

On the other hand, it has been noted that partly due to relative advantages of the hospital (presumably from public sector hospitals), there is excessive influx of patients at the hospital from far off areas on a daily basis involving high travel costs. It has been noted that patients may prefer to travel to a more distant facility if they feel that it provides better services, including a range of care options [Creel, *et al.* (2002)]. However, there is resultant congestion and some of the standards for certain health care items are jeopardised. For instance, cleanliness and hygiene of certain physical premises such as washrooms is noted as a major health issue at the hospital. Likewise, unavailability of clean drinking water was also a source of concern for customers. The element of hospital congestion may also be inferred in terms of waiting time customers have to go through before consultation with the doctor. In addition, communication scale in general has received particularly low rating. Also, there is a need to improve the quality of items in other scales including general satisfaction, interpersonal skills, and access and availability aspects. In the absence of any indigenous HMIS system, the hospital needs to focus on improving the quality of these scales since it has been catering to significant population of workers and their dependents.

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Comments

The study is focused on evaluating the quality aspects of health care provision using consumer satisfaction as an instrument to assess patients' perceptions about the use of services. I appreciate the authors' effort to address a crucial topic for evaluating health care systems and its quality for which limited information and research is available in Pakistan. Using Patient Satisfaction Questionnaire (PSQ) technique measured on a five category scale ranging from 'strongly agree' to 'strongly disagree', self perceptions of individuals, the study analyses consumer satisfaction about health care services. The sampled population is drawn from a Social Security Hospital in Rawalpindi, established under the social protection scheme in the Punjab province.

After a comprehensive review of literature on dimensions of quality in consumer satisfaction and the operating of health protection schemes in Pakistan, the authors have tried to justify the relevance of the study in using evaluation of its quality through patients' satisfaction criteria. However, the paper has a number of limitations regarding the study design, sample selection and its size, data collection methodology and data reliability which will be discussed briefly.

Based on the sampled population of a social security hospital in Rawalpindi, the study has strong built-in selection bias by presenting a case study of a small hospital. From a pool of 37,000 hospital employees and 200,000 dependents as service users, the data has been collected from only 120 respondents—a sample too small to be representative for a meaningful analysis.

As for the data collection methodology, only outpatients visiting the hospital for seeking health services during certain hours have been interviewed about the satisfaction of services, whereas in-patients who are admitted in the hospital and spend longer time and use multiple services for curative and treatment process, as well as the medical staff who provide those services, have been left out. The results thus represent the perceptions of outpatients only leaving out the input by the medical staff and inpatients who are equally important in giving opinion about health service provision and its quality. Moreover, the consumers' responses on the quality of services provided at the hospital have been captured through five relative scores based on personal perceptions (see Table 1 in the paper) that are hard to quantify and explain the distance between categories of responses.

Looking at the socio-economic characteristics of the study sample (Table 3), it is apparent that the respondents with a mean age of 37 years have largely low education level, low monthly household income, and an average family size of 5.4 children—factors that are all reflective of low socioeconomic status. However, a majority of respondents have indicated high level of satisfaction about the quality of services. This might reflect the biased perceptions of respondents because the hospital selected is managed by the Social Security Scheme of the government with services offered at very

low price or user charges mainly to facilitate medical benefits to the registered employees and its dependent families, who mostly have low socio-economic status and hence feel satisfied with free availability of services. Certainly, the perceptions of consumer satisfaction in private hospitals with high costs and user charges would be different than presented here and the results would become more meaningful if compared with a privately managed hospital with high price charged for services. Moreover, many other quality indicators such as patient/doctor ratio, client inflow, type of services offered, quality of the paramedic and technical staff, etc., would be useful additions to assess service quality and consumer satisfaction.

In all, the study is stretched far with detailed data and tabulations on only 120 respondents raising many questions than giving answers about the utility of this approach to assess quality aspects of health services, and about how to improve services at social security institutions and making policy interventions at other health service outlets. I suggest that some sections of the paper including literature review, health protection and social assistance schemes could be synthesised to present it as a conference paper.

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